9th ANNUAL MASSACHUSETTS UNDERGRADUATE CONFERENCE

Featuring Presentations on

Community Service
Creative Work
Thesis Research
Independent Study
and Study Abroad

Friday, April 25, 2003
Boston, MA

Seaport Hotel
at the World Trade Center

Conference Program
Presentation Schedule and Abstracts

Sponsored by Commonwealth College at the University of Massachusetts Amherst
# Table of Contents

## Acknowledgments

2

## Conference Schedule

3

## Maps

4

## Presentations Schedule

<table>
<thead>
<tr>
<th>Oral Presentations</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poster Presentations</td>
<td>10</td>
</tr>
</tbody>
</table>

## Abstracts

<table>
<thead>
<tr>
<th>Oral Presentations</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American Studies</td>
<td>15</td>
</tr>
<tr>
<td>Animal Studies</td>
<td>15</td>
</tr>
<tr>
<td>Anthropology</td>
<td>15</td>
</tr>
<tr>
<td>Art History</td>
<td>16</td>
</tr>
<tr>
<td>Biology</td>
<td>17</td>
</tr>
<tr>
<td>Chemical Engineering</td>
<td>18</td>
</tr>
<tr>
<td>Chemistry</td>
<td>19</td>
</tr>
<tr>
<td>Classical Language &amp; Literature</td>
<td>21</td>
</tr>
<tr>
<td>Communication</td>
<td>22</td>
</tr>
<tr>
<td>Community or Public Service</td>
<td>22</td>
</tr>
<tr>
<td>Computer Science</td>
<td>23</td>
</tr>
<tr>
<td>Dance</td>
<td>23</td>
</tr>
<tr>
<td>Decision Science</td>
<td>24</td>
</tr>
<tr>
<td>Economics</td>
<td>24</td>
</tr>
<tr>
<td>Education</td>
<td>25</td>
</tr>
<tr>
<td>English</td>
<td>26</td>
</tr>
<tr>
<td>English Literature</td>
<td>30</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>32</td>
</tr>
<tr>
<td>History</td>
<td>33</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>35</td>
</tr>
<tr>
<td>Literature</td>
<td>35</td>
</tr>
<tr>
<td>Management</td>
<td>36</td>
</tr>
<tr>
<td>Marketing</td>
<td>36</td>
</tr>
<tr>
<td>Mathematics &amp; Statistics</td>
<td>37</td>
</tr>
<tr>
<td>Multimedia</td>
<td>37</td>
</tr>
<tr>
<td>Nursing</td>
<td>38</td>
</tr>
<tr>
<td>Nutrition &amp; Food Science</td>
<td>39</td>
</tr>
<tr>
<td>Philosophy</td>
<td>39</td>
</tr>
<tr>
<td>Physics</td>
<td>41</td>
</tr>
<tr>
<td>Political Science</td>
<td>41</td>
</tr>
<tr>
<td>Psychology</td>
<td>42</td>
</tr>
<tr>
<td>Social Work</td>
<td>43</td>
</tr>
<tr>
<td>Sociology</td>
<td>44</td>
</tr>
<tr>
<td>Theatre</td>
<td>45</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poster Presentations</th>
<th>46</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>46</td>
</tr>
<tr>
<td>African American Studies</td>
<td>46</td>
</tr>
<tr>
<td>Animal Science</td>
<td>46</td>
</tr>
<tr>
<td>Anthropology</td>
<td>47</td>
</tr>
<tr>
<td>Astronomy</td>
<td>48</td>
</tr>
<tr>
<td>Biology</td>
<td>49</td>
</tr>
<tr>
<td>Chemistry</td>
<td>54</td>
</tr>
<tr>
<td>Communication</td>
<td>57</td>
</tr>
<tr>
<td>Community or Public Service</td>
<td>59</td>
</tr>
<tr>
<td>Communication Disorders</td>
<td>60</td>
</tr>
<tr>
<td>Computer Science</td>
<td>61</td>
</tr>
<tr>
<td>Criminology</td>
<td>64</td>
</tr>
<tr>
<td>Economics</td>
<td>65</td>
</tr>
<tr>
<td>Education</td>
<td>65</td>
</tr>
<tr>
<td>English Literature</td>
<td>66</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>67</td>
</tr>
<tr>
<td>Finance</td>
<td>68</td>
</tr>
<tr>
<td>Geography</td>
<td>68</td>
</tr>
<tr>
<td>Geology</td>
<td>68</td>
</tr>
<tr>
<td>International Studies</td>
<td>70</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>70</td>
</tr>
<tr>
<td>Linguistics</td>
<td>71</td>
</tr>
<tr>
<td>Literature</td>
<td>71</td>
</tr>
<tr>
<td>Marketing</td>
<td>72</td>
</tr>
<tr>
<td>Mathematics &amp; Statistics</td>
<td>72</td>
</tr>
<tr>
<td>Merchandising &amp; Textiles</td>
<td>73</td>
</tr>
<tr>
<td>Microbiology</td>
<td>74</td>
</tr>
<tr>
<td>Multimedia</td>
<td>74</td>
</tr>
<tr>
<td>Nursing</td>
<td>74</td>
</tr>
<tr>
<td>Nutrition &amp; Food Science</td>
<td>75</td>
</tr>
<tr>
<td>Pharmacy &amp; Pharmacology</td>
<td>76</td>
</tr>
<tr>
<td>Philosophy</td>
<td>77</td>
</tr>
<tr>
<td>Physics</td>
<td>77</td>
</tr>
<tr>
<td>Political Science</td>
<td>78</td>
</tr>
<tr>
<td>Psychology</td>
<td>78</td>
</tr>
<tr>
<td>Social Work</td>
<td>86</td>
</tr>
<tr>
<td>Sociology</td>
<td>87</td>
</tr>
<tr>
<td>Studio Art</td>
<td>88</td>
</tr>
<tr>
<td>Visual Arts</td>
<td>89</td>
</tr>
</tbody>
</table>

## Indexes

<table>
<thead>
<tr>
<th>Index of Primary Presenters</th>
<th>90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index of Primary Presenters by School</td>
<td>93</td>
</tr>
</tbody>
</table>
Acknowledgements

We would like to acknowledge the Seaport Hotel/World Trade Center Boston for offering their facilities at a reduced rate for this year’s conference.

Thanks also go to the many faculty members who volunteered their time and expertise to review abstracts and gave invaluable guidance to student presenters.

We would like to express great appreciation to the following campus contacts for their time and support of the conference:

Ellen Shanahan Berkshire Community College
Andrew Harris Bridgewater State College
Greg Sethares Bristol Community College
Joan Brenner Bunker Hill Community College
Mary Cordill Cape Cod Community College
John Chetro-Szivos Fitchburg State College
Susanne H. Conley Framingham State College
Anne Wiley Greenfield Community College
Kim Hicks Holyoke Community College
David Langston Mass College of Liberal Arts
Carolyn Ann Cohen Massachusetts Bay Community College
Janna Longacre Massachusetts College of Art
Brad Lima Massachusetts Maritime Academy
David Lafontaine Massasoit Community College
Cathy Pride Middlesex Community College
Thomas Malloy Mount Wachusett Community College
Marcy Marold North Shore Community College
Ginger Hurajt Northern Essex Community College
Maura Tighe-Stickles Quinsigamond Community College
Everest Onuoha Roxbury Community College
Rod Kessler Salem State College
Arlene Rodriguez Springfield Technical College
Joyce Morrissey UMass Boston
Louise Habich UMass Dartmouth
Stephen Pennell UMass Lowell
Kathleen McIntosh Westfield State College
Sharon Yang Worcester State College
### Conference Schedule

<table>
<thead>
<tr>
<th>Event</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration</td>
<td>8:30 a.m. – 9:20 a.m.</td>
</tr>
<tr>
<td>Welcome (Waterfront Ballroom)</td>
<td>9:20 a.m. – 9:50 a.m.</td>
</tr>
<tr>
<td>Morning Poster and Oral Sessions</td>
<td>10:00 a.m. – 12:00 p.m.</td>
</tr>
<tr>
<td>Convocation &amp; Keynote Address (Waterfront Ballroom)</td>
<td>12:10 p.m. – 12:40 p.m.</td>
</tr>
<tr>
<td>Lunch Break</td>
<td>12:40 p.m. – 1:40 p.m.</td>
</tr>
<tr>
<td>Afternoon Poster and Oral Sessions</td>
<td>1:40 p.m. – 3:40 p.m.</td>
</tr>
<tr>
<td>Closing (Waterfront Ballroom)</td>
<td>3:40 p.m. – 4:00 p.m.</td>
</tr>
</tbody>
</table>
Seaport Hotel
World Trade Center Boston

Map of Conference Facilities
# Schedule of Presentations

## Oral, Visual and Performing Arts Presentations

Oral presentations are grouped in one-hour-long panels. Each primary presenter (whether presenting an individual or group project) gives a 10-minute presentation, and a 15-minute discussion for the entire panel follows.

### Back Bay 1 Complex

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jason Proulx</td>
<td>Chemistry</td>
<td>Bristol Community College</td>
<td>10:00-11:00</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Jasy Campbell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>John Golda</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Darren Hilliard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eric Resendes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wanda Westgate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shannon Williams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Jing Dong</td>
<td>Computer Science</td>
<td>UMass Boston</td>
<td>10:00-11:00</td>
<td>28</td>
</tr>
<tr>
<td>1</td>
<td>Raymond Wong</td>
<td>Marketing</td>
<td>UMass Dartmouth</td>
<td>10:00-11:00</td>
<td>78</td>
</tr>
<tr>
<td>1</td>
<td>Henock Legesse</td>
<td>Physics</td>
<td>UMass Boston</td>
<td>10:00-11:00</td>
<td>91</td>
</tr>
<tr>
<td>2</td>
<td>Lisa Ehl</td>
<td>History</td>
<td>UMass Boston</td>
<td>11:00-12:00</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>Amy Wilfong</td>
<td>Philosophy</td>
<td>Worcester State College</td>
<td>11:00-12:00</td>
<td>90</td>
</tr>
<tr>
<td>2</td>
<td>Kim Traucenie</td>
<td>Political Science</td>
<td>UMass Boston</td>
<td>11:00-12:00</td>
<td>94</td>
</tr>
<tr>
<td>2</td>
<td>Chasity Menard</td>
<td>Sociology</td>
<td>UMass Dartmouth</td>
<td>11:00-12:00</td>
<td>104</td>
</tr>
<tr>
<td>3</td>
<td>Scott Lownie</td>
<td>Education</td>
<td>Salem State College</td>
<td>1:40-2:40</td>
<td>35</td>
</tr>
<tr>
<td>3</td>
<td>Kristen Malli</td>
<td>English</td>
<td>Fitchburg State College</td>
<td>1:40-2:40</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>Carolyn Ritter</td>
<td>Marketing</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>Julie Matta</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Melinda Silveira</td>
<td>Social Work</td>
<td>Salem State College</td>
<td>1:40-2:40</td>
<td>102</td>
</tr>
<tr>
<td>4</td>
<td>Lisa Pires</td>
<td>African American Studies</td>
<td>Bristol Community College</td>
<td>2:40-3:40</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Rebecca Iwerks</td>
<td>Community or Public Service</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>Carolyn Murphy</td>
<td>English Literature</td>
<td>Fitchburg State College</td>
<td>2:40-3:40</td>
<td>58</td>
</tr>
<tr>
<td>4</td>
<td>Byron Simmons</td>
<td>Philosophy</td>
<td>Holyoke Community College</td>
<td>2:40-3:40</td>
<td>89</td>
</tr>
</tbody>
</table>

### Back Bay 2 Complex

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jeanne Kent</td>
<td>English</td>
<td>UMass Boston</td>
<td>10:00-11:00</td>
<td>44</td>
</tr>
<tr>
<td>1</td>
<td>Marina Picket</td>
<td>English</td>
<td>Massasoit Community</td>
<td>10:00-11:00</td>
<td>47</td>
</tr>
<tr>
<td>1</td>
<td>Trisha Farco</td>
<td>English</td>
<td>Mass College of Liberal Arts</td>
<td>10:00-11:00</td>
<td>41</td>
</tr>
<tr>
<td>1</td>
<td>Todd Erickson</td>
<td>English</td>
<td>UMass Amherst</td>
<td>10:00-11:00</td>
<td>40</td>
</tr>
<tr>
<td>2</td>
<td>Russell Hansen</td>
<td>Classical Language &amp; Literature</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>22</td>
</tr>
<tr>
<td>2</td>
<td>Daniel Smith</td>
<td>Classical Language &amp; Literature</td>
<td>UMass Boston</td>
<td>11:00-12:00</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>Stacey Guella</td>
<td>English</td>
<td>Worcester State College</td>
<td>11:00-12:00</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>Alicia Kendall</td>
<td>English Literature</td>
<td>UMass Dartmouth</td>
<td>11:00-12:00</td>
<td>180</td>
</tr>
<tr>
<td>3</td>
<td>Justin Libby</td>
<td>Anthropology</td>
<td>UMass Boston</td>
<td>1:40-2:40</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>John DiMatteo</td>
<td>Biology</td>
<td>Holyoke Community College</td>
<td>1:40-2:40</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Lindsay Funk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Erin Haas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>William Loew</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jennifer Putnam</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Back Bay 2 Complex

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Lindsay Funk</td>
<td>Environmental Studies</td>
<td>Holyoke Community College</td>
<td>1:40-2:40</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>John DiMatteo Jr.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>William Loew</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jennifer Putnam</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Raycho Thomas</td>
<td>History</td>
<td>Framingham State College</td>
<td>1:40-2:40</td>
<td>69</td>
</tr>
<tr>
<td>4</td>
<td>Kristi Glenn</td>
<td>Decision Science</td>
<td>Massasoit Community</td>
<td>2:40-3:40</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>David Bisson</td>
<td>Economics</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>32</td>
</tr>
<tr>
<td>4</td>
<td>Fiona Finch</td>
<td>Management</td>
<td>Salem State College</td>
<td>2:40-3:40</td>
<td>74</td>
</tr>
</tbody>
</table>

### Federal 1 Complex

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gina Mattson</td>
<td>Education</td>
<td>Salem State College</td>
<td>10:00-11:00</td>
<td>36</td>
</tr>
<tr>
<td>1</td>
<td>Sandra Thompson</td>
<td>Education</td>
<td>Massasoit Community</td>
<td>10:00-11:00</td>
<td>37</td>
</tr>
<tr>
<td>1</td>
<td>Jaclyn Donovan</td>
<td>English</td>
<td>Worcester State College</td>
<td>10:00-11:00</td>
<td>39</td>
</tr>
<tr>
<td>1</td>
<td>Jacquelyn Smith</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>10:00-11:00</td>
<td>99</td>
</tr>
<tr>
<td>2</td>
<td>Edwin Velis</td>
<td>Economics</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Jennifer DuLong</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Nicole Yukna</td>
<td>History</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>70</td>
</tr>
<tr>
<td>2</td>
<td>Krista Ferrante</td>
<td>History</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>66</td>
</tr>
<tr>
<td>2</td>
<td>John Tawa</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>11:00-12:00</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Brandy Rose</td>
<td>Animal Studies</td>
<td>Massasoit Community</td>
<td>1:40-2:40</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Ryan Quinn</td>
<td>Philosophy</td>
<td>Mass College of Liberal Arts</td>
<td>1:40-2:40</td>
<td>88</td>
</tr>
<tr>
<td>3</td>
<td>Marie Albano</td>
<td>Social Work</td>
<td>Massachusetts Bay</td>
<td>1:40-2:40</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Dianne Dixon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tony Jacob</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Daniel McShane</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Arturo Ortega</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stephanie Tortorella</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Elizabeth Verbitsky</td>
<td>Social Work</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>103</td>
</tr>
<tr>
<td>4</td>
<td>Karina Schrengohst</td>
<td>English Literature</td>
<td>Holyoke Community College</td>
<td>2:40-3:40</td>
<td>59</td>
</tr>
<tr>
<td>4</td>
<td>Holly Moren</td>
<td>English Literature</td>
<td>Westfield State College</td>
<td>2:40-3:40</td>
<td>57</td>
</tr>
<tr>
<td>4</td>
<td>Alexander Fairley</td>
<td>Psychology</td>
<td>North Shore Community</td>
<td>2:40-3:40</td>
<td>95</td>
</tr>
<tr>
<td>4</td>
<td>Sean Tierney</td>
<td>Visual Arts</td>
<td>Massasoit Community</td>
<td>2:40-3:40</td>
<td>108</td>
</tr>
</tbody>
</table>

### Federal 2 Complex

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sarah Pomerantz</td>
<td>Anthropology</td>
<td>UMass Amherst</td>
<td>10:00-11:00</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>Julie McGee</td>
<td>Kinesiology</td>
<td>UMass Amherst</td>
<td>10:00-11:00</td>
<td>72</td>
</tr>
<tr>
<td>1</td>
<td>Kimberly Hastings</td>
<td>Nursing</td>
<td>UMass Dartmouth</td>
<td>10:00-11:00</td>
<td>83</td>
</tr>
<tr>
<td>2</td>
<td>Jordan Atlas</td>
<td>Chemical Engineering</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Carolyn Robinson</td>
<td>Chemistry</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Rebecca Maynard</td>
<td>Chemistry</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>Kathryn Pikora</td>
<td>Biology</td>
<td>Salem State College</td>
<td>1:40-2:40</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>Rachel Kester</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Lee Stanish</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>Joseph Fraiman</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>96</td>
</tr>
<tr>
<td>4</td>
<td>Craig Cipolla</td>
<td>Anthropology</td>
<td>UMass Boston</td>
<td>2:40-3:40</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Josiah Mayo</td>
<td>Anthropology</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Britt Zartman</td>
<td>History</td>
<td>Bristol Community College</td>
<td>2:40-3:40</td>
<td>71</td>
</tr>
<tr>
<td>4</td>
<td>Alexander Cotter</td>
<td>Mathematics &amp; Statistics</td>
<td>Massasoit Community</td>
<td>2:40-3:40</td>
<td>79</td>
</tr>
</tbody>
</table>
### Waterfront 1A Room

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Jennifer Liebsch Smith</td>
<td>Economics</td>
<td>Bunker Hill Community College</td>
<td>11:00-12:00</td>
<td>33</td>
</tr>
<tr>
<td>2</td>
<td>Paul Witter</td>
<td>English</td>
<td>Cape Cod Community</td>
<td>11:00-12:00</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>Elizabeth LaFond</td>
<td>English Literature</td>
<td>Westfield State College</td>
<td>11:00-12:00</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>Esther Schleidweiler</td>
<td>Political Science</td>
<td>Salem State College</td>
<td>11:00-12:00</td>
<td>93</td>
</tr>
<tr>
<td>3</td>
<td>Gina Palumbo</td>
<td>Art History</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>7</td>
</tr>
<tr>
<td>3</td>
<td>Jennifer Pierce</td>
<td>Environmental Studies</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>64</td>
</tr>
<tr>
<td>3</td>
<td>Angela Amaral</td>
<td>Visual Arts</td>
<td>Bristol Community College</td>
<td>1:40-2:40</td>
<td>107</td>
</tr>
<tr>
<td>4</td>
<td>Sidra Iqbal</td>
<td>Chemistry</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>John Carter</td>
<td>Chemistry</td>
<td>Framingham State College</td>
<td>2:40-3:40</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>Thomas Gass</td>
<td>Chemistry</td>
<td>Salem State College</td>
<td>2:40-3:40</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>Andrew Latham</td>
<td>Chemistry</td>
<td>Salem State College</td>
<td>2:40-3:40</td>
<td>18</td>
</tr>
</tbody>
</table>

### Waterfront 1B Room

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nicholas Giarratani</td>
<td>English Literature</td>
<td>Salem State College</td>
<td>10:00-11:00</td>
<td>54</td>
</tr>
<tr>
<td>1</td>
<td>Lillian Waugh</td>
<td>English Literature</td>
<td>Massasoit Community</td>
<td>10:00-11:00</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Ted Giovannini</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dew Jareanvai</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stephanie Maziarz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Michael Schneider</td>
<td>History</td>
<td>Springfield Technical</td>
<td>10:00-11:00</td>
<td>68</td>
</tr>
<tr>
<td>2</td>
<td>Molly Layton</td>
<td>Classical Language &amp; Literature</td>
<td>UMass Amherst</td>
<td>11:00-12:00</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>Eurides Lopes</td>
<td>English</td>
<td>Massasoit Community</td>
<td>11:00-12:00</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>Jacob Ball</td>
<td>English Literature</td>
<td>Worcester State College</td>
<td>11:00-12:00</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>Barbara Fox</td>
<td>History</td>
<td>UMass Boston</td>
<td>11:00-12:00</td>
<td>67</td>
</tr>
<tr>
<td>3</td>
<td>Jonathan DeLong</td>
<td>Chemistry</td>
<td>Springfield Technical</td>
<td>1:40-2:40</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Jodi Arruda Jones</td>
<td>Multimedia</td>
<td>Bristol Community College</td>
<td>1:40-2:40</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>Kristin Helgaard</td>
<td>Nutrition &amp; Food Science</td>
<td>UMass Amherst</td>
<td>1:40-2:40</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>Amanda Boudreault</td>
<td>Philosophy</td>
<td>Mass College of Liberal Arts</td>
<td>1:40-2:40</td>
<td>85</td>
</tr>
<tr>
<td>4</td>
<td>Marita Callahan</td>
<td>Community or Public Service</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>Erin Burnham</td>
<td>Nursing</td>
<td>Salem State College</td>
<td>2:40-3:40</td>
<td>81</td>
</tr>
<tr>
<td>4</td>
<td>Jenna Cullivan</td>
<td>Nursing</td>
<td>UMass Dartmouth</td>
<td>2:40-3:40</td>
<td>82</td>
</tr>
<tr>
<td>4</td>
<td>Miriam Parrish</td>
<td>Political Science</td>
<td>UMass Amherst</td>
<td>2:40-3:40</td>
<td>92</td>
</tr>
</tbody>
</table>

### Waterfront 1C Room

<table>
<thead>
<tr>
<th>Panel</th>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Erin Hickey</td>
<td>Marketing</td>
<td>UMass Amherst</td>
<td>10:00-11:00</td>
<td>75</td>
</tr>
<tr>
<td>1</td>
<td>Marcie Judges</td>
<td>Marketing</td>
<td>UMass Amherst</td>
<td>10:00-11:00</td>
<td>76</td>
</tr>
<tr>
<td>1</td>
<td>Angela Klimowicz</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>10:00-11:00</td>
<td>98</td>
</tr>
<tr>
<td>2</td>
<td>Andrew Jennings</td>
<td>English</td>
<td>Westfield State College</td>
<td>11:00-12:00</td>
<td>43</td>
</tr>
<tr>
<td>2</td>
<td>James-Ethan Linton</td>
<td>Philosophy</td>
<td>Worcester State College</td>
<td>11:00-12:00</td>
<td>86</td>
</tr>
<tr>
<td>2</td>
<td>Steven Moran</td>
<td>Philosophy</td>
<td>Massasoit Community</td>
<td>11:00-12:00</td>
<td>87</td>
</tr>
<tr>
<td>3</td>
<td>Amber Vayo</td>
<td>English</td>
<td>Worcester State College</td>
<td>1:40-2:40</td>
<td>49</td>
</tr>
<tr>
<td>3</td>
<td>Jane Wrezinski</td>
<td>English</td>
<td>Mass College of Liberal Arts</td>
<td>1:40-2:40</td>
<td>52</td>
</tr>
<tr>
<td>3</td>
<td>Nancy Timmins</td>
<td>English Literature</td>
<td>Massasoit Community</td>
<td>1:40-2:40</td>
<td>61</td>
</tr>
<tr>
<td>3</td>
<td>Amanda Lavoroga</td>
<td>English Literature</td>
<td>Worcester State College</td>
<td>1:40-2:40</td>
<td>56</td>
</tr>
<tr>
<td>4</td>
<td>Adam Carroll</td>
<td>English</td>
<td>Mass College of Liberal Arts</td>
<td>2:40-3:40</td>
<td>38</td>
</tr>
<tr>
<td>4</td>
<td>Heidi Smith</td>
<td>English</td>
<td>Mass College of Liberal Arts</td>
<td>2:40-3:40</td>
<td>48</td>
</tr>
<tr>
<td>4</td>
<td>Jason Wandrei</td>
<td>English</td>
<td>Mass College of Liberal Arts</td>
<td>2:40-3:40</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Marty McEvoy</td>
<td>Literature</td>
<td>Mass College of Liberal Arts</td>
<td>2:40-3:40</td>
<td>73</td>
</tr>
</tbody>
</table>
### Waterfront 2 & 3 - Visual and Performing Arts Presentations

<table>
<thead>
<tr>
<th>Presenter</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Lanza</td>
<td>Communication</td>
<td>Massasoit Community</td>
<td>11:20-11:40</td>
<td>25</td>
</tr>
<tr>
<td>Richard Casey</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael Grealey</td>
<td>Dance</td>
<td>UMass Boston</td>
<td>11:00-11:20</td>
<td>29</td>
</tr>
<tr>
<td>Ruth Shimano-Hackett</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ruth Shimano-Hackett</td>
<td>Dance</td>
<td>UMass Boston</td>
<td>10:40-11:00</td>
<td>30</td>
</tr>
<tr>
<td>Rocky Graziano</td>
<td>Theatre</td>
<td>UMass Boston</td>
<td>10:00-10:20</td>
<td>105</td>
</tr>
<tr>
<td>Marta Johnson</td>
<td>Theatre</td>
<td>UMass Boston</td>
<td>10:20-10:40</td>
<td>106</td>
</tr>
</tbody>
</table>

### Poster Presentations - Cityview Ballroom

**Morning Session:** 10:00 A.M.–12:00 P.M.; **Afternoon Session:** 1:40 P.M.–3:40 P.M.

#### Morning Session

<table>
<thead>
<tr>
<th>Board</th>
<th>Presenters</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amy Tessier Rachael Wade</td>
<td>Community or Public Service</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>161</td>
</tr>
<tr>
<td>2</td>
<td>Stacey Roth Patricia Murphy Deirdre Lawson</td>
<td>Communication Disorders</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>160</td>
</tr>
<tr>
<td>3</td>
<td>Fatmata Braima</td>
<td>Community or Public Service</td>
<td>Massasoit Community</td>
<td>10:00-12:00</td>
<td>156</td>
</tr>
<tr>
<td>4</td>
<td>Rebecca Ford Ann-Marie DeMoranville Miguel Martinez</td>
<td>Accounting</td>
<td>Bristol Community College</td>
<td>10:00-12:00</td>
<td>109</td>
</tr>
<tr>
<td>5</td>
<td>Yanyu Li Maria Ferreira</td>
<td>International Studies</td>
<td>Salem State College</td>
<td>10:00-12:00</td>
<td>193</td>
</tr>
<tr>
<td>6</td>
<td>R Marie Flores Rachel Norman</td>
<td>Biology</td>
<td>Bunker Hill Community College</td>
<td>10:00-12:00</td>
<td>124</td>
</tr>
<tr>
<td>7</td>
<td>Samantha Baker Anastasia Dubrovsky</td>
<td>Community or Public Service</td>
<td>Fitchburg State College</td>
<td>10:00-12:00</td>
<td>155</td>
</tr>
<tr>
<td>8</td>
<td>Donna Lynne Demanarig</td>
<td>Community or Public Service</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>158</td>
</tr>
<tr>
<td>9</td>
<td>Lisa Siemaszko Michele Barako Eric Koehler Nicole Nesbitt Trish Tearney Trish Tearney Vicky Voltatzis</td>
<td>Marketing</td>
<td>UMass Dartmouth</td>
<td>10:00-12:00</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>Katrina Kellogg Benjamin Reed</td>
<td>Economics</td>
<td>UMass Boston</td>
<td>10:00-12:00</td>
<td>175</td>
</tr>
<tr>
<td>11</td>
<td>Katie Murphy Lisa Clark</td>
<td>Communication</td>
<td>Fitchburg State College</td>
<td>10:00-12:00</td>
<td>154</td>
</tr>
<tr>
<td>12</td>
<td>Melissa Gauvin Courtney Miller</td>
<td>Merchandising &amp; Textiles</td>
<td>Framingham State College</td>
<td>10:00-12:00</td>
<td>149</td>
</tr>
<tr>
<td>13</td>
<td>Valerie Mei Stephanie Dussourd</td>
<td>Merchandising &amp; Textiles</td>
<td>Framingham State College</td>
<td>10:00-12:00</td>
<td>202</td>
</tr>
<tr>
<td>14</td>
<td>Jaclyn Jefgood Casey Demoree</td>
<td>Communication</td>
<td>Salem State College</td>
<td>10:00-12:00</td>
<td>152</td>
</tr>
<tr>
<td>15</td>
<td>Christopher Bradley Samantha Inman</td>
<td>Communication</td>
<td>Massasoit Community</td>
<td>10:00-12:00</td>
<td>148</td>
</tr>
<tr>
<td>16</td>
<td>Communication</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>186</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Financial</td>
<td>Communication</td>
<td>Salem State College</td>
<td>10:00-12:00</td>
<td>150</td>
</tr>
<tr>
<td>18</td>
<td>Communication</td>
<td>Salem State College</td>
<td>10:00-12:00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board</td>
<td>Presenters</td>
<td>Field of Presentation</td>
<td>Campus</td>
<td>Time</td>
<td>Abst.#</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>-----------------------</td>
<td>--------</td>
<td>---------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 25    | Edgar Contreras  
Najeeb Badar  
Brian Durand  
Sun Yeren | Marketing | Bunker Hill Community College | 10:00-12:00 | 199 |
| 26    | sindhura sunkara | Computer Science | UMass Boston | 10:00-12:00 | 171 |
| 27    | Ramy Hanna | Computer Science | Bunker Hill Community College | 10:00-12:00 | 166 |
| 28    | David Lavigne | Computer Science | UMass Amherst | 10:00-12:00 | 167 |
| 29    | Lucas Black | Computer Science | Bunker Hill Community College | 10:00-12:00 | 163 |
| 30    | Elizabeth Gaudet  
Jose Charles | Computer Science | Bunker Hill Community College | 10:00-12:00 | 164 |
| 31    | Frantzy Germain | Computer Science | Bunker Hill Community College | 10:00-12:00 | 165 |
| 32    | Gregory Walek | Multimedia | UMass Amherst | 10:00-12:00 | 206 |
| 33    | James Muturi | Computer Science | Salem State College | 10:00-12:00 | 168 |
| 34    | Bulat Sultanov | Computer Science | Bunker Hill Community College | 10:00-12:00 | 170 |
| 35    | Patricia Parrish | Computer Science | Bunker Hill Community College | 10:00-12:00 | 169 |
| 36    | Robert Aquadro | Physics | UMass Amherst | 10:00-12:00 | 217 |
| 37    | Catherine Colby  
Mary Clare Blais  
Richard Collette, Jr  
Joan Gallagher  
Christina Harwood  
Thomas Lawlor  
Jennifer Maher  
Janet Wilkins  
Mikki Wilson | Astronomy | North Shore Community | 10:00-12:00 | 118 |
| 38    | Byron Simmons | Mathematics & Statistics | Holyoke Community College | 10:00-12:00 | 201 |
| 39    | Rose Lawler | Chemistry | UMass Amherst | 10:00-12:00 | 143 |
| 40    | Mary Golden | Chemistry | UMass Amherst | 10:00-12:00 | 139 |
| 41    | Katharine Harris | Chemistry | UMass Amherst | 10:00-12:00 | 140 |
| 42    | Ilvin Polena  
Judson Boisvert | Chemistry | Worcester State College | 10:00-12:00 | 144 |
| 43    | Eric Steele | Chemistry | UMass Dartmouth | 10:00-12:00 | 146 |
| 44    | Kurt van Vloten | Chemistry | UMass Boston | 10:00-12:00 | 147 |
| 45    | Miwako Kondo | Chemistry | UMass Dartmouth | 10:00-12:00 | 142 |
| 46    | Marlene DeAbreu | Chemistry | UMass Dartmouth | 10:00-12:00 | 138 |
| 47    | Clara Jordan | Chemistry | UMass Dartmouth | 10:00-12:00 | 141 |
| 48    | Fernando Coutinho | Chemistry | Bunker Hill Community College | 10:00-12:00 | 137 |
| 49    | Suzanne Grant | Biology | UMass Boston | 10:00-12:00 | 9 |
| 50    | Jennifer Wilkins | Biology | UMass Amherst | 10:00-12:00 | 134 |
| 51    | Kimberly Salaycik | Biology | UMass Amherst | 10:00-12:00 | 126 |
| 52    | Patricia Squitiero | Biology | UMass Amherst | 10:00-12:00 | 130 |
| 53    | Danielle Arsenault | Biology | UMass Amherst | 10:00-12:00 | 119 |
| 54    | Kathleen Nestor | Animal Sciences | UMass Amherst | 10:00-12:00 | 112 |
| 55    | Maureen Kelly | Environmental Studies | UMass Boston | 10:00-12:00 | 183 |
| 56    | Esther Smith | Biology | UMass Boston | 10:00-12:00 | 128 |
| 57    | Catherine Moroski | Environmental Studies | UMass Boston | 10:00-12:00 | 184 |
| 58    | SHANG-SHUAN YU  
Julianna Campos | Biology | UMass Boston | 10:00-12:00 | 135 |
| 59    | Douglas Shoemaker | Biology | UMass Boston | 10:00-12:00 | 127 |
| 60    | Jessie St. Martin  
Alexa Mac Pherson | Biology | UMass Boston | 10:00-12:00 | 131 |
### Morning Session - Poster Presentations - Cityview Ballroom

<table>
<thead>
<tr>
<th>Board</th>
<th>Presenters</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>Ivana Djuretic</td>
<td>Biology</td>
<td>UMass Boston</td>
<td>10:00-12:00</td>
<td>123</td>
</tr>
<tr>
<td>62</td>
<td>Kristin Forloney</td>
<td>Microbiology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>205</td>
</tr>
<tr>
<td>63</td>
<td>Shalu Shelat</td>
<td>Environmental Studies</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>185</td>
</tr>
<tr>
<td>64</td>
<td>Jeremiah Farelli</td>
<td>Pharmacy &amp; Pharmacology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>214</td>
</tr>
<tr>
<td>65</td>
<td>Emily Miller</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>125</td>
</tr>
<tr>
<td>66</td>
<td>Marietta Walsh</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>133</td>
</tr>
<tr>
<td>67</td>
<td>Andrew Bellemer</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>120</td>
</tr>
<tr>
<td>68</td>
<td>Stephanie Carter</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>121</td>
</tr>
<tr>
<td>69</td>
<td>Robert Smock</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>129</td>
</tr>
<tr>
<td>70</td>
<td>Rachel Sugal</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>132</td>
</tr>
<tr>
<td>71</td>
<td>Shideh Shafie</td>
<td>Chemistry</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>145</td>
</tr>
<tr>
<td>72</td>
<td>Chun-Hsing Chen</td>
<td>Chemistry</td>
<td>UMass Dartmouth</td>
<td>10:00-12:00</td>
<td>136</td>
</tr>
<tr>
<td>73</td>
<td>Ana Palacios</td>
<td>Visual Arts</td>
<td>Bunker Hill Community College</td>
<td>10:00-12:00</td>
<td>258</td>
</tr>
<tr>
<td>74</td>
<td>Gertrude Mageza</td>
<td>Studio Art</td>
<td>Bunker Hill Community College</td>
<td>10:00-12:00</td>
<td>255</td>
</tr>
<tr>
<td>75</td>
<td>Melinda Amaral</td>
<td>Visual Arts</td>
<td>Bristol Community College</td>
<td>10:00-12:00</td>
<td>256</td>
</tr>
<tr>
<td>76</td>
<td>Kelly Carrico</td>
<td>Visual Arts</td>
<td>Massasoit Community</td>
<td>10:00-12:00</td>
<td>257</td>
</tr>
<tr>
<td>79</td>
<td>Nicholas Obolensky</td>
<td>Anthropology</td>
<td>UMass Amherst</td>
<td>10:00-12:00</td>
<td>114</td>
</tr>
</tbody>
</table>

### Poster Presentations - Cityview Ballroom

Morning Session: 10:00 A.M.–12:00 P.M.; Afternoon Session: 1:40 P.M.–3:40 P.M.

### Afternoon Session

<table>
<thead>
<tr>
<th>Board</th>
<th>Presenters</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shannon Andrade, Nathan Brown, Jon Clermont, Karen Goscininski, Sondra Morin, Kristin Purdy, Holly Schaaf, Ellen Ulyanova</td>
<td>Literature</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>197</td>
</tr>
<tr>
<td>2</td>
<td>Gary Marchand</td>
<td>English Literature</td>
<td>Massasoit Community</td>
<td>1:40-3:40</td>
<td>182</td>
</tr>
<tr>
<td>3</td>
<td>Kristin Loko</td>
<td>English Literature</td>
<td>Westfield State College</td>
<td>1:40-3:40</td>
<td>181</td>
</tr>
<tr>
<td>5</td>
<td>Elizabeth Cassidy</td>
<td>Literature</td>
<td>Massasoit Community</td>
<td>1:40-3:40</td>
<td>198</td>
</tr>
<tr>
<td>6</td>
<td>Timothy Smith</td>
<td>English Literature</td>
<td>Massasoit Community</td>
<td>1:40-3:40</td>
<td>60</td>
</tr>
<tr>
<td>7</td>
<td>Mark Lowell</td>
<td>Political Science</td>
<td>Massasoit Community</td>
<td>1:40-3:40</td>
<td>218</td>
</tr>
<tr>
<td>8</td>
<td>Emily Batchelder, Jill Rice, Tammy Bronson</td>
<td>Criminology</td>
<td>Mount Wachusett Community</td>
<td>1:40-3:40</td>
<td>172</td>
</tr>
<tr>
<td>9</td>
<td>Jessica Roche, David Dionne, Tiffini Piesyk</td>
<td>Criminology</td>
<td>Mount Wachusett Community</td>
<td>1:40-3:40</td>
<td>174</td>
</tr>
<tr>
<td>10</td>
<td>Amanda Levesque</td>
<td>International Studies</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>192</td>
</tr>
<tr>
<td>11</td>
<td>Renay McManus</td>
<td>Economics</td>
<td>Northern Essex Community</td>
<td>1:40-3:40</td>
<td>176</td>
</tr>
<tr>
<td>12</td>
<td>William Powers</td>
<td>Political Science</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>219</td>
</tr>
<tr>
<td>13</td>
<td>Joan Hawes</td>
<td>Philosophy</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>215</td>
</tr>
<tr>
<td>14</td>
<td>Karla Hubschwerlin</td>
<td>Geology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>188</td>
</tr>
<tr>
<td>Board</td>
<td>Presenters</td>
<td>Field of Presentation</td>
<td>Campus</td>
<td>Time</td>
<td>Abst.#</td>
</tr>
<tr>
<td>-------</td>
<td>------------</td>
<td>-----------------------</td>
<td>--------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>15</td>
<td>Elizabeth Smith</td>
<td>Geology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>191</td>
</tr>
<tr>
<td>16</td>
<td>Erik Olson</td>
<td>Geology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>189</td>
</tr>
<tr>
<td>17</td>
<td>Fletcher Schneeflock</td>
<td>Geology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>190</td>
</tr>
<tr>
<td>18</td>
<td>Heather Ruel</td>
<td>Geography</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>187</td>
</tr>
<tr>
<td>19</td>
<td>Mary Quilty</td>
<td>Anthropology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>116</td>
</tr>
<tr>
<td>20</td>
<td>Lori Mulcahy</td>
<td>African American Studies</td>
<td>Bristol Community College</td>
<td>1:40-3:40</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>Deborah Malone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Betina Steiger</td>
<td>Anthropology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>117</td>
</tr>
<tr>
<td>22</td>
<td>Jennifer Garnache</td>
<td>Anthropology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>113</td>
</tr>
<tr>
<td>23</td>
<td>Brenda Pires</td>
<td>Anthropology</td>
<td>Bristol Community College</td>
<td>1:40-3:40</td>
<td>115</td>
</tr>
<tr>
<td>24</td>
<td>Natalie Deed</td>
<td>Psychology</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>226</td>
</tr>
<tr>
<td>25</td>
<td>Patricia Warren</td>
<td>African American Studies</td>
<td>Bristol Community College</td>
<td>1:40-3:40</td>
<td>111</td>
</tr>
<tr>
<td>26</td>
<td>Tammy Holleman</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>230</td>
</tr>
<tr>
<td>27</td>
<td>Derek Benoit</td>
<td>Nutrition &amp; Food Science</td>
<td>Bunker Hill Community College</td>
<td>1:40-3:40</td>
<td>211</td>
</tr>
<tr>
<td>28</td>
<td>Kristen Abdow</td>
<td>Education</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>177</td>
</tr>
<tr>
<td>29</td>
<td>Rachel Wintner</td>
<td>Linguistics</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>196</td>
</tr>
<tr>
<td>30</td>
<td>Jill Rodrigues</td>
<td>Sociology</td>
<td>Bristol Community College</td>
<td>1:40-3:40</td>
<td>252</td>
</tr>
<tr>
<td>31</td>
<td>Jennifer Benoit</td>
<td>Nursing</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>208</td>
</tr>
<tr>
<td></td>
<td>Tabitha Topham</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Melissa Tomey</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>244</td>
</tr>
<tr>
<td>33</td>
<td>Jane Bruce</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>223</td>
</tr>
<tr>
<td>34</td>
<td>Fatima Andrade</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>220</td>
</tr>
<tr>
<td>35</td>
<td>Erin Cote</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>225</td>
</tr>
<tr>
<td>36</td>
<td>Brigitte DosSantos</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>227</td>
</tr>
<tr>
<td>37</td>
<td>Scott Guerin</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>219</td>
</tr>
<tr>
<td>38</td>
<td>Jamie Goldsmith</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>97</td>
</tr>
<tr>
<td>39</td>
<td>Karyn Stafford</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>243</td>
</tr>
<tr>
<td>40</td>
<td>Naomi Campbell</td>
<td>Education</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>178</td>
</tr>
<tr>
<td>41</td>
<td>Cindy Hollister</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>231</td>
</tr>
<tr>
<td>42</td>
<td>Amanda Angie</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>221</td>
</tr>
<tr>
<td>43</td>
<td>Jennifer Weis</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>246</td>
</tr>
<tr>
<td>44</td>
<td>William Kennedy</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>233</td>
</tr>
<tr>
<td>45</td>
<td>Allison Salvi</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>241</td>
</tr>
<tr>
<td></td>
<td>Brooke Sebastiao</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Valerie Peterson</td>
<td>Psychology</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>239</td>
</tr>
<tr>
<td>47</td>
<td>Stephen Howley</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>232</td>
</tr>
<tr>
<td>48</td>
<td>Erica Fleming</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>228</td>
</tr>
<tr>
<td>49</td>
<td>Katelyn LeClerc</td>
<td>Social Work</td>
<td>Salem State College</td>
<td>1:40-3:40</td>
<td>248</td>
</tr>
<tr>
<td>50</td>
<td>David Rothauser</td>
<td>Philosophy</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>216</td>
</tr>
<tr>
<td>51</td>
<td>Erin Kivell</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>234</td>
</tr>
<tr>
<td>52</td>
<td>Rachael Kenney</td>
<td>Sociology</td>
<td>UMass Lowell</td>
<td>1:40-3:40</td>
<td>251</td>
</tr>
<tr>
<td>53</td>
<td>Bridget St. Pierre</td>
<td>Sociology</td>
<td>Northern Essex Community</td>
<td>1:40-3:40</td>
<td>254</td>
</tr>
<tr>
<td>54</td>
<td>Keila Puello</td>
<td>Criminology</td>
<td>Northern Essex Community</td>
<td>1:40-3:40</td>
<td>173</td>
</tr>
<tr>
<td>55</td>
<td>Cynthia Sanden</td>
<td>Sociology</td>
<td>Mount Wachusett Community</td>
<td>1:40-3:40</td>
<td>253</td>
</tr>
<tr>
<td></td>
<td>Joshua Collette</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>Heather Conlan</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>224</td>
</tr>
<tr>
<td>57</td>
<td>Katherine Lombardo</td>
<td>Psychology</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>236</td>
</tr>
<tr>
<td>58</td>
<td>Oluwafunmilayo</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>238</td>
</tr>
<tr>
<td>59</td>
<td>Allison Rogers</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>240</td>
</tr>
<tr>
<td>60</td>
<td>Cynthia Klubnik</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>235</td>
</tr>
<tr>
<td>61</td>
<td>Zachary Waldon</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>245</td>
</tr>
</tbody>
</table>
### Afternoon Session - Poster Presentations - Cityview Ballroom

<table>
<thead>
<tr>
<th>Board</th>
<th>Presenters</th>
<th>Field of Presentation</th>
<th>Campus</th>
<th>Time</th>
<th>Abst.#</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>Janine Armstrong</td>
<td>Psychology</td>
<td>UMass Boston</td>
<td>1:40-3:40</td>
<td>222</td>
</tr>
<tr>
<td>63</td>
<td>Catherine Coy</td>
<td>Biology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>122</td>
</tr>
<tr>
<td>64</td>
<td>Shannon McCumber</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>237</td>
</tr>
<tr>
<td>65</td>
<td>Jenna Sippel</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>242</td>
</tr>
<tr>
<td>66</td>
<td>Elizabeth Kobs</td>
<td>Nutrition &amp; Food Science</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>212</td>
</tr>
<tr>
<td>67</td>
<td>Joshua Nota</td>
<td>Kinesiology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>194</td>
</tr>
<tr>
<td>68</td>
<td>Ryan Sullivan</td>
<td>Kinesiology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>195</td>
</tr>
<tr>
<td>69</td>
<td>Gabriella Erdosy</td>
<td>Nursing</td>
<td>UMass Lowell</td>
<td>1:40-3:40</td>
<td>209</td>
</tr>
<tr>
<td>70</td>
<td>Kirsten Wright</td>
<td>Nursing</td>
<td>UMass Dartmouth</td>
<td>1:40-3:40</td>
<td>210</td>
</tr>
<tr>
<td>71</td>
<td>Randy Beers</td>
<td>Nursing</td>
<td>UMass Dartmouth</td>
<td>1:40-3:40</td>
<td>207</td>
</tr>
<tr>
<td>72</td>
<td>Jessica Fitts</td>
<td>Education</td>
<td>Mass College of Liberal Arts</td>
<td>1:40-3:40</td>
<td>179</td>
</tr>
<tr>
<td>73</td>
<td>Kathy Panarello</td>
<td>Social Work</td>
<td>Massachusetts Bay</td>
<td>1:40-3:40</td>
<td>249</td>
</tr>
<tr>
<td>74</td>
<td>Mary Rebal</td>
<td>Nutrition &amp; Food Science</td>
<td>Framingham State College</td>
<td>1:40-3:40</td>
<td>213</td>
</tr>
<tr>
<td>75</td>
<td>Sara Youngwirth</td>
<td>Psychology</td>
<td>UMass Amherst</td>
<td>1:40-3:40</td>
<td>247</td>
</tr>
<tr>
<td>76</td>
<td>Janet Wilkins * Winfried Batsche * Augustina Subegdjo</td>
<td>Community or Public Service</td>
<td>North Shore Community</td>
<td>1:40-3:40</td>
<td>162</td>
</tr>
<tr>
<td>77</td>
<td>Alyne Butland</td>
<td>Political Science</td>
<td>Fitchburg State College</td>
<td>1:40-3:40</td>
<td></td>
</tr>
</tbody>
</table>
AFRICAN AMERICAN STUDIES

1  BACK BAY 1 COMPLEX  2:40-3:40  PANEL 4

LISA PIRES (ELLEN OLMSTEAD), DEPARTMENT OF ENGLISH, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

SACRED SPACES IN PUBLIC PLACES
This project will consider the historical and psychological perspectives on trauma and the ways in which sacred spaces have been and can be created to remind people of those traumas. The traumas under consideration pertain to the experiences of Africans in the United States: slavery, civil rights and racism in the broadest sense. The focus will be on healing gardens, monuments and parks created as sacred sites designed to command an individual’s visceral reaction as well as a community's public acknowledgment of the struggles and sacrifice that trauma entails.

ANIMAL STUDIES

2  FEDERAL 1 COMPLEX  1:40-2:40  PANEL 3

BRANDY ROSE (LAURA YELLEN), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

GUIDE DOGS: ENHANCING INDEPENDENCE AND SAFETY FOR BLIND PEOPLE
In 1927, Dorothy Harrison Eustis started to train German Shepherds to guide blinded veterans of World War One. In a sense, she created an independent life for blind people. The training of a guide dog takes teamwork and effort, and it involves the sighted trainer, the blind person, and the guide dog. Guide dogs are not pets, as many people think, and in the United States they are permitted everywhere by law. They are trained to guide blind people to their destinations through traffic and crowds; and around obstacles, holes in the ground, and other hazards. Despite blind people's attempts to educate the public, guide dogs in European countries are still not universally recognized. At the present time, there are two Massachusetts laws in particular pertaining to guide dogs. One law states that all motorists must stop when a blind person is crossing the street with a white cane or guide dog, and the second law states that a blind person is guaranteed the right to be accompanied by a guide dog in a public accommodation or on public conveyances. “The Seeing Eye,” a school specializing in the training and utilization of guide dogs, teaches that harmony is key to a good team. The freedom and independence gained in the teamwork of owner and dog are the result of that harmony. Personal experiences about the use of Carmel, a guide dog, will be shared as part of this presentation.

ANTHROPOLOGY

3  FEDERAL 2 COMPLEX  2:40-3:40  PANEL 4

CRAIG CIPOLLA (DAVID LANDON), DEPARTMENT OF ANTHROPOLOGY, UMASS BOSTON, BOSTON, MA 02125

LOOKING UNDERNEATH: A ZOOARCHAEOLOGICAL PERSPECTIVE OF SYLVESTER MANOR, SHELTER ISLAND, NY
Sylvester Manor was a Dutch-owned plantation that supplied provisions to Barbadian sugar plantations in the 17th century. It sits on Shelter Island, located between the outer forks of Long Island, New York. Over the last five summers, the Fiske Center of Archaeological Research has been excavating at Sylvester Manor in efforts to unlock its rich history. Not only did Sylvester Manor play an important role in 17th century global trade, it was also part of the struggle for land between Native Americans, the British, and the Dutch during the colonization period. My work is based on zooarchaeological analyses of Sylvester Manor. Zooarchaeology is an interdisciplinary approach to understanding archaeological sites, by examining animal bones. As the name implies, it is a combination of both archaeology and zoology. My main objective is to access European and Native American foodways on this site. As Europeans and Native Americans interacted in the New World, they were constantly participating in cultural exchange. My work attempts to understand this cultural exchange by looking at how each group’s eating habits may have changed. One way in which native foodways changed at this time was by the introduction of animal husbandry by Europeans. Along with the adoption of animal husbandry, I will also address how European diets were changed with exposure to new landscapes. By accessing past subsistence strategies and shifts within them, we gain insights into past cultures. My research should shed new light on the Sylvester Manor project and suggest possible new excavation approaches and/or new interpretations of data.
### ANTHROPOLOGY

**4 BACK BAY 2 COMPLEX 1:40-2:40 PANEL 3**

**JUSTIN LIBBY** (JUDITH ZEITLIN), DEPARTMENT OF ANTHROPOLOGY, UMASS BOSTON, BOSTON, MA 02125

**EXPLORING ALTERNATIVES TO THE ECOLOGICAL DISASTER MODEL FOR THE TIWANAKU COLLAPSE**

The role of drought has recently been used to explain the collapse of the Tiwanaku, a pre-Inca empire that existed near the shores of Lake Titicaca in present day Bolivia from A.D.400 to 1000. The drought model has received little criticism and is generally accepted in archaeology. Closer examination of this model, however, reveals its inconsistencies. Drought evidence for the Andean Altiplano does not correlate with evidence for sociocultural change at Tiwanaku sites. The collapse seems to occur during a period of minimal precipitation decline relative to the area’s history. Similar periods of precipitation correspond to Tiwanaku colonization and periods of growth. Investigation of other possible factors is necessary at this time to better understand the collapse. Recent findings suggest that the neighboring Wari Empire had a greater impact on Tiwanaku society than had previously been thought and may even have played a role in its decline and collapse. In addition to the Wari research, inquiry into several factors that contributed to the collapse will provide archaeologists greater insight. I propose that a strong model for the collapse of the Tiwanaku would consider multiple factors, not excluding declining precipitation but also including population growth, elite and peasant relationships, administrative control, and the interaction and competition with outside groups.

### ART HISTORY

**7 WATERFRONT 1A ROOM 1:40-2:40 PANEL 3**

**GINA PALUMBO** (WILLIAM OEDEL), DEPARTMENT OF ART HISTORY, UMASS AMHERST, AMHERST, MA 01003

**SHAPING REALITY: DEPICTIONS OF MILLS IN ANTEBELLUM AMERICAN ART**

Although mills and factories were commonplace in America by the mid-19th century, depictions of them were not. Artists often attempted to disguise mill structures, or simply did not paint them at all. In trying to account for the lack of representation of such fixtures of American life in academic landscape painting, this study will look at the few elite works which do depict mills or factories as well as other genres that show
similar structures, such as topographical views of towns, mill “portraits”, and rustic imagery. The study will attempt to distinguish between these types and show that the works of artists such as Frederic Edwin Church and Asher B. Durand show a degree of emotion and meaning that is not present in the other genres. The intentions of Durand and Church will be considered in an attempt to clarify the conflicting opinions about the place of industrial expansion in art and in life in 19th century America.

**BIOLOGY**

**WASHING OUR HANDS WITH SOIL: ECOLOGICAL AND PERSONAL RESTORATION IN COSTA RICA**

Thousands of acres of tropical forest are destroyed each year and the odds are against stopping this destructive cycle. In the dry tropical forests of Costa Rica, however, hundreds of acres of forest are being replanted. Ecological restoration projects are attempting to reforest tropical ecosystems and integrate sustainable development into the local economy. We participated in a tropical studies course in Costa Rica that included partaking in restoration efforts in an analog forest at the Arbofilia research station. The analog forest serves as a model for ecological restoration, using corridors to connect fragmented habitats, protect endangered species, and provide sustainable production of coffee, vanilla, and cocoa. Our panel will discuss the impact of tropical deforestation and the transformative power of ecological restoration work that now serves as an inspiration for our work. Throughout the course, our values were challenged by the impact of deforestation. Under the guidance of Miguel Soto, Arbofilia’s Director, we were able to actively participate in restoration projects that enhanced our scientific understanding of tropical issues while creating an avenue for personal transformation. In Soto’s words we were washing our hands with soil; we were able to give back to the land that we had grown to love. By washing our hands in soil, we became the change we seek for the world.


Microorganisms and their toxins are the cause of many diseases that harm multi-cellular organisms. Like vertebrates, invertebrates are susceptible to infection by pathogens. Antimicrobial peptides are proving to be of vital importance for both vertebrate and invertebrate immunity and are thought to play a significant role in the survival against invading bacteria and fungi for many different species. In general, antimicrobial peptides are defined as cationic, low molecular weight (typically less than 10 kilo Daltons) peptides with simple alpha helical structure. Peptides exhibiting antimicrobial activity have been identified in a diverse range of animals (e.g., mammals, amphibians, fish, insects). This project focused on detecting antimicrobial activity in the body fluids and mucus secretions of the Leidy’s Comb Jellyfish (Mnemiopsis leidyi) and the Moon Jellyfish (Aurelia aurita). Jellyfish were collected from Nantucket harbor. Antibacterial activity was assayed against both gram-positive and gram-negative bacteria. From the antibacterial assays that were conducted it was determined that there was a <500 Dalton protein fraction, isolated from the fluids or mucus secretions of both species of jellyfish, which exhibited growth inhibition activity. The isolation and study of endogenous antimicrobial peptides from jellyfish could prove to have extensive implications in understanding the evolution of immunity and can also aid in the development of new drugs to help in the fight against disease in humans.
green fluorescence protein), which can be visualized via fluorescence microscopy. It is believed that the pattern of lethality for P35 is expressed at different levels determined by the constructs on different chromosomes. 1782-Gal4 driven expression of P35 causes lethality in the pupal stage. It appears that P35 prevents apoptosis in imaginal discs, which are essential for normal growth and development. 3748-Gal4 driven expression of the baculovirus causes lethality but also significant cuticular defects on the dorsal and ventral abdomen and genitalia. The hypoderm of the abdomen is formed from imaginal histoblasts that proliferate during the pupal stage of development while the larval epidermal cells are programmed to undergo apoptosis. P35 is most likely inhibiting the cell death of larval epidermal cells, thus resulting in abdominal cuticle defects.

**BIOLOGY**

**EVIDENCE OF CELLULAR DIFFERENTIATION IN THE TERMINAL CELLS OF SPIROYA COMMUNIS**

Cellular differentiation in the extant algal genus Spriogyra has not been reported, but examination of the cells at the end of filaments (terminal cells) and internal cells may reveal evidence of differentiation. Two-celled fragments created via shearing with a pipette were followed through at least one mitotic division. Observations suggest that the terminal cells of Spriogyra communis are longer than internal cells. A paired t test yields a 95% confidence interval that there is a significant difference between terminal and internal cells (two-tailed P value = 0.0012). In addition, each terminal cell of one filament exhibits a rounded outer end wall and a straight cross wall. Each internal cell exhibits two straight cross walls. In 0.6 M sorbitol the end walls flatten, and this is consistent with the hypothesis that turgor pressure causes the characteristic rounded appearance of the outer end walls. Thus, the data suggest that the rounded outer end walls occur because of turgor pressure and not cellular differentiation. However, the significant difference between the mean of terminal cell lengths and the mean of internal cell lengths is consistent with the view that cellular differentiation may occur in Spriogyra.

**FUNCTIONAL ANALYSIS OF THE ARABIDOPSIS YSL9 PROTEIN IN TERMS OF PLANT METAL HOMEOSTASIS**

Investigation into the mechanisms underlying plant metal uptake have recently gained importance. Research has focused on finding ways to generate crops that take up more of metals nutritionally vital for human survival, such as iron. This research was designed to determine the function of the previously undocumented YSL9 gene in plant metal homeostasis in Arabidopsis thaliana. YSL9 is thought to encode a protein that mediates the transport of chelated metals due to its sequence similarity to the YSL gene family and to the maize (zea maizae) Ys1 gene, a known metal transporter. The effects of YSL9 protein overexpression were measured in Arabidopsis in planta over two generations in order to determine overt phenotypic variations, such as chlorosis and death. Transformed plants showed no obvious phenotypic changes. A semi-quantitative analysis will be performed using rTPCR to verify increased protein expression in transformants. Additionally, ten genetic lines of overexpressors were tested for phenotypic changes induced by altered metal conditions (0.33x iron and 0.25x copper concentrations for low metal stress, and 500x copper concentration for high metal stress). No obvious phenotypic differences have been detected. However, dry weight analysis of plant tissue is currently underway and may uncover subtle growth differences. Protein localization at the tissue level will be measured using a genetic construct containing the YSL9 promoter region fused to the GUS (beta-glucuronidase) gene, which stains blue when expressed. Knowing the location of YSL9 protein expression may help determine its function within the plant and its role, if any, in metal transport/uptake. The results from this project indicate a need for further investigation into the YSL9 gene to better determine its importance in metal uptake in Arabidopsis.

**CHEMICAL ENGINEERING**

**DEVELOPMENT OF A TRANSFORMATION PROTOCOL FOR TAXUS PLANT CELL CULTURES**

Paclitaxel (generic name for TaxolTM - Bristol Myers Squibb) is an anti-cancer agent produced by Taxus plants. This research project centers on the use of molecular approaches to delineate global metabolic control of paclitaxel accumulation in Taxus cultures. The specific initial goal associated with this research is to develop a reliable technique for transformation of Taxus cell lines. Transformation techniques require a method for selection of the transformed cells over the non-transformed cells. A common criterion for selection is antibiotic resistance. Taxus
susceptibility to the antibiotics kanamycin and hygromycin will be determined by plating cells on solid media with a range of antibiotic concentrations (0 mg/mL, 200 mg/mL). Transformation by Agrobacterium tumefaciens is the most often used method for introduction of foreign DNAs into plant cells. Plant cell transformation will be attempted using the transforming bacterium Agrobacterium containing a vector coding for both antibiotic resistance and green fluorescent protein (GFP). Successful transformation of Taxus cell lines will result in cells that are able to grow on an antibiotic and produce GFP. Past experiments have encountered limitations with low efficiency transformations and low stability in transformed cell lines. This project will focus on producing a reliable method for producing stable transformed Taxus cell lines.

**CHEMISTRY**

**14 WATERFRONT 1A ROOM 2:40-3:40 PANEL 4**

JOHN CARTER (ROBERT BECK), DEPARTMENT OF CHEMISTRY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

**IMPACT OF MASS SPECTROMETRY ON MODERN SOCIETY**

Mass Spectrometry (MS) has been used in chemistry and in many other fields of science and industry during the last 100 years, yet the technology of MS is generally unknown to the educated public. MS is a method used in chemistry for separating ionized atoms or molecules according to their mass (m) and electric charge (z). The purpose of this study will be to describe what MS is, to explain how MS operates, and to discuss the impact of MS on modern society. The sources for this study are World Wide Web sites, scientific societies such as the American Chemical Society (ACS) and the American Society of Mass Spectrometry (ASMS), scientific books, scientific journals, encyclopedias, newspaper articles, and magazines articles.

**15 WATERFRONT 1B ROOM 1:40-2:40 PANEL 3**

JONATHAN DELONG (CHERYL LUKAS), DEPARTMENT OF , SPRINGFIELD TECHNICAL COMMUNITY COLLEGE, SPRINGFIELD, MA 01105

**A VISUAL PRESENTATION OF DIMENSIONAL ANALYSIS**

The concept of dimensional analysis has historically proven difficult for introductory chemistry students to comprehend, apply and master, despite efforts to demonstrate the concept through application examples. Recognizing that many students, including those with specific disabilities, are visual learners, a series of four QuickTime animations using Macromedia Flash software has been developed as a pedagogical tool to present, in a visual format, the concept of dimensional analysis. These animations can be shown in the classroom using a laptop computer and projector; in order to offer students constant access to the lesson, the animations can also be posted on a supplemental course website. The effectiveness of these animations will be assessed by analyzing students’ performance in classes both before and after the implementation of this tool. Additional concepts for introductory and advanced chemistry courses can be developed using this same multimedia approach, giving both chemistry and digital animation students more opportunities to practice and apply their knowledge.

**16 WATERFRONT 1A ROOM 2:40-3:40 PANEL 4**

THOMAS GASS (CHRISTINE MACTAYLOR), DEPARTMENT OF CHEMISTRY, SALEM STATE COLLEGE, SALEM, MA 01970

**A STUDY OF ULTRAVIOLET LIGHT-INDUCED CHLORINATION OF HYDROCARBONS IN A SEAWATER MATRIX**

Ultraviolet light is known to have a detrimental effect on the environment by initiating reactions whose products are harmful to living organisms. One reaction that can proceed via ultraviolet light is the chlorination of a hydrocarbon. This research is to determine is such a reaction can occur in seawater and by what mechanism the reaction would proceed. Research will involve the employment of an ultraviolet light directed on a tank of simulated seawater. Hydrocarbons will be bubbled through the seawater for 24 hours and a determination of the products will be done using gas chromatography/mass spectrometry (GC/MS).

**17 WATERFRONT 1A ROOM 2:40-3:40 PANEL 4**

SIDRA IQBAL (LYNMARIE THOMPSON), DEPARTMENT OF CHEMISTRY, UMASS AMHERST, AMHERST, MA 01003

**INVESTIGATING THE ROLE OF ELECTROSTATIC INTERACTIONS IN SPECIFICITY OF LIGAND BINDING TO CHEMOTAXIS RECEPOTRS**

Bacterial chemotaxis receptors bind small molecules from the environment and transmit a signal across the membrane to direct swimming towards favorable locations. The serine and aspartate receptors, two members of the bacterial chemotaxis receptor family, have very similar ligand binding sites, which raises the question of how these receptors each selectively bind their ligand. We hypothesize that electrostatic interactions are important in discriminating between the negatively charged aspartate and neutral serine ligand to their respective receptors. Three amino acids in the serine receptor ligand binding region were altered to the corresponding residues in the aspartate receptor in an attempt to increase the receptor affinity for aspartate and probe the mechanisms that determine the specificity of the ligand binding site of the receptor to its chemoattractant. We are performing ligand-binding assays on the mutants D153A, which removes a negative charge,
Oral Session

and V87K, which adds a positive charge near the ligand-binding site. These mutations may each stabilize binding of the negatively charged aspartate ligand to the serine receptor. In addition, we also conduct this assay on the mutant F151Y which functions to add a hydroxyl group that can form a hydrogen bond to aspartate (as seen in the aspartate receptor crystal structure). Each single mutant, and the various double and triple mutant combinations will reveal the coordinated effects of the mutations on ligand recognition, and identify which electrostatic interactions lead to the most profound changes in the ligand specificity of the receptor. Understanding the factors that control the specificity and affinity of the ligands to their binding sites may ultimately provide valuable insight for engineering new inhibitors (drugs) or new proteins.

CHEMISTRY

18  WATERFRONT 1A ROOM  2:40-3:40  PANEL 4

ANDREW LATHAM (RONALD MACTAYLOR), DEPARTMENT OF CHEMISTRY, SALEM STATE COLLEGE, SALEM, MA 01970

A STUDY OF THE EFFECT ULTRAVIOLET LIGHT HAS ON HYDROCARBONS IN SOLUTION

Laboratory samples containing various hydrocarbons were prepared. These samples were irradiated with ultraviolet light. Gas chromatography and mass spectroscopy were used to verify the contents of the samples pre-irradiation and to analyze the effects the UV light had on the hydrocarbons in rivers and ponds resulting from biogenic processes as well as pollution. The presence of metals in the ice was also studied to determine if they acted as a catalyst in altering the hydrocarbons. These results along with possible environmental and geological implications will be presented.

19  FEDERAL 2 COMPLEX  11:00-12:00  PANEL 2

REBECCA MAYNARD (LILA GIERASCH), DEPARTMENT OF CHEMISTRY, UMASS AMHERST, AMHERST, MA 01003

DISTANCE MEAUREMENTS IN CELLULAR RETINOIC-ACID-BINDING PROTEIN (CRABP) USING FLUORESCENCE TECHNIQUES

The protein-folding problem is one of concern in the field of biochemistry. If scientists knew the model of folding that different proteins fold by, we may be able to apply that to protein misfolding diseases that occur in nature. Folding refers to the path a primary sequence goes through from its denatured state to obtain its native tertiary structure in the cell. I am working with CRABP I, a predominantly beta-sheet molecule, in order to characterize its intermediate form. We use Mus musculus cellular retinoic-acid binding protein I, and express it in Escherichia coli. This protein is modified in the lab to increase purification yield. A 10-residue histidine tag is added to the N-terminus and during purification is bound to a Nickel column. Another slight modification is made to residue 131 to increase stability of the protein in vitro; arginine to glutamine. Through the use of recombinant DNA technology, site-directed mutagenesis, and fluorescence techniques, I hope to help characterize the shape of the intermediate by measuring the distance between certain chosen residues in the molecule. The measurements will be taken during different stages in the folding process, from the native state to the denatured state. Two residues will be added to the C-terminus of the molecule so that a floppy end will be created. A fluorophore will be added to this end, while another fluorophore will be added to the opposite end of the protein. These fluorophores will become a donor-acceptor pair and will give the information I described above, which can help to determine where certain residues are during the folding pathway of CRABP I. If measurements are obtained at the conclusion of these experiments, we will have a better idea of when certain residues come together, and if there is in fact a variety of random structures before it becomes native as the protein-folding funnel implies.

20  BACK BAY 1 COMPLEX  10:00-11:00  PANEL 1

JASON PROULX, JASY CAMPBELL, JOHN GOLDA, DARREN HILLIARD, ERIC J RESENDES, WANDA WESTGATE, SHANNON WILLIAMS (JAMES PELLETIER), DEPARTMENT OF CHEMISTRY, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

THE COMPUTERIZATION OF AN UNDERGRADUATE CHEMISTRY LABORATORY - PHASE TWO

The introduction of computer technology in the chemistry laboratories at Bristol Community College has included Smartboard technology. The present authors compared current technology (the Smartboard) with innovative display technology, the Symposium. As a result of this comparison, the present team recommends the inclusion of Symposium technology in the recommended package in Phase Two. Phase Two will include (as a model) the preparation of a video-clip of a basic laboratory technique to be used in the orientation of introductory chemistry students, using Smartboard technology. This team recommends the inclusion of a Symposium, personal computer, computer projector, printer and a computer table as the mobile computer package for the second laboratory unit in the chemistry laboratory suite at Bristol Community College. The package is designed to provide students with efficient data storage in each laboratory unit of the chemistry suite and the capability of printing data for individual use in each of the laboratories.
CHEMISTRY

21  FEDERAL 2 COMPLEX  11:00-12:00  PANEL 2

CAROLYN ROBINSON (CRAIG MARTIN), DEPARTMENT OF CHEMISTRY, UMASS AMHERST, AMHERST, MA 01003

TESTS OF A MODEL OF SEQUENCE-DEPENDENT INITIATION BY T7 RNA POLYMERASE

The means by which cells make proteins starts with a process called transcription. In this process enzymes use the genetic code of DNA to make a messenger molecule of RNA that will transfer the genetic information to other cellular enzymes so that proteins can be made. This study investigates the transcription enzyme of the T7 bacteriophage, T7 RNA polymerase. This enzyme shows a preference for using GTP as a starting substrate over other nucleotides ATP, UTP, and CTP. By altering the amino acid sequence near the active site of the enzyme the stability of initial transcription is changed. This was done by altering amino acids thought to stabilize initial polymerization within the enzyme. Crystal structures indicate the arginine amino acid at position 386 in the polypeptide chain of the enzyme as a good target for mutagenesis based on its proximity to the enzyme’s active site and its documented propensity for interacting with GTP. Crystal structures also indicate histidine at position 784, which has also been investigated in other published works. These amino acids were substituted with the amino acid alanine so in order to minimize perturbations to the protein structure but the chemistry would be different. Three mutants were made: R386A, H784A, and R386A/H784A. These were tested to see the effects of individual substitutions as well as the combined effects. It was shown that the efficiency of the enzyme was indeed different.

CLASSICAL LANGUAGE & LITERATURE

22  BACK BAY 2 COMPLEX  11:00-12:00  PANEL 2

RUSSELL HANSEN (MARIOS PHILIPPIDES), DEPARTMENT OF CLASSICAL LANGUAGE & LITERATURE, UMASS AMHERST, AMHERST, MA 01003

REFLECTIONS OF MYCENAEN THEBES IN THE CADMUS LEGEND

The purpose of this research is to better understand the legend that surround Cadmus, the mythical founder of the Greek city of Thebes. The legend can be examined to look into the Mycenaean culture of Thebes, but because of the foreign origin of Cadmus in the story, it has another dimension of Bronze Age culture to examine. By looking at the Cadmus legends in their primary form we can see how authors like Homer, Hesiod, Herodotus, Ovid, and many more saw the myths. From modern times, we can look at people’s interpretations of those Classical authors, but also use linguistic and archaeological evidence in helping us decide which parts of the myth are true representations of Mycenaean times and which were put in for literary effect. The question will be answered in three parts. The first part will establish the distinct culture of Mycenaean times and demonstrate that such a culture existed in Bronze Age Thebes. Then evolution of the Cadmus myth through classical texts will be examined. The third and final section will focus on connecting the deeds in the myth to the Mycenaean period with a focus on looking into the truth of his Phoenician origin and how that can or cannot be supported by the evidence from Thebes.

23  WATERFRONT 1B ROOM  11:00-12:00  PANEL 2

MOLLY LAYTON (TERESA RAMSBY), DEPARTMENT OF CLASSICAL LANGUAGE & LITERATURE, UMASS AMHERST, AMHERST, MA 01003

FEMALE MARTYRS IN ANCIENT LITERATURE

Women have been martyred for different beliefs throughout the centuries. This paper compares the literary representation of the martyrs of Perpetua, Felicitas, and Agnes, three female martyrs from the late Roman empire, to Livy’s description of the deaths of Lucretia and Verginia, two women who were killed for virtue’s sake in Rome’s early history. The deaths occurred in separate eras of Rome’s history, but the literature emphasizes similar themes. All five women had their stories either written down or redacted by another person, and their culture dictated how the women would be portrayed. Livy wrote the stories of Lucretia and Verginia in his book Ab Urbe Condita in the first century BC, describing events that had taken place several hundred years earlier. The Peristephanon, which is a collection of martyrdoms by Prudentius, contains a poem about Agnes’ miraculous persecution and death. Perpetua wrote her own account of her and Felicitas’ imprisonment which another person, probably Tertullian, completed with a description of their deaths. In these primary sources, common themes can be traced which the author or the redactor thought were important to emphasize. All the women have a strong desire to protect their pudicitia or chastity, and all the women have significant relationships with other men in the story, especially their fathers. Secondary sources are explored to show how these themes are affected by the culture and time period in which the writing of the story occurred, by comparing the stories to other literature and cultural trends of the day.
THE UNDERLYING IRONY IN EURIPIDES’ ALKESTIS

The first three words in Euripides’ Alkestis are always translated as House of Admetos. This is not in dispute; it is a verbal setting of the scene in a tragic prolog. The style of the phrase, where the poet makes an adjective out of a person’s name, seems an odd choice of diction, however, especially for a prosatryic play. Perhaps, though, this fancy rhetoric implies a deeper meaning. If it were translated keeping the meaning of Admetos’ name untamed in mind, the phrase can also be read to mean untamable house, creating a pun that provides the play with an underlying irony as the characters struggle against the forces which tame all things: Death and Necessity. Even the most desperate and pitiful of pleas in this play become laughable, as we know that they are wasting their words, for the house had been saved even before the action began. The aim of this paper is to validate this pun and demonstrate how it allows for this alternate perception of the Alkestis. I will do this by examining Euripides’ dramatic style, the story as it existed before Euripides wrote his play, and the chthonic cults associated at that time with Thessaly, the region in which the play takes place.

SCENE FROM “CHARLIE AND THE CHOCOLATE FACTORY”

In this scene from a student production of the play “Charlie and the Chocolate Factory,” based on Roald Dahl’s popular children’s book, the characters Charlie and Grandpa Joe express their excitement and wonder at the fateful turn of events as they travel together to meet Willy Wonka. Two student actors interpret this dialogue, using voice, body language, costumes, and make-up to engage their audience. Playing characters who are considerably older and younger than the actors’ natural ages poses the dramatic challenge in this scene.

HOW CAN LOCAL BOARDS MAKE BETTER DECISIONS AND OPERATE MORE EFFECTIVELY?

Planning boards play a critical role in the life of cities and towns in Massachusetts, creating the framework to plan or limit growth and development of their communities. It is important that planning boards operate smoothly and effectively and that planning board members make educated and well informed decisions. This study examines how planning boards function throughout Massachusetts and identifies the educational needs and preferences of planning board members. Questionnaires will be mailed to members of forty planning boards throughout the state, selected to represent all regions and a range of population sizes of all towns and cities. Planning board members will answer questions regarding how board members interact and make decisions, how meetings are run, and their preferred delivery methods for training and education. Results from this study will be used to help state and regional planners, administrators, and educators understand how planning boards are functioning and develop promising ways to educate board members across the state. The information will also be used by UMass Extension to develop a certification program for planning board members. These efforts will ultimately support the work done by local boards and will assist in the design of educational tools that will help local board members to make better decisions.
COMMUNITY OR PUBLIC SERVICE

27 BACK BAY 1 COMPLEX 2:40-3:40 PANEL 4

**REBECCA IWERKS** (MARY HANNAH HENDERSON), DEPARTMENT OF COMMUNITY OR PUBLIC SERVICE, UMASS AMHERST, AMHERST, MA

**COMMUNITY SERVICE LEARNING ABROAD**

This community based project hopes to create and promote Community Service-Learning Abroad (CSLA) opportunities for UMass students with the following goals in mind: to aid in the progress of developing countries; to sensitize students as to their position in the world; to provide students with opportunities to apply their skills and knowledge; and to promote more comprehensive understanding of global interdependence. With the collaboration of the UMass Office of Community Service-Learning (OCSL) and the International Programs Office (IPO), we are working towards these goals on three levels: establishing an ongoing CSLA program in South Africa; creating partnerships with service organizations where UMass students frequently study abroad; and advocating for CSLA among students and university offices. Each of these aspects is progressing according to the values of service-learning. In our presentation, we will show how the programming in South Africa is being built off a relationship with the Amy Biehl Foundation established through a summer internship. We will discuss how partnerships are being forged abroad as a result of student and faculty interviews and how a curriculum is being established so that students can engage these partnerships in a reflective manner while not being in a traditional classroom. Lastly, we will discuss work done in the form of grant proposals and budget advocacy to ensure that this will be a sustainable program.

COMPUTER SCIENCE

28 BACK BAY 1 COMPLEX 10:00-11:00 PANEL 1

**JING DONG** (ROBERT COHEN), DEPARTMENT OF COMPUTER SCIENCE, UMASS BOSTON, BOSTON, MA 02125

**TREE AND GRAPH LIBRARY FOR JAVA**

In computer science, data structures are representations of how data are stored in computer memory. Trees are used to store hierarchical information such as organization charts or distribution channels. Graphs are used to store networked information such as road maps or communication networks. The purpose of this project is to design and implement in Java these two fundamental data structures of Tree and Graph. The goals for this design are: consistency with the Java Collections Framework, the data structures library that is part of Java; support for common tree and graph algorithms such as search and shortest path; and an easy-to-use programming interface. When completed, the main distinguishing feature of this library, compared with existing Tree and Graph libraries, will be its compatibility with the existing Java Collection Framework, which not only gives programmers a familiar look interface but also allows them to integrate this library with the Java collections in a seemly way.

DANCE

29 WATERFRONT 2&3 11:00-11:20

**MICHAEL GREALEY, RUTH SHIMAN-HACKETT (MARGARET MUSMON), DEPARTMENT OF THEATRE, UMASS BOSTON, BOSTON, MA 02125**

**ODE TO CRAVING SIN AND STUMBLING GRACE**

This dance explores the loss and pain surrounding the issue of addiction as it has touched each of our lives. We worked to develop movement that evoked the image of mutual destruction mingled with a reaching out for help. Through this composition, we strove to develop movements which reflected the emotional inspiration in a physical way an audience could relate to. Recent presentations of this work to Unfolding Portraits, a shared choreographers’ concert, and the Dance Complex in Cambridge gave us an opportunity to modify parts of the dance based on feedback from a panel of teachers and choreographers, and to watch this dance mature more fully. This process has helped us become a choreographic team and explore our artistry together in a way distinct from solo performance.
BEYOND SOLIPSISM
This is a solo I have been developing this semester to explore combinations of movement styles, including fall and recover, contract and release, and various shapes as initiation. The emotional subject matter behind this dance is the sense of isolation from a group, in reaction to being spurned or left behind. I have worked to develop the shapes and movement styles to the point where they took on the motivating emotions of loneliness, hope, and frenzy while still maintaining a sort of integrity within themselves in terms of form. This dance has helped me continue to explore my use of elements in dance, including shape, space, time, and how these could be manipulated to convey mood and emotion, without sacrificing the dance in terms of form. I will perform this solo at the American College Dance Festival in New Hampshire March 14-17. It is also part of a larger, three-part work I am developing for Kaleidoscope, the end of the semester dance show at UMass Boston.

STEM CELL RESEARCH: DESTROYING LIFE OR PRESERVING LIFE?
Stem cell research is a topic that continually dominates our daily headlines. This presentation gives a brief yet detailed look into this ever debatable issue. Stem cells are the basic cells from which all the human body's tissues and organs originate. Scientists have found that by taking these cells at their earliest stages they can manipulate them to be used to cure a host of diseases. Stem cell research touches on all sides of the ethical forum because of the issue of the source of these cells. From when life begins, to how to use embryos that are already in existence, to how to use fetuses that have been miscarried or aborted, ethical debates occur from religious, social, and political standpoints. This presentation will also explore how stem cell therapy is conducted, as well as how it can help, worsen, or possibly cure one of humanity's most debilitating diseases: Parkinson's Disease.

E2M AT UMASS AMHERST: BUILDING A NEW ECONOMIC MODEL
I am currently involved in a long-term, community-based project with the goal of involving UMass Amherst in augmenting the Western Massachusetts E2M Regional Economic Model. Based in Easthampton, MA, E2M.org is a non-profit organization founded in January 2000 to empower entrepreneurs, employees, investors, institutions, and communities to create a model of capitalism that will co-exist with the current model while changing it fundamentally. The E2M model defines a quantifiable standard of Community Consciousness that includes employees and the regional community as financial stakeholders in E2M certified businesses. This project endeavors to strengthen the E2M economic model in Western Massachusetts in three ways: (1) creating opportunities for student-run businesses on the UMass Amherst campus to become E2M certified; (2) introducing E2M proposals to the Student Government Association, Graduate Student Senate, and Faculty Senate in order to begin a dialogue about the commercialization of UMass research and technology; and (3) hosting a public forum and a seminar at the UMass Amherst Isenberg School of Management to discuss how the E2M model can help regional communities and public institutions of higher education become more economically self-sustaining. In my oral or poster presentation, I will describe the Western Massachusetts E2M Regional Economic Model and report on efforts and results pertaining to the project's three components.
From Communism to the Market System: Hungary and the Czech Republic

This paper studies the transition of two Central European economies from communism to market economies. It takes a comparative look at the challenges involved, the similarities and differences of their experiences, and their accomplishments. Both Hungary and the Czech Republic were communist countries under the influence of the Soviet Union. With the dissolution of the Soviet Union, both countries decided to move to a market economic system. Success is seen in both countries with economic growth, and both are seeking to become members of the European Union. It is this success of an economy under the market system that has led to more countries embracing the ideas of the market system.

Latino Stereotyping in the Media: Its Influence on Self-Perception and Social Perceptions

Media representation of ethnic groups can have the effect of creating a circular pattern of stereotypes turning into realities. The information gathered from films or television varies by viewer and certain messages can create misconceptions about the people portrayed. These misconceptions can influence the viewers’ attitude toward the group of people being represented in both positive and negative ways. Our study was conducted to explore the social and economic conditions which are commonly associated with Latinos in American films and television. In prior research we examined 14 contemporary films and 15 television programs for the attributes given to Latino characters. We found that most portrayals of Latinos in Hollywood films tend to be what could be considered negative. To address this we have explored ways to help middle school students analyze these films in a more in-depth manner than what is presented superficially by Hollywood. To accomplish this we developed activities for each film based on the issues presented by the film while taking into consideration the level of understanding of our aimed audience. We have found that better understanding of what is presented to viewers can only be gained through active participation in what is being observed or learned. In turn, better understanding of each other helps different groups interact in more beneficial ways. The evidence found on the films and the theoretical assumptions found in critical pedagogy and media activism literature, particularly in the works of Paolo Freire and Pierre Bourdieu, support our conclusion.

Drugs, Alcohol and Health Education: Speaking the Truth Face-to-Face

Drugs and Alcohol are everywhere: turn on the television, flip through a magazine, walk through the halls of a local high school, or enter a weekend party. How are teens expected to react appropriately to the overwhelming social pressures to use drugs? While educational curricula vary significantly from school to school and state to state, drug education typically involves students who read a chapter, hear a lecture from their teacher, and perhaps watch a short film. Are such methods adequate today, however, given the real danger and overwhelming social pressures students face to participate in an alcohol- and drug-filled world? This project consists of a model presentation by a 24 year-old recovering drug addict and alcoholic for high school and other groups, an approach anchored in the idea that an effective program must include three components: 1) outside educators, 2) face-to-face discussion among groups of students of similar age, and 3) full disclosure of the positive and negative effects, both temporary and long term, of drugs and alcohol. This fifteen-minute presentation simulates a high school presentation that would be followed by a no-holds-barred student discussion with no teachers present.
EDUCATION

36  FEDERAL 1 COMPLEX  10:00-11:00  PANEL 1

GINA MATTSON (GREGORY CARROLL), DEPARTMENT OF EDUCATION, SALEM STATE COLLEGE, SALEM, MA 01970

TRACKING AND ABILITY GROUPING IN THE AMERICAN SCHOOL SYSTEM

Tracking and ability grouping are common features in American Schools. They are also two of the most harshly criticized practices in American education. Tracking and ability grouping are methods that provide students in grades K-12 with the best education possible. This work examines the usage of tracking and ability grouping in relation to educational reform. Various schools, teachers, and administrators will be asked to participate in the study through the use of interviews, surveys, and observations. The question of this project is as follows: "How does tracking and ability grouping affect educational equality?" Students in the middle/secondary grades will be used as a key reference. The conclusions drawn in this thesis will result from both primary as well as secondary sources. These sources will allow for closer examination of the use of tracking and ability grouping as well as an attempt to further progress educational reform. The intended result of this thesis will be used to educate individuals and school administrations with the necessary knowledge they may need in order to change their school systems.

ENGLISH

37  FEDERAL 1 COMPLEX  10:00-11:00  PANEL 1

SANDRA THOMPSON (SUSAN MARTELLI), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

EXPLORATION OF THE BENEFITS OF READING ALOUD TO A CHILD

Reading aloud to a child can have a major effect on his or her academic performance as well as a positive impact on the relationship the reader has with the child. This oral presentation describes regular weekly sessions of reading aloud to a child during the course of a semester. Jim Trelease, the author of "The Read Aloud Handbook", was the inspiration for the reading sessions. In his book, Trelease explains the importance of reading aloud to a child and the ways it can improve the child's schoolwork as well as his or her emotional well-being. Although the child involved in this project was a good student when the reading sessions began, both her vocabulary and reading comprehension were enhanced substantially by the time of the final session. Reading aloud to a child will strengthen the reader's existing relationship with the child, enhance the child's vocabulary and attentiveness, provide an opportunity for discussing issues related to peers and school, and increase the love of reading by making it an activity rather than a chore.

38  WATERFRONT 1C ROOM  2:40-3:40  PANEL 4

ADAM CARROLL (MARK MILLER), DEPARTMENT OF ENGLISH, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

TRANSFORMATIVE MOTION

These poems center on the process of motion and change. The specific subjects range from a metaphorical progression of ideas to an actual physical transformation of the subject. The speakers of these poems undertake physical journeys that assume further metaphorical resonances when the motion of the journey produces correlative physical and psychological transformation.

39  FEDERAL 1 COMPLEX  10:00-11:00  PANEL 1

JACLYN DONOVAN (SHARON YANG), DEPARTMENT OF LITERATURE, WORCESTER STATE COLLEGE, WORCESTER, MA 01602

MYTHOLOGICAL PARALLELS IN CONTEMPORARY CHILDREN'S LITERATURE

As well as being sources of inspiration for numerous authors of children's literature, mythological parallels have been used as an adult theme in literature for thousands of years. Unfortunately, for much of this time it seemed as though the world of mythology contained themes too perverse and profane for children's literature. This paper explores how it is possible today for the vital lessons contained within myths to be dispersed to the masses through the medium of children's books. By searching the texts of the Harry Potter series and juxtaposing them alongside ancient myths, it is possible to see how author J.K. Rowling weaves the old world with the new. The study concludes that ancient myths have parallels in popular culture today, and no matter how old or controversial they are, the themes and lessons of mythology are timeless and always valuable. Therefore, drawing on stories of the past and merging them with contemporary literature provides a limitless source to help teach enduring lessons.
ENGLISH

40 BACK BAY 2 COMPLEX 10:00-11:00 PANEL 1

TODD ERICKSON (RANDALL KNOPER), DEPARTMENT OF ENGLISH, UMASS AMHERST, AMHERST, MA 01003

AT THE SWITCH: A NOVELLA, AND WATER LIKE ME LIFT YOU: A COLLECTION OF POETRY

The purpose of this presentation is to read selections of two works of creative writing written in part to fulfill the requirement of a senior honors project. The first work is a short novel titled At the Switch, which incorporates themes concerning fate and the possibility of hierarchies therein (God vs. Fate vs. Human Will), coincidence and its consequences, forms of beauty and their necessity, and the presence of the past in the present. These themes are explored through a trajectory that connects the suicide of an elderly woman with an accident-precipitated premature birth that is the climax of a young college student's unplanned pregnancy. As the novel progresses, events of both uncanny and normal natures arise such as a rock kicked astray that then breaks a truck named Becky's window, or the determined attempt of the teenage father to salvage a relationship with a former female friend. Likewise, relationships, both platonic and sexual, are developed between characters of all ages (from premature birth to eighty-five). With these events arise several issues such as the ethics of and decisions surrounding abortion, and the construction of fortune and misfortune. The second work, Water Like Me Lift You, is a collection of poems organized into three parts: Devotion and Its Ends: The Torrential Calm, which concerns personal love and loss; The Decibels of Derivatives, which concerns current issues; and Terra Etceteras, experiments in form, or musings on life in general that are not related to love, loss, or current events.

41 BACK BAY 2 COMPLEX 10:00-11:00 PANEL 1

TRISHA FARCO (ABBOT CUTLER), DEPARTMENT OF ENGLISH, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

READING POEMS

These poems draw from a collection of my work over the past three years. They have received endorsements from the faculty and my peers in the workshops where they have been developed. The poems concentrate both on themes of love and on my reflections about myself as a woman of the present culture.

42 BACK BAY 2 COMPLEX 11:00-12:00 PANEL 2

STACEY GUELLA (SHARON YANG), DEPARTMENT OF LITERATURE, WORCESTER STATE COLLEGE, WORCESTER, MA 01602

THE JAGGED CASTLE: THE GOTHIC AND FILM NOIR IN CITIZEN KANE

Orson Welles's Citizen Kane is considered by many film scholars to be one of the best films ever made. It is not only famous for its cinematic techniques, but also for its portrayal of the life and career of William Randolph Hearst, as presented through the protagonist, Charles Forster Kane. As an art form, the film draws on elements of the film noir and gothic genres to energetically communicate and display a non static view of Kane and the individuals that he knew during his lifetime. (Citizen Kane (1941) a review by Tim Dirks http://www.filmsite.org/citi.html). This paper explores how Citizen Kane draws on these genres to emphasize the themes of corruption within a system and the characters' preoccupation with the past. Through comparisons with other film noir films, such as Welles's Macbeth, Olivier's Hamlet, Murder My Sweet, and Act of Violence, this paper also examines how various cinematic techniques were used to emphasize characters' situations, hidden motives, and emotions.

43 WATERFRONT 1C ROOM 11:00-12:00 PANEL 2

ANDREW JENNINGS (GLEN BREWSTER), DEPARTMENT OF ENGLISH, WESTFIELD STATE COLLEGE, WESTFIELD, MA 01086

RETHINKING RELIGION THROUGH THE MEDIUMS OF POETRY AND SHORT STORY

My focus for my presentation will center around alternative views of God and religion through personal experience via the mediums of poetry and short story. My poem, entitled “God Is A Satanist”, looks at God through a system of logic and question rather than through a system of accepted Christian faith. My second literary piece, a short story entitled “Wondering, Waiting, Scheming, Baiting, Repenting, Unrelenting, Squiggling, Dying, Always Trying, Never Lying to Myself or How I Finally Made Peace With Myself” centers around a young man struggling to leave a born-again Christian faith and finding closure in confrontation. My purpose of presenting these pieces is to invite people to open their minds to alternative, and refreshing views of God and religion. Both of these literary pieces are original and, I believe, meet high literary standards.
ENGLISH

44  BACK BAY 2 COMPLEX 10:00-11:00 PANEL 1

JEANNE KENT (LOYD SCHWARTZ), DEPARTMENT OF ENGLISH, UMASS BOSTON, BOSTON, MA 02125

A DAY IN THE LIFE OF A WOMAN

My presentation will consist of five poems from my manuscript entitled, “A Day in the Life of a Woman.” These poems are about a woman’s exploration of herself and the world she finds herself in as a university student. In “Sestina” an older woman returns to college and is anxious about writing a poem. In “Morning Coffee” she confesses to being a coffee addict. Insomnia rears its ugly head in “Waking in the Wee Hours.” In “Luis Garcia and Jessica Smith” the woman imagines the interaction between an immigrant toll booth worker and an American student. Finally, in “Life is Like a French Class” she studies both the professor and some of the students in the class. In 2001 I received the Academy of American Poets’ Harold Taylor Prize for “Sestina” and “A Morning in the Life of a Woman.” In 2002 I received the New England Poetry Club’s John Holmes Prize for “Sestina.”

45  WATERFRONT 1B ROOM 11:00-12:00 PANEL 2

EURIDES LOPES (SUSAN MARTELLI), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

QUEEN ELIZABETH I: STRENGTH, WISDOM, AND DIPLOMACY IN NAVIGATING ENGLAND THROUGH RELIGIOUS AND POLITICAL CONTROVERSY

Beginning with a chronological overview of Queen Elizabeth I’s family background and historical highlights of her reign, this powerpoint presentation will examine the religious and political philosophies of one of England’s most brilliant monarchs. Her strength, wisdom, and diplomacy as a ruler in a controversial and unstable society enabled her to lead England into the Golden Age. Queen Elizabeth I’s reign inspired patriotism, heroism, poetry, and art, resulting in the amazing development of England as one of the commanding powers in Europe. Her letters and speeches serve as powerful vehicles for comprehending and evaluating her role in the Protestant Reformation and her effectiveness as a monarch. The “Speech to the Troops at Tilbury” reveals Queen Elizabeth I’s close and trusting relationship with her people. It also presents her as an outstanding female monarch. Although she speaks of possessing the body “of a weak and feeble woman”, she has “the heart and stomach of a king”. Her intellectual capabilities proved to be extremely powerful in breaking down cultural stereotypes about women. Ultimately, the study of Queen Elizabeth I’s ideology provides a model for how to govern with wisdom and determination, overcoming daily political and religious obstacles.

46  BACK BAY 1 COMPLEX 1:40-2:40 PANEL 3

KRISTEN MALLI (MARGARITE ROUMAS), DEPARTMENT OF ENGLISH, FITCHBURG STATE COLLEGE, FITCHBURG, MA 01420

IT’S SHOWTIME: HOW THE PERFORMING ARTS BUILD RESILIENCY AND LEADERSHIP IN AT-RISK YOUTH

Youth from low-income, minority and first-generation American backgrounds are at risk for engaging in behaviors such as drug use, violence, gangs and dropping out of school. Involvement in arts programs has proved helpful in developing the leadership capacity and resiliency of at-risk youth. It is believed that by providing youth with valuable life skills, mentorship, and the opportunity to engage in challenging problem-solving, arts programs increase the chance that youth will be able to avoid destructive behaviors. This study was conducted to determine the effectiveness of arts programs in developing leadership capacity and resiliency in at-risk youth ages 11-18. Ten arts programs serving youth were evaluated using a survey based on Stogdill’s Trait Leadership Theory, Gardner’s Multiple Intelligences Theory, and Bernard’s Resiliency Theory. Two of these programs, one community-based and one school-based, were further investigated using interviews and observations. Based on the research conducted, the performing arts seem particularly successful in engaging and developing the self-esteem and life skills of at-risk youth. The ability to perform and receive feedback within a supportive community makes performance a strong venue for developing the leadership capacity and resiliency of at-risk youth.

47  BACK BAY 2 COMPLEX 10:00-11:00 PANEL 1

MARINA PICKETT (TIMOTHY TRASK), DEPARTMENT OF COMMUNICATION, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

“SECRET LOVE”: FOUR REVISIONS OF ONE ORIGINAL POEM

Four drafts of this original poem entitled “Secret Love” demonstrate how a shift in point-of-view can change the tone of a poem. The first version is a rough draft, where the writer has mixed second person and third person points-of-view, and the tone of the poem is unfocused, as it moves from directly addressing the object of secret love (you) to an almost editorial commentary. The first revision modifies the poem to a consistent third person point-of-view, emphasizing one subject, so the poem becomes more distant and yet focused on only person in the couple. The third version changes slightly and the emphasis is balanced between both lovers, while the poem remains in the objective third person point-of-view. Finally, the last revision shows a complete shift to second person, where now the reader is the “you” directly spoken to by the poet, and the tone becomes more personal and urgent. These changes in points-of-view give the same poem entirely different tones.
**ENGLISH**

**48**  
**WATERFRONT 1C ROOM**  
2:40-3:40  
**PANEL 4**

**HEIDI SMITH** (MARK MILLER), DEPARTMENT OF ENGLISH, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

**AS CLOSE TO INFINITY AS IT GETS**

The poems from my portfolio entitled, “as close to infinity as it gets,” address a range of emotions and situations through a common matrix of abstraction. As with infinity, they have neither an end nor a beginning, and the poems show this paradox within each situation and emotion. I hope to illustrate that the meaning of my work is not necessarily the subject, author, or reader in isolation, but is a blending of these elements.

**49**  
**WATERFRONT 1C ROOM**  
1:40-2:40  
**PANEL 3**

**AMBER YAYO** (SHARON YANG), DEPARTMENT OF LITERATURE, WORCESTER STATE COLLEGE, WORCESTER, MA 01602

**THE NOIR AND THE ROUGE: THEMES IN THE MOULIN ROUGE**

The film noir genre and literature's de casibus tragedy are not typically associated; however, Baz Luhrmann's “Moulin Rouge” combines traits from both genres. The “Moulin Rouge” draws on traits from classic film noirs such as “Double Indemnity”, “Act of Violence”, and “Murder, My Sweet”. The film uses lighting angles, color patterns, and views of human nature to recreate a noir effect. The role of authority figures and the use of money as a power source also contributes to the darker views of human nature and leads into the de casibus aspects. Like Shakespeare’s “Macbeth”, the wheel of fortune turns through the “Moulin Rouge”.

**50**  
**WATERFRONT 1C ROOM**  
2:40-3:40  
**PANEL 4**

**JASON WANDREI** (MARK MILLER), DEPARTMENT OF ENGLISH, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

**READING THE DIFFERENCES**

The poems in this collection center on the puzzlement each speaker undergoes when an experience shatters expectations they had formulated in advance. Potentially positive encounters founder on surprising human differences, and the speakers of my poems find themselves negotiating their disappointment in a new brave new world not of their own making. Some of my poems recount that process throughout the course of an entire day. All of these poems aim to discover points of contact where people can become mutually intelligible to each other.

**51**  
**WATERFRONT 1A ROOM**  
11:00-12:00  
**PANEL 2**

**PAUL WITTER** (MARY CORDILL), DEPARTMENT OF SOCIOLOGY, CAPE COD COMMUNITY COLLEGE, WEST BARNSTABLE, MA 02668

**POLITICS OF THE ENGLISH LANGUAGE: ANALYSIS AND APPLICATION**

I attempt to analyze examples of the current use of language in politics based upon the criteria established by George Orwell in his essay “Politics and the English Language. I look at the cliches, the misuse of words and their meanings and the role of the media. I will present portions of the portfolio of essays and examples that composed my project.

**52**  
**WATERFRONT 1C ROOM**  
1:40-2:40  
**PANEL 3**

**JANE WRZESINSKI** (DAVID LANGSTON), DEPARTMENT OF ENGLISH, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

**CHALLENGING CONVENTION AND CONSTRUCTED IDENTITY: A FEMINIST REREADING OF SHAKESPEARE’S THE TAMING OF THE SHREW**

Feminist critics have often condemned Shakespeare’s The Taming of the Shrew as inherently sexist, citing Kate’s final submission to a conventional marriage based on sexual asymmetry - a view that works if Kate's plotline is considered in isolation. However, when placed in the play's larger context, particularly the parallel plotlines for Sly and Bianca, the spectacle of Kate's taming is far from a simple affirmation of convention; rather it is Shakespeare's commentary on ways that patriarchal and aristocratic powers distort truth and reality in order to benefit themselves at the expense of the powerless. Intertwined with the central theme of gender/power relationships are two equally important sub-themes: the power of performative language and the advantageous possibilities of performance (acting). In this richer thematic context appearances jockey ceaselessly with reality, compelling the individual to negotiate among conflicting influences. The play's centerpiece is not only its imagery of oppression, but also its parallel visions of feminine identity and marriage that exceed conventional definition. Its final tableau contrasting Kate's submission with Bianca's rebellion shows that patriarchal gender prescriptions do not prevail in isolation, but are inevitably accompanied by antithetical tensions that not only drive them, but threaten constantly to subvert them.
In the nineteenth-century, one main anxiety in life and literary situations was that of social status. In that society, men were supposed to be leaders and achievers, but their achievements would not be counted as a mark of true social superiority unless they could also be called gentlemen. In much of nineteenth-century fiction, men are identified as gentlemen due to their money and social position. William Hazlitt, who has described men and women as leaders and achievers, but their achievements would not be counted as a mark of true social superiority unless they could also be called gentlemen. In much of nineteenth-century fiction, men are identified as gentlemen due to their money and social position.

GLORIA NAYLOR

YEARS OF REBUILDING COMMUNITY, STILL NOT COMPLETED: DIFFUSION IN NOVELS BY ERNEST J. GAINES AND GLORIA NAYLOR

In the years following slavery, there was a great dispersion of African-American culture, community and family connection. Generation after generation, African-American individuals strove to gain a sense of belonging in a community of familiar people containing family ties and culture. "A Lesson Before Dying," by Ernest J. Gaines, and "The Women of Brewster Place," by Gloria Naylor, depict the rebuilding of communities in different time periods. The actions of the novels are separated by 30 years and focus on different specific conflicts. In Gaines' novel, a convicted murderer is facing the death penalty, and in Naylor's novel a community leader tries to break down physical barriers that separate the neighborhood from the rest of the city. However, very similar problems, such as trying to plant cultural roots for the future, are addressed in each novel. The racial struggles of the larger world impact on these local levels as characters in each novel attempt resolution through action. Amidst the national circumstances, Gaines and Naylor show their protagonists, Grant and Kiswana, rebuilding and healing their families and communities. In both novels, images of rebuilding point to family connections, community and a sense of comfort and hope for future African-American generations.

AMANDA LAVORNGA

A GENTLEMAN'S TITLE: IS BEING A GENTLEMAN A MAN'S SAVIOUR IN THE VICTORIAN ERA?

In the nineteenth-century, one main anxiety in life and literary situations was that of social status. In that society, men were supposed to be leaders and achievers, but their achievements would not be counted as a mark of true social superiority unless they could also be called "gentlemen". In much of nineteenth-century fiction, men are identified as gentlemen due to their money and social position. William Hazlitt, who has described men and women as leaders and achievers, but their achievements would not be counted as a mark of true social superiority unless they could also be called gentlemen. In much of nineteenth-century fiction, men are identified as gentlemen due to their money and social position.
Oral Session

Makepeace Thackeray makes us rethink this characterization of nineteenth-century men, by providing a statement that serves as a catalyst in arguing that money and power are not the keys to success in becoming a gentleman. In Thackeray's Vanity Fair, a rather high standard is set for classifying men in Victorian novels as gentlemen, in the true sense of the word. Thackeray defines the term gentleman as meaning a man “whose aims are generous, whose truth is constant, and not only constant in its kind but elevated in its degree; whose want of meanness makes them simple: who can look the world honestly in the face with an equal manly sympathy for the great and the small” (720). Using male characters from Emma, Jane Eyre, Wuthering Heights, and Vanity Fair, this paper tests the two different views and concludes that, though many men look like gentlemen by their social rank or because of their gracious manners, this definition proclaims that the real gentlemen are the men whose personalities are genuine, humble, and sympathetic. The true gentlemen are those who look out for others, and for the benefits of others, rather than for their own self-improvement or stature. The most important things to a gentleman are not the material possessions that go along with being a gentleman by class. Examination of these texts proves to show that gentlemen are far and few between and that, most likely, the men who are least expected to, end up as the true gentlemen.

57 FEDERAL 1 COMPLEX 2:40-3:40 PANEL 4

HOLLY MOREN (GLEN BREWSTER), DEPARTMENT OF ENGLISH, WESTFIELD STATE COLLEGE, WESTFIELD, MA 01086

CHASING SHADOWS: THE MISREPRESENTATION OF SARAH ORNE JEWETT

The phrase “Until the day break and the shadows flee away” is carefully etched into American writer Sarah Orne Jewett's gravestone. The irony of this epigraph is that it bears more truth than it was perhaps intended to. Jewett had two great loves in her life: her writing and her lover, Annie Fields. Although Jewett is best known for her picturesque descriptions of the Maine countryside, this study will pay more serious attention to her second claim to fame: her “Boston marriage” to Annie Fields. Through this examination of the life of Sarah Orne Jewett, we will discover the unfortunate but crucial choice Jewett's biographer made when he decided to exempt any evidence of Jewett's love relationship with Fields from her biography. By presenting the Jewett/Fields relationship as a Boston marriage, a presumably nonexistent union between women in the late 19th century (although the definition is debatable) historians and biographers have perhaps deliberately chosen to exclude one of the most important elements in the understanding and appreciation of Sarah Orne Jewett: her sexuality. This presentation will not only discuss the social phenomenon of the Boston marriage, but it will also chase away the shadows hovering above Jewett's legacy and finally declare her as one of our country's earliest and greatest lesbian writers.

58 BACK BAY 1 COMPLEX 2:40-3:40 PANEL 4

CAROLYN MURPHY (JUDITH BUDZ), DEPARTMENT OF ENGLISH LITERATURE, FITCHBURG STATE COLLEGE, FITCHBURG, MA 01420

COMPARING AND CONTRASTING THE PORTRAYAL OF AFRICA AND AFRICANS IN JOSEPH CONRAD’S HEART OF DARKNESS AND CHINUA ACHEBE’S THINGS FALL APART

In Heart of Darkness, Conrad seems to give a limited view of Africa and its people as seen through the eyes of a European, whereas Achebe portrays African cultures as complex and valued from the perspective of an African clan in Things Fall Apart. On the surface, both novels appear to be very different. Some argue that Heart is a racist work supportive of imperialism, standing in sharp contrast to Things' textured depiction of Igbo life; others say that Heart is an ironic and symbolic book that is just as anti-imperialistic as Achebe's culturally-rich and humanized story. After exploring many books and journal articles taking various positions about the two books, this thesis contends that, while both put forward some apparently contrasting views on Europeans, Africans, and imperialism, they also present ambiguities concerning the meeting of the two cultures. Each book exposes positive and negative aspects of the conflicting cultures reflecting the complex nature of humanity, thereby undermining any confining labels.

59 FEDERAL 1 COMPLEX 2:40-3:40 PANEL 4

KARINA SCHRENGOHST (KIM HICKS), DEPARTMENT OF ENGLISH, HOLYOKE COMMUNITY COLLEGE, HOLYOKE, MA 01040

PEDAGOGY AND PRINCESSES

Popular versions of fairy tales, both literary and cinematic, offer a narrow view of women that perpetuates patriarchal views, and discreetly transmits stereotypical behaviors in a magical vehicle of entertainment. An evolutionary analysis of the changes that have occurred in the presentation and the function of fairy tales involves examining oral tradition, literary publication, and cinematic production. This presentation will subject several tales to such analysis, including Snow White, Cinderella, and The Little Mermaid. Careful analysis reveals the existence of multiple voices and reoccurring ideological messages, and explains why fairy tales have continued to flourish over the years and cross culturally.
MALE VIOLENCE AGAINST WOMEN IN THE NOVELS OF JOHN STEINBECK AND IN CONTEMPORARY LIFE

Illuminating parallels may be drawn between John Steinbeck’s portrayal of violence by men directed toward women in his novels and the reality of the problem of violence against women in contemporary American life. This presentation will include up-to-date statistics and information about women victimized by physical abuse, rape, and murder as a result of male attackers. Images from Steinbeck’s novels “Of Mice and Men” and “The Pearl” will depict the effects of male violence on the victims and on the perpetrators themselves. Examples of Steinbeck's fictional portraits of violent men include Lennie in “Of Mice and Men” and Kino in “The Pearl”. At the end of each novel, both men suffer as a result of the abuse that they direct against women. Kino loses his son along with the spiritual aspect of the relationship with his wife and Lennie is deprived of life. Aspects of Steinbeck’s biography will be highlighted, especially his relationships with women. Documentation of the continuance and prevalence of violence against women in the present American culture sheds light on dangers inherent in gender stereotypes.

SHAKESPEARE’S LOVE THEMES ANALYZED THROUGH THE GREEK MODELS OF LOVE: AGAPE, PHILIOS, STORGE, AND EROS

While the English language uses one word, love, to describe distinctly different emotions, the Greek philosophers described love by its nature, depth, and conditionality. This oral presentation explores love themes in William Shakespeare’s plays through the Greek models of agape, philios, storge, and eros. When modern film makers interpret Shakespeare’s plays they often translate originally platonic themes into more sensualised ones. In doing so they create a sexy, sensationalized appeal that is more attractive to today's audiences. Several love themes in Shakespeare’s comedies, tragedies, and histories will be compared and contrasted with the modern film analogs of “Romeo and Juliet”, “Twelfth Night”, “Richard III”, and “Henry V”. The discussion will capture some of the advantages and disadvantages of stage and film depictions of the Greek models of love.

ANCHORS OF SUBSTANCE: A GROUP OF ORIGINAL POEMS ABOUT FAMILY RELATIONSHIPS

Memories of things that happened to us when we were younger and still within the family circle have a lasting effect on how we gradually form ideals, beliefs, attitudes, and a growing understanding of whom we are. A group of poets, Community College students at varied stages of life, has written original poems reflecting some of the experiences they consider memorable and significant now, in the past, and in the future. Ordinary things take on a heightened reality as they become anchors of substance upon which emotions become attached, preserved, or sometimes kept in a safe, less threatening place. A loaf of home-made bread, a pocketbook, a rocking chair, a garden, are examples of common, ordinary things that become road signs, symbols, and structures of hidden meaning. The poets offer their personal memories in the form of poems to be interpreted according to what the poem says on the surface or what it might mean symbolically.

COSTA RICA: A JOURNEY OF EXPERIENTIAL EDUCATION, HEIGHTENED ENVIRONMENTAL AWARENESS AND ELEVATED SELF-CONSCIOUSNESS

Tropical ecosystems are among the most biologically diverse, yet most environmentally threatened, habitats on Earth. We participated in a study abroad course in Costa Rica in January 2003. The course consisted of three main components. First we were introduced to various tropical ecosystems through guided hikes. Second, we participated in field research projects that engaged us in the practice of tropical
ecology research. And finally we were involved in a service-oriented exercise intended to integrate knowledge, experience, and a deeper call for civic duty to respond to the tropical deforestation crisis. In our panel discussion we will address issues of environmental degradation such as deforestation, forest fragmentation, and species and habitat loss. We will emphasize methods of protection and maintenance of tropical biodiversity. Rather than teaching distinct lessons, Costa Rica was a learning continuum about environmental degradation, about a culture so much different from our own, about the microcosm of the individual and the macrocosm of the universe. The social and ecological experience in Costa Rica led us to challenge our worldviews and question the cultural and economic assumptions of the modern world in which we live.

ENVIRONMENTAL LITERACY AMONGST HIGH SCHOOL STUDENTS: WHERE DOES IT COME FROM?
As human consumption continues to demand more of the earth's resources, encouraging environmental awareness is an increasing concern for parents, educators and policy-makers. Encouraging environmental activism among students in Massachusetts is critical for addressing many local and statewide environmental problems that are expected to persist in the future. The current study considers a sample of high school students in Massachusetts who are currently active in local environmental issues. The goal is to learn how these students became knowledgeable, skilled, and motivated. A questionnaire survey previously developed and used by researchers and teachers at the University of Wisconsin was revised to assess students’ environmental experiences, role models, and the issues that they are personally committed to addressing. Students in high school environmental clubs across the state will participate by completing surveys that will be sent through the mail and also presented to students at statewide environmental youth conferences and meetings. The results of this survey will provide information to concerned educators and environmentalists who are interested in how to effectively encourage activism in their students. It will also be used to inform Massachusetts’s educators and policy-makers to identify strategies and improve their efforts aimed at helping students to become environmentally active citizens.

NINETEENTH CENTURY MARRIED WOMEN’S PROPERTY REFORM IN MASSACHUSETTS
In the field of women’s legal history the married women’s property acts of the nineteenth century have been considered a major expansion of women’s rights. Prior to their passage a married woman could not enter into a contract, bring suit against another, keep wages, write her own will, or act as legal guardian, even to her own children. All of her property, personal and real, was her husband’s to use as he saw fit. Inherited from English common law, the doctrine of coverture made man and wife one person. Legislative reforms in the 1840s granted married women more rights to control their own property. By breaking down coverture the married women’s property acts were considered vital to women’s rights. New research, however, is challenging the importance of the property acts. Some historians argue that the laws meant to protect married women were interpreted so narrowly that in effect the common law standard of coverture was maintained. This debate gives rise to several questions about married women’s property acts: how can their effectiveness be determined? Were the acts a revolutionary gain for women or do they prove that women’s rights were more evolutionary? Should historians reconsider their importance? Because these rights varied from state to state during the nineteenth century, the answers will vary depending on the region studied. This study will focus on Massachusetts from the 1840s through the 1890s, specifically the application of legislative reforms and evidence of them in married women’s cases. The result will determine where Massachusetts fits in the debate over married women’s property reform.

WEAPONS OF THE WEAK
This research was done to shed light on the phenomenon of suicide bombing in relation to ancient Jerusalem. An analysis of The Jewish War by the ancient historian Josephus, allows for a comparison to modern acts of desperation. The study uses the city of Jerusalem in 70 CE when the ancient Jews were battling the Romans as a backdrop to the modern turmoil as described in the mass media. I will bring a historical perspective on Jerusalem's desperation and the lengths people will go to achieve their ideals. In both time periods, the weaker party has been drawn to acts of self-sacrifice due to complete hopelessness and desperation. Although modern acts of self-sacrifice may seem extraordinary, they are very similar to the ancient acts of desperation. Both the ancient Jews and the modern Palestinians are unwilling to reasonably compromise. They are engaged in battles of absolutes, where those fighting for liberation absolutely will not settle for anything less. These martyrs are willing to kill themselves for their cause will concede to nothing less, be it slavery or loss of territory. For them there is nothing worth preserving if their cause is hopeless. Conclusion: There are potential compromising solutions between the opposing factions but the
strength of will prevails as related to ideals and cultural influence, resulting in a vendetta that overrides peaceful outcomes instead of simply realizing and accepting their mutual humanity.

**HISTORY**

67 WATERFRONT 1B ROOM 11:00-12:00 PANEL 2

BARBARA FOX (R. MALCOLM SMUTS), DEPARTMENT OF HISTORY, UMASS BOSTON, BOSTON, MA 02125

"THIS MOST NOBLE MARRIAGE": THE WEDDING OF MARY TUDOR AND PHILIP OF SPAIN

Close study of the ceremonies and rituals of court life can reveal a great deal about how the court and government function. In 1554 Mary Tudor, first Queen Regnant of England, married Philip of Spain, son of Holy Roman Emperor Charles V. Using primary and secondary sources, this study evaluates the wedding ritual itself and pertinent events surrounding it in terms of how well they accomplished certain political purposes. At the time of her marriage, Mary needed to convince her Council, her countrymen, and the world at large that she was the legitimate holder of the throne; that England was politically stable, economically prosperous and returning to the Catholic Church; that she had, like other rulers, the right to choose her own consort; that the Spanish alliance was a good one, and that she could function as both Queen and wife without ceding power to her husband. It is my conclusion that, although the marriage of Mary and Philip was a noted failure, the wedding itself succeeded in all aims but that of gaining acceptance of Philip from the English.

68 WATERFRONT 1B ROOM 10:00-11:00 PANEL 1

MICHAEL SCHNEIDER (STEVEN WEISNER), DEPARTMENT OF HISTORY, SPRINGFIELD TECHNICAL COMMUNITY COLLEGE, SPRINGFIELD, MA 01105

MAJOR ROBERT ROGERS: THE FORGOTTEN RANGER

Major Robert Rogers, despite achieving international fame and recognition for his exploits during the French and Indian War, is not well remembered by modern historians. The regiment he founded, Rogers' Rangers, and the men that fought with him, are considered by our military to be precursors to the modern day U.S. Army Ranger, and the rangers of today conduct themselves using principles that he helped to perfect. Despite this, only one truly comprehensive biography of his life has ever been attempted, and it is heavily biased to show the major in the most positive light possible. This paper, by utilizing a variety of both primary and secondary sources, will be the foundation for a biography based on the subject's life, which will seek to portray him as accurately as possible, without emphasis on his positive or negative qualities.

69 BACK BAY 2 COMPLEX 1:40-2:40 PANEL 3

RAYCHO THOMAS (NUTTING P. BRADLEY), DEPARTMENT OF HISTORY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

WHY ENGLAND FREED JAMAICA: AN IN-DEPTH ANALYSIS OF THE MORANT BAY REBELLION

This paper explores the situation in Jamaica leading up to and including the Morant Bay rebellion. It takes a socio-economic approach to understanding the causes of the rebellion. Among these are the apprenticeship system, instituted just before the abolishment of slavery, the caste system, and the poor economic conditions of the Jamaican working class. This study concludes that the Morant Bay rebellion set a precedent that was the beginning of the Jamaican independence movement.

70 FEDERAL 1 COMPLEX 11:00-12:00 PANEL 2

NICOLE YUKNA (JOHN HIGGINSON), DEPARTMENT OF HISTORY, UMASS AMHERST, AMHERST, MA 01003

DIFFERENCES IN URBAN AND RURAL EXPERIENCE WITH THE TRC

This project is a historical survey of the differences in the urban and rural experience relating to the TRC, South Africa's Truth and Reconciliation Commission. The project developed out of a course on South Africa, which led me to develop an interest in how two groups with extremely varied experiences under apartheid would each relate to a single commission aimed at alleviating their pain. My investigation began with written documents particularly biographies, historical surveys, and academic texts. In addition I utilized interviews and textual research conducted in South Africa, particularly Cape Town and environs, the area of concentration for this project. The general results of this research were that although the two groups had different forms of interaction with the apartheid government as well as other South Africans they suffered varied violations of their human rights and different disruptions to their quality of life. Yet through the commission's specific efforts to address all South Africans as well as the democratic government's attempts at inclusion the commission appears to have been equally effective for both urban and rural residents. Such a finding is extremely important because it sets an example for other countries establishing truth commissions currently, by studying the South African model other nations with disparate populations can formulate truth processes that are of equal value and service to all their citizens.
THE ORAL HISTORY OF NEW BEDFORD'S NORWEGIAN SCALLOPERS PROJECT

I have lived in Mattapoisett, Massachusetts for nineteen years. My father and uncle were scallopers out of New Bedford, Massachusetts for many years. In 1999-2000, I worked on a factory-processing fishing boat, the F/T Starbound, based out of Dutch Harbor, Alaska. My family history and personal experience have led me to conduct family and local history research through the Commonwealth Honors Program at Bristol Community College. In the process of researching, I met Kathryn Grover, an independent researcher, writer and editor in American history, who put me in touch with John Piltzecker, superintendent of the New Bedford Whaling National Historical Park. John and Kathryn confirmed my impression that the Norwegian contribution to New Bedford's maritime heritage has not been documented or advertised, and I am dedicated to fully documenting the Norwegian scalloping history in New Bedford, primarily through interviews. I am interested in documenting all aspects of the lives of Norwegian scallopers: when and why they left Norway, where they first settled when they came to the United States, how they were introduced to scalloping, why they chose to scallop from the port of New Bedford, what New Bedford was (and is) like as a fishing port, who else was (and is) fishing from this port, what the market was like for scallops and how it has changed, what shore side life was like for scallopers and their families, who the outfitters and ship suppliers were, and any other aspects of work and life that mattered to Norwegian Americans. My research is also being included in a larger project being conducted by the New Bedford Whaling National Historical Park, the 2003 Commercial Fishing Industry Exhibit.

REACTION TIME OF THE LOWER LIMBS AND HORMONE LEVEL AS A POSSIBLE EXPLANATION OF THE INCREASED RATE OF INJURIES TO THE ANTERIOR CRUCIATE LIGAMENT AMONG FEMALE ATHLETES

Injuries to the anterior cruciate ligament are 3 to 10 times more likely to occur in female athletes as opposed to males as reported in literature. Possible mechanisms such as differences in biomechanics, neuromuscular control, and hormone levels have been proposed as possible explanations for this difference between the genders. The possible correlation between hormone levels and whole body reaction time was explored in hope of gaining insight to this difference in incidence of injury between the sexes. Prior research suggests that the greatest difference in female physical performance occurs during the preovulatory phase when estrogen levels are highest. Therefore it was hypothesized that the greatest difference in reaction time will occur during the preovulatory phase. Reaction time was tested by having the subject jump forward when given a signal. A force plate measuring ground reaction forces was used to determine when the subject initiated the jump, and then left the ground. The dependent measure of reaction time was defined as the time between when the light stimulus was given and when the subject left the ground. Female subjects were tested at onset menses, pre-ovulation and post-ovulation and blood samples were taken at each data collection and assayed to determine blood hormone level. Male subjects were used as controls and were tested in three sessions 10-12 days apart.

READING DIGRESSIONS & MUSINGS

The presentation of selections from my poetry collection, Digressions and Musings, a collection has has received awards and faculty approval. The poems are very diverse in both subject matter and form; they range from free verse reflections about conflicts faced by my immigrant grandfather when he came to America to a villenelle that celebrates Beethoven. As “digressions,” my poems invite the reader to step aside from the ordinary routines of life and muse on the commonplace events that can transform our understanding of the everyday.
MANAGEMENT

74 BACK BAY 2 COMPLEX 2:40-3:40 PANEL 4

FIONA FINCH (FIONA FINCH), DEPARTMENT OF MANAGEMENT, SALEM STATE COLLEGE, SALEM, MA 01970

A COMPARISON OF FEMALE MANAGEMENT STYLES IN SMALL-SIZED COMPANIES WITH THOSE OF LARGE-SIZED COMPANIES: DO WOMEN HAVE TO ADOPT THE TRADITIONAL MALE MANAGEMENT STYLE TO SUCCEED?

It is known that female managers are underrepresented in corporate America. This study was conducted to determine if female managers have to adopt the traditional male management style (i.e. directive) to succeed in a male-dominated environment. It is hypothesized that women exhibit greater success in small-sized companies when using the democratic management style. When women advance to large-sized corporations, the directive style may be better suited to the large nature of departments and work groups. For this study, ten female managers are selected from small-sized companies and ten from medium and large-sized companies. Small-sized companies are defined in this study as having between 5-150 employees. Medium and large-sized companies are between 100-150 and 150+, respectively. Each manager is interviewed on her leadership style and actions. The results will test the hypothesis that female managers have to adopt the directive management style to succeed. Success is defined in this study as the rate and speed of promotions and percentage salary increases within the company or industry. Employee turnover rates will also be factored into defining success for the management styles used.

MARKETING

75 WATERFRONT 1C ROOM 10:00-11:00 PANEL 1

ERIN HICKEY (GEORGE MILNE), DEPARTMENT OF MARKETING, UMASS AMHERST, AMHERST, MA 01003

TEENAGERS, HAIR CARE PRODUCTS AND THE CONSUMER MARKET

Young Adults, Hair Care Products and The Consumer Market: the Hair Care industry has not yet tapped the vast young adult consumer market. This market has great potential. This study was conducted to determine the needs, preferences, and consumer behavior of young adults, to create a unique hair product brand that meets the needs of the young adult target market. Research methods set the basis for a creative promotional campaign targeted at young adults, with a focus group of five, 14-18 year olds. Facilitated discussion format provided valuable information surrounding young adult preferences, opinions, and values as they relate specifically to hair care. This primary research is supported by secondary library research and primary data from a survey I conducted. Young adults between ages 14-18 do not feel that their consumer needs are being met by current hair care brands on the market. Young adults are well groomed and hygiene conscious. They live fast paced lifestyles, and want to be recognized and taken seriously. Young adults have tremendous consumer power and influence their families' hair product purchasing decisions. They do not feel that their age group is represented in hair product advertising. The conclusion is that young adults do not feel that the majority of hair care brands meet their needs. They desire deep cleaning, easy to use, fun, fragrant, gentle, and stylishly packaged hair products. Young adults frequently blow dry, color and style their hair, making long-term hair care vital. Very few hair care brands have developed product lines that meet these specific market needs of young adults.

76 WATERFRONT 1C ROOM 10:00-11:00 PANEL 1

MARCIE JUDGES (MARC WEINBERGER), DEPARTMENT OF MARKETING, UMASS AMHERST, AMHERST, MA 01003

BRITISH VERSUS AMERICAN COLLEGE STUDENTS VIEWS OF WOMEN IN MAGAZINE ADVERTISEMENTS

A woman’s view of herself may be influenced by how women are portrayed in the advertising that they view. This study was designed to test and discuss how American and British female college students view women in magazine advertisements. For this study ninety female British college students were surveyed. This process included having them view a set of predetermined advertisements and then having them answer a questionnaire based on these advertisements. The advertisements used are for three different products: perfume, lipstick and facial cleanser. The advertisements were altered so that one advertisement for each product portrays a professional woman; another is a woman exhibiting sex appeal while the third advertisement only featured the product. This process was repeated with ninety female American college students. The students were randomly selected from the females at Imperial College (in London) and Umass, Amherst. They were also asked a number of demographic questions including, what university they attend, current class year, age, height and weight. These demographic factors along with economic factors regarding the universities these women attend will be included in the analysis. The final steps are to compare this data with the original hypotheses and develop conclusions based on the responses received and the earlier literature that was examined. The final presentation will also include a presentation of the advertisements used in this study.
QUALITATIVE RESEARCH REGARDING ADOLESCENT SMOKING

Smoking still holds appeal to countless adolescents despite the billions of dollars being spent on anti-smoking campaigns. It is vital to understand the motivations and rationales behind youth smoking when developing programs to curb adolescent smoking trends. Traditional survey methods have led to some understanding of teenagers’ attitudes and behaviors. However, the use of innovative qualitative research may provide deeper insight to the perceptions and images associated with smoking. Adolescents in two youth groups participated in an ethnographic study of smoking. These students ranged from 12 to 17 years old. The key components of this qualitative study are the use of improvisational theater and role-playing activities. These activities were recorded and serve as the basis for individual and group interviews. Analyses of the videotaped activities and discussions yielded insights into smoking within youth culture. A second outcome of this study is to evaluate the effectiveness of the qualitative research methods used.

ELECTRONIC COMMERCE

An examination of the fast growing electronic commerce industry shows the importance of such knowledge in the development of any business undergraduate student. Fifteen of the nation’s top undergraduate electronic commerce programs ranked through US News and World Report were examined with the emphasis on curriculum with respect to electronic commerce specific classes and electronic commerce content. The project will consist of a presentation on the trends in the electronic commerce industry along with a report of skills and knowledge needed for electronic commerce concentrations and occupations. Emphasis is placed on the development of an appropriate electronic commerce knowledge base for business students and an analysis of the programs and services of top electronic commerce schools.
NURSING

81 WATERFRONT 1B ROOM 2:40-3:40 PANEL 4

ERIN BURNHAM (ROD KESSLER), DEPARTMENT OF ENGLISH, SALEM STATE COLLEGE, SALEM, MA 01970

RECOGNIZING OUR OWN PAIN: SCREENING NURSING STUDENTS FOR SIGNS OF DEPRESSION

Undergraduates often function under a great deal of mental and physical stress, leading to a condition they call burn-out but which in fact may be depression. Researchers have started focusing on students to find out what factors lead to the high rate of depression on college campuses. My project looks specifically at the baccalaureate nursing students at Salem State College. This population is put under high stress and students strive for perfection. Students at all grade levels in the nursing program anonymously complete the PHQ-8 depression questionnaire developed by Pfizer. The data are analyzed to reveal prevalence rates and possible correlations with length of time within the program. The results are also reported to the students in the program with information about services available within the college. While untreated depression remains a widespread problem, leading to an increase in sick days and reduced work productivity, for students as well for anyone else, treatment options have grown significantly in the last decade, and many students will benefit from becoming better informed.

82 WATERFRONT 1B ROOM 2:40-3:40 PANEL 4

JENNA CULLIVAN (KRISTEN SETHARES), DEPARTMENT OF NURSING, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

BACCALAUREATE NURSING STUDENTS GAIN FROM COMMUNITY BASED SERVICE LEARNING PROJECT

The purpose of the presentation is to describe a community service project organized by nursing students. Promoting the health of the community is one role of nurses. This can be accomplished through community service projects. In an effort to become involved in community service, the sophomore nursing class organized a clothing drive for a homeless shelter in Cambridge, MA. The sophomore class felt that it was important to help serve this homeless adolescent shelter during the holiday season. Signs were posted with a list of what these adolescents needed, e-mails were sent out to all nursing faculty and students, and announcement were made in several classes to keep the students informed of what was being collected and what was still needed. Students and faculty donated numerous amounts of toiletries, sleeping gear, clothes, jackets and other essentials. A group of nursing students went to the shelter to deliver the materials collected and benefited from speaking with the director of the program. The students were informed about the program and the importance that nurses have in the community. In all this the community project was a success. Students gained knowledge on health promotion and prepared for professional roles including community service.

83 FEDERAL 2 COMPLEX 10:00-11:00 PANEL 1

KIMBERLY HASTINGS (JEANNE LEFFERS), DEPARTMENT OF NURSING, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

INTERNATIONAL NURSING: DOMINICAN REPUBLIC COMMUNITY

Despite barriers associated with ethnicity, gender, and age, we find that it is imperative to provide for equal access to health care. As student leaders, we feel it is our role to advocate for those who are underserved, not only within our own borders, but also for those in developing countries. One way to fulfill this nursing role is to donate time to continued community care, educational awareness, or non-profit health care organizations. Also, one could participate or help fund international medical missions where health care professionals can make a difference. The focus of this presentation for the Boston Conference is nursing leadership in a cross-cultural setting: The Dominican Republic. As student nurses interested in cultural awareness, we were given the opportunity to provide health care service to a vulnerable population. This population resides near Las Matas de Farfan, located within the western part of the Dominican Republic. Intercultural Nursing Inc. health care team members included 20 registered nurses, one physician, one physician’s assistant, three nurse practitioners, and five nursing students and three Spanish-speaking interpreters. While there, we observed the differences in health care conditions and the health care problems of the people. While immersed in the culture, we began to understand how their culture has influenced their concept of health care. We were able to gain invaluable assessment, and creative problem solving skills by working in clinics with limited resources. Throughout our presentation we will share our experiences from the Medical Mission, led by Intercultural Nursing Inc. from January 4 - 18, 2003. Our oral presentation will include a discussion of the initiative and motivation needed to physically, emotionally, and mentally prepare for this mission. We will also talk about some of the most influential experiences gained during our stay. We will discuss how our experiences have affected us personally and professionally as student leaders.
ENSURING FOOD SECURITY AND STABILITY IN SPRINGFIELD, MASSACHUSETTS

Food security and food access are important issues facing many urban neighborhoods. Currently, residents of many cities have little or no direct access to grocery stores or other food services, making it very difficult to maintain a nutritionally adequate diet and increasing the likelihood of poor nutrition and diet-related diseases. The purpose of this research is to support a food security initiative in Springfield, Massachusetts that is directed by the X Main Street Corporation, a nonprofit, volunteer organization in collaboration with the University of Massachusetts Extension Program. This report will focus on two aspects of this initiative, a Community Food Assessment and an evaluation of a transportation program designed to increase access to a full-service supermarket for low income and elderly city residents. City records, computer-generated mapping programs and published census data information will be used to produce a Food Access Map to show the full range of retail food sources and alternatives. An evaluation of a community-based shuttle program will use passenger monitoring and questionnaires to assess the impact of the shuttle program on supermarket use. The information and results will be used to support ongoing efforts to illustrate the benefits to local food retailers for collaborating with community organizations and to serve as an educational tool for continuing efforts to ensure food access and stability in the city.

PHILOSOPHY

PUBLIC SCHOOLING OR PUBLIC EDUCATION?

The ongoing campaign to devalue public education involves a number of different dimensions, each with its own history and social implications. My study begins by applying notions drawn from Paulo Freire's "Pedagogy of the Oppressed" to analyze key tensions between working class values and public schooling, particularly as they came to be manifested in the 1950's and 1960's. I conclude by suggesting that public schooling can be a valuable social instrument, and I propose any reformulation of public education should assume a "life-related" emphasis to resolve the opposition between schooling and education.

BEING NAUSEOUS

"Why are there beings at all instead of nothing?" (Heidegger 1). This fundamental question lies at the heart of metaphysics; and is Jean-Paul Sartre's point of origin and means of inquisition in Being and Nothingness, from which he develops the essential elements of existential philosophy. Being and Nothingness explores phenomenology, Being-in-itself, Being-for-itself, bad faith, alienation, and the freedom of anguish. When an individual experiences anguish he is faced with the reality-of-self, which Sartre defines as nothing. Prior to Being and Nothingness Sartre published his first literary work Nausea, in which the main character Antoine Roquentin experiences nausea when faced with the nothingness of his existence, thus similarities can be drawn between being in anguish and being nauseous. Is Sartre's definition of anguish a precursor to, and interchangeable with nausea? Is it Sartre's underlining intention to associate anguish with nausea? In determining the similarities and differences between both works it is crucial to look at the historical context in which they were written. Nausea was written in 1938, where Sartre's focus was grounded in the comforts of the French Bourgeois. Being and Nothingness was written in 1943 and Sartre's philosophy was undeniably influenced by German occupation, with emphasis on the Nazi atrocities. Therefore, it is the purpose of this inquiry to discern the similarities and differences between Nausea and Being and Nothingness with concentration on the defining characteristics of anguish and nausea—with respect to their historical context.
An examination of humanity's concepts of good and evil as explored in the novel “Washington Square” by Henry James and the philosophical work “Conversations with God” by Neale Donald Walsch provides valuable tools in interpreting the experiences of life. Without an understanding of what is meant by the concept of evil, it is impossible to assign the value of good. Good and evil are determined based on an intricate web of ideas, relations, and societal influences. An individual's awareness of the nature of evil may even succeed in strengthening his or her ability to adhere to the concept of goodness with integrity. In “Conversations with God,” Walsch casts an enlightening perspective on evil. Literature also illuminates the interdependence of the concepts of good and evil and their role in forming judgments. The character of Catherine in Henry James’s “Washington Square” serves as a powerful example of an individual struggling with concepts of good and evil. Through James's portrayal of Catherine as a good and loyal servant of her malevolent father, Dr. Sloper, a true depiction of Catherine's integrity is shown. This presentation will delve into how the conscious understanding of good and evil may empower human beings ethically and morally in their lives.
PHYSICS

91 BACK BAY 1 COMPLEX 10:00-11:00 PANEL 1

HENOCK LEGESSE (DVGLN RAO), DEPARTMENT OF PHYSICS, UMASS BOSTON, BOSTON, MA 02125

ENCRYPTED STORAGE
Today securing stored data is part of many peoples’ everyday lives. A passport, a password, a bank card, a credit card — all must be secured. Over the past few years, the use of optical information processing for the design of security systems has become increasingly popular. In the present study, we adopt optical encryption techniques like double random encoding for securing the data in polymer media using conventional holography. Initial studies are carried out using Mat lab simulation. We also present preliminary experimental results on data storage in polymer media using conventional holography.

POLITICAL SCIENCE

92 WATERFRONT 1B ROOM 2:40-3:40 PANEL 4

MIRIAM PARRISH (JOHN BRIGHAM), DEPARTMENT OF POLITICAL SCIENCE, UMASS AMHERST, AMHERST, MA 01003

JURISPRUDENTIAL THOUGHT AT THE INTERSECTION OF LAW AND ENTERTAINMENT
This study is in Socio-Legal Studies, a field analyzing the reciprocal relationship between law and society. The focus is law and entertainment. I contribute to and challenge the work of Lawrence Friedman, Richard Sherwin, and Michael Rogin, among others, as I develop a theory of entertainment and law as mutually constitutive. Interviews with screenwriters, researchers, and television producers lead me to reformulate the traditional dichotomies of fact and fiction, reality and entertainment. Public understandings of law are, in part, shaped by law’s image in popular culture. In addition, the public has a role in this production through such practices as focus groups, screenings, fan mail, and so on. Finally, celebrity culture creates an imagined community between viewers and artists that contributes to the authority of law.

93 WATERFRONT 1A ROOM 11:00-12:00 PANEL 2

ESTHER SCHLEIDWEILER (ROD KESSLER), DEPARTMENT OF ENGLISH, SALEM STATE COLLEGE, SALEM, MA 01970

GORBACHEV: HIS ROLE IN THE DOWNFALL OF THE USSR
The power structure of the world has changed since the Cold War came to an end. Mikhail Gorbachev was president of the USSR when the Soviet Union collapsed in the midst of the reforms he had initiated. Historians agree that it was in Gorbachev's power to quell the uprisings in Poland and East Germany, yet the Soviet military was restrained in its barracks. The question is, why did Gorbachev not try to stop the revolts that tore the USSR apart? Did he misperceive the consequences of his own decisions, or was he, by not acting, truly enacting his ultimate agenda? What was his motivation? To answer these questions, I examine Gorbachev's recently translated memoir as well as pertinent literature and journals in the field of political science.

94 BACK BAY 1 COMPLEX 11:00-12:00 PANEL 2

KIM TRAUCENIEK (RUSTY SIMONDS), DEPARTMENT OF POLITICAL SCIENCE, UMASS BOSTON, BOSTON, MA 02125

REDISCOVERING HARRIET MARTINEAU
Though often neglected today, Harriet Martineau was a major political thinker in the nineteenth century. Martineau published dozens of books and countless articles and essays from 1822 until her death in 1876. She wrote on every subject from the political economy to theology, American slavery to education, and was acquainted with such prominent English thinkers as Charles Darwin, Thomas Carlyle and Thomas Malthus. This study explores and highlights two of Martineau's major contributions. She influenced Darwin's Natural Selection theory as well as his path to agnosticism and his political views. She was also one of the foremost proponents of and experts on Malthus's work, a key component of Darwin's theory. Secondly, I examine Martineau's contributions to the study of American democracy by comparing her arguments with those made by Alex de Toqueville. On the subjects of woman and slavery, Martineau offers valuable analyses of early America that are not discussed in de Toqueville’s Democracy in America. This study contributes to a new and proper estimate of Martineau and her work.
PSYCHOLOGY

95  FEDERAL 1 COMPLEX  2:40-3:40  PANEL 4

ALEXANDER FAIRLEY (JENNIFER HARRIS), DEPARTMENT OF PSYCHOLOGY, NORTH SHORE COMMUNITY COLLEGE, DANVERS, MA 01923

UNDERSTANDING IBSEN’S A DOLL’S HOUSE IN THE CONTEXT OF RESEARCH BY PSYCHOLOGIST LAWRENCE KOHLBERG

Henrik Ibsen emphatically insisted that A Doll’s House was less about the rights of women than about human rights in general. Nevertheless, many modern critics, specifically Richard Gilman and psychologist/philosopher Ken Wilber, continue to interpret the play to be about women’s rights. Gilman maintains that the play really is about the human appetite for power and exploitation and the corollary victimization of those who are not so driven. Wilber’s claim that men have been conspiring to oppress women is insulting to the humanity of both men and women, implying that women are subservient and docile and that men are aggressive, tyrannical subjugators. An alternative view is that of the late Harvard psychology professor Lawrence Kohlberg who divides human moral reasoning into three progressive levels: 1) pre-conventional, 2) conventional, and 3) post-conventional. The first level is a pre-socialization level concerned with avoiding punishments and seeking rewards. The second level is concerned with approval and adherence to rule based systems of morality. The third level is an internalized morality concerned with adherence to abstract ethical principles such as nonviolence and honesty. In this paper I argue that the conflict between Nora and Torvald Helmer is a conflict between conventional and post-conventional value systems, which is more in concert with Ibsen’s claim that A Doll’s House is about human rights, not just women’s rights.

96  FEDERAL 2 COMPLEX  1:40-2:40  PANEL 3

JOSEPH FRAIMAN (JERROLD MEYER), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

ARE MDMA’S INDUCED BEHAVIORAL CHANGES CAUSED BY MDMA’S SELECTIVE SEROTONIN NEUROTOXICITY

Ecstasy [3,4-methylenedioxymethamphetamine (MDMA)] is a commonly abused recreational drug, which is known to produce neurotoxicity, selective to the serotonin system, in several different animal species and may in humans as well. It has been demonstrated that MDMA can cause long-term behavioral consequences in animals and possibly humans. The purpose of this study is to help understand if these behavioral changes are related to the selective serotonin damage. Rats will be administered MDMA along with a selective serotonin reuptake inhibitor (SSRI) this treatment has previously been shown to prevent MDMA’s selective serotonin neurotoxicity. These rats will be compared to a saline group and a MDMA group. All rats will be given behavioral tests such as an object recognition test and an elevated plus maze which are animal models for memory and anxiety respectively. After behavioral testing the hippocampus and striatum will be analyzed for markers for serotonergic damage. The MDMA/SSRI and saline group are expected not to show signs of serotonergic damage. The saline and MDMA/SSRI group may show similar performance on the behavioral tests, which will support the theory that MDMA induced behavioral changes are a result of selective serotonin damage. On the contrary if the MDMA/SSRI groups perform differently on a behavioral test than the saline group, this suggests MDMA may be causing neurotoxicity that is not selective to serotonin. If the latter is observed this will lead to a paradigm shift in the current theory of MDMA being a selective serotonin neurotoxin and begin new areas of research for the cause of the behavioral changes.

97  CITYVIEW BALLROOM  1:40-3:40  PANEL

JAMIE GOLDSMITH (PATRICIA WISOCKI), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

THE EFFECTS OF SOCIAL ANXIETY ON COLLEGE WOMEN WITH EATING DISORDERS

The purpose of this study was to explore the possibility of a positive relationship between eating disorders and social anxiety among college aged women. The participants (N=100) included fifty women who self reported that they had disordered eating and fifty women who said they had little to no eating related issues. Each participant filled out 2 questionnaires; questionnaire one had nine items related to disordered eating and 9 items related to social phobia/anxiety, questionnaire two is The Social Interaction Anxiety Scale that had twenty items that describe cognitive and behavioral reactions to social situations. Results were analyzed through Microsoft Excel mean scores and SPSS correlation coefficients to determine disordered eating behavior and anxiety felt in social situations. Mean scores from the eating disorders survey were correlated with 2 separate mean scores of the different social anxiety surveys. A positive correlation was found between subjects who reported disordered eating and high levels of social anxiety. Results also showed statistically significant differences in the anxiety levels of individuals who displayed disordered eating behaviors and those that did not, in social situations. Future research should continue to explore these factors and look at other extraneous variables, such as medication, that could possibly affect results.
TAINTED BY BEAUTY: PERCEPTIONS OF THE EFFECTS OF FASHION MAGAZINE EXPOSURE ON A WOMAN’S SELF-ESTEEM

Over the past decade the influence of media on women's self-esteem and body image has been greatly influenced. Moreover, much of the research has focused on video media and its negative influence. This study investigated college women's perceptions of the influences of varying types of print media on their body image. Participants included 141 college women who read a scenario portraying a hypothetical woman who varied in weight and type of magazine read. The women then completed measures assessing their perceptions of the scenario female who read fashion magazines, their own self-esteem and body shape satisfaction, and personal dieting and exercising habits. Women perceived the overweight woman as having lower physical self-esteem and lower body satisfaction than the average weight woman. In addition, women perceived overweight peers as having lower self-esteem and body satisfaction regardless of magazine type exposure. An interesting pattern of associations was established among the factors of self-esteem, body shape satisfaction, diet, and exercise. Implications for the impact of magazine viewing on young women’s self perceptions are discussed.

RAISED IN A SMALL TOWN: VARIATION IN THE ADAPTATION OF RURAL YOUTH

Compared to urban and suburban youth, rural youth have greater difficulty adjusting to the psychosocial stressors they are exposed to in adolescence. However, present research falls short in identifying the variation with which rural youth adapt to these stressors. This study will investigate the risk factors that account for the variation in the development of depression among rural adolescents. It is hypothesized that 1) relative to urban and suburban adolescents, rural adolescents will report a more negative experience of school climate, significantly lower levels of family income, less social support, and higher levels of depression, 2) rural youth who are female, perceive their school climate as more negative, come from families of lower socioeconomic status, and have less social support will have higher levels of depression, and 3) social support will interact with a perceived negative school climate to attenuate the risk of depression among rural youth. Participants in this study were more than 4,000 Illinois middle school students who were given measures of depression, classroom environment, and perceived social support over a period of three years. This data will be analyzed using a one-way ANOVA to determine if there are significant differences between the rural and suburban/urban subgroups, with a Tukey post-hoc test to be used to examine the specific differences between the groups. Then a series of hierarchal regressions will be used to determine whether gender, perceived school climate, and socioeconomic status put rural youth at risk for depression, as well as whether social support mediates the effects of school climate.

THE SELF IN BICULTURAL CONTEXTS: THE PROCESS OF SELF-CONSTRUAL AMONG ASIAN AMERICANS

This study challenges the prevailing theory that the bicultural, Asian American experience involves frame switching between independent and interdependent construals of self, as adaptations to individualistic and collectivistic environments, respectively. This theory fails to represent the multiple ways in which the self in various contexts may be construed. The qualitative interview methodology adopted in this study reflects 1) the need for an exploratory investigation into a concept that is not well understood, and 2) the overall lack of quantitative, empirical support for Markus and Kitayama's theory of self-construal. Asian American adults who have been resident in the United States since at least five years of age were recruited from the Greater Boston area and participated in a two part, in-depth interview. The first portion was an open-ended exploration of participants' experiences of selfhood in various contexts, while the second introduced and evaluated Markus and Kitayama's theory at a structural level. A grounded theory constant comparative analysis of participants' stories, 1) offers multiple ways in which the self may be developmentally constructed, construed and negotiated in multicultural spaces and 2) provides support for Markus and Kitayama's theory as a monocultural construct only while challenging its relevance to the bicultural experience.
key element to the hearing and non-hearing populations. The community and family's adjustment to deafness in regard to acceptance and knowledge of resources for emotional support will also be discussed. Another section of the discussion will concern the relationship between hearing and non-hearing cultures and the technology and medical options which assists the deaf to adapt and become less isolated in the hearing world.

SOCIAL WORK

102 BACK BAY 1 COMPLEX 1:40-2:40 PANEL 3

MELINDA SILVEIRA (ROD KESSLER), DEPARTMENT OF ENGLISH, SALEM STATE COLLEGE, SALEM, MA 01970

LATIN-AMERICAN TEEN MOMS: CULTURE, SINGLE-PARENTING, ADOLESCENCE, DOMESTIC VIOLENCE, NEGLECT - A CASE STUDY
While teen pregnancy is prevalent throughout society and younger and younger girls are giving birth, the stress upon Latin-American teenage mothers can be especially severe, given a culture that emphasizes family life and that looks down upon abandoning one's child to someone else's care (adoption). This study presents an analysis of an in-depth case study of an unwed Latin-American teenage mother connected with Catholic Charities North in Lynn, Massachusetts. What does it mean to be still growing and developing as an individual while having the care of someone other than oneself? What are the consequences within this culture of a teen mother's own mother taking on the role of secondary caregiver? Are there sources of stress that contribute to patterns of domestic violence if the teen mother does not remain single? Does the impact of the emotional and physical pressures on Latin-American teen mothers cause these girls to neglect their children? Through a series of interviews with a now-17-year-old mother and with access to case records and a network of providers spanning the period between October 2001 and January 2003, this study attempts to provide partial answers to such questions.

103 FEDERAL 1 COMPLEX 1:40-2:40 PANEL 3

ELIZABETH VERBITSKY (WILLIAM MILLER), DEPARTMENT OF COMMUNITY OR PUBLIC SERVICE, UMASS AMHERST, AMHERST, MA 01003

PROTECTING THE ELDERLY: AN EVALUATION OF ELDER CONSUMER RISK IN FRANKLIN COUNTY, MASSACHUSETTS
It is estimated that roughly a quarter of the victims of telemarketing and mail fraud nationwide are aged 65 or older. The purpose of this study is to assess the specific nature and prevalence of consumer fraud issues that affect the elderly in Franklin County, MA. University of Massachusetts Extension has collaborated with the primary provider of services to the elderly in Franklin County (Franklin County Home Care Corporation) and with the Franklin County District Attorney's Office to devise a questionnaire survey. Surveys will be distributed to seniors at senior centers and to individuals in their homes through home visitation programs. The survey will assess elders on their past experiences with specific business tactics designed to perpetrate consumer fraud on individuals from vulnerable populations. It will also assess some general consumer habits that are associated with increased susceptibility and highlight effective ways for organizations to educate elders about their rights and the available resources for consumer assistance. Results from this study will help the collaborating agencies and other interested audiences such as law enforcement to gain a better knowledge of the nature and prevalence of local fraud practices. It will also help organizations to allocate resources and tailor their educational efforts to better meet the needs of elderly consumers in Franklin County.

SOCIOLOGY

104 BACK BAY 1 COMPLEX 11:00-12:00 PANEL 2

CHASITY MENARD (ANDREA KLIMT), DEPARTMENT OF ANTHROPOLOGY, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

THE EFFECTS OF TRAINING AND ENVIRONMENT ON THE BIRTHING PRACTICES OF MIDWIVES IN 21ST CENTURY MASSACHUSETTS AND RHODE ISLAND
Intensive interviews with Certified Nurse Midwives, Certified Professional Midwives and one Lay Midwife in Rhode Island and Massachusetts combined with scholarly research on the state of midwifery care in the US today sought to discover how the definition of the Midwifery Model of Care, under which all midwives are trained, may be interpreted and applied differently by the separate categories of midwives, relative to their education and training. This alternate interpretation would translate into different standards of care for clients. Although this was evident to some degree in the interviews conducted, it is however not only training and education that alter how a midwife may practice her craft, but also motivation and attitudes about the Midwifery Model may change the manner in which she practices, including performing interventions, relationships with doctors, nurses, and clients, in obstacles she perceived, as well as where she projected the field of midwifery was headed in the recent future.
THEATRE

105  WATERFRONT 2&3  10:00-10:20

ROCKY GRAZIANO (JOHN CONLON), DEPARTMENT OF THEATRE, UMASS BOSTON, BOSTON, MA 02125

SCENES FROM THE KENNEDY CENTER AMERICAN COLLEGE THEATRE FESTIVAL
We will perform a scene from the play “Class Action” by Brad Slaight. It takes place after a high school prom, when Tina and Robby, having driven to a local “hot spot,” feel the need to prove that they are more than just friends to classmates parked around them. This scene was chosen, through competitive auditions for the Irene Ryan Scholarship, for presentation at the Kennedy Center American College Theater Festival held at Keene State College on January 29, 2003.

106  WATERFRONT 2&3  10:20-10:40

MARTA JOHNSON (JOHN CONLON), DEPARTMENT OF THEATRE, UMASS BOSTON, BOSTON, MA 02125

SCENES FROM THE KENNEDY CENTER AMERICAN COLLEGE THEATRE FESTIVAL
We will perform a scene from the play “The Audition” by John Goode. In it, roommates Jen and Inger argue over a monologue for an audition. This scene was chosen, through competitive auditions for the Irene Ryan Scholarship, for presentation at the Kennedy Center American College Theater Festival held at Keene State College, on January 29, 2003.

VISUAL ARTS

107  WATERFRONT 1A ROOM  1:40-2:40  PANEL 3

ANGELA AMARAL (MARISA MILLARD), DEPARTMENT OF VISUAL ARTS, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

THE JOURNAL: AN INSIDE LOOK AT THE ART AND PROCESS OF LOGO DESIGN
The nature and extensive process of logo design is generally misunderstood. Because of this, it is not very well valued; if anyone thinks about it at all, they probably view it as something easily done. Therefore, I have sought ways to demonstrate the methodical and extensive quality of the design process in order to increase public awareness and to be able to examine my own personal progression. For a ten-week project in a graphic design class, I have kept a chronological documentation of each stage of my logo design process as well as a journal recording impressions, thoughts, feelings and opinions of the work itself and of the logo process. I chose a real world client for this project in order to help me see the connections to the professional practice of graphic design. I found that keeping a journal has brought me insights into the way the brain works, reinforcing the connection between what I’ve learned before and what I know now to be true. My journaling and process documentation succeeded in creating for myself a greater understanding of how the creative design process works and I believe that it also will increase personal awareness in others of how extensive the process really is.

108  FEDERAL 1 COMPLEX  2:40-3:40  PANEL 4

SEAN TIERNEY (CAROL SOKOLOWSKI), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

OF LOVE AND NEUROSES: A LOOK AT THE WORKS OF WOODY ALLEN AND WILLIAM SHAKESPEARE THROUGH FILM
This presentation will compare and contrast Woody Allen’s “Annie Hall” with the 1996 film version of William Shakespeare’s “Twelfth Night”. Both romantic comedies deal with the inner workings and transformations of human beings as they undergo the process of falling in love, an experience both artists view as valuable despite the numerous obstacles. Allen and Shakespeare share an interest in the complexity of relationships and the neurotic behaviors associated with falling in love. Their characters experience strangeness, nervousness, and loss of sureness as a result of love. Allen’s study of the strains and difficulties associated with romantic relationships in “Annie Hall” parallels Shakespeare’s reversals and mishaps in “Twelfth Night”. In these films love is never simple, the road towards it is not clear, and its follies can be highly amusing to watch. In the end, however, the path to love is found through character evolution and the journey towards it is eternally worthwhile.
ACCOUNTING

109  CITYVIEW BALLROOM  10:00-12:00  BOARD 5

REBECCA FORD, ANN-MARIE DEMORANVILLE, MIGUEL E MARTINEZ (CAROL GARAND), DEPARTMENT OF ACCOUNTING, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

VITA: VOLUNTEER INCOME TAX ASSISTANCE

VITA is an Internal Revenue Service program that assists with and prepares income tax returns for lower income individuals free of charge. The students involved in the program volunteered one week during the winter break to be trained in 2002 income tax law, the TaxWise computerized tax package and electronic filing. At the end of the one week training, these students were required to pass a certification exam. The students now volunteer four hours each week preparing tax returns for the eligible BCC community from February 1st through April 15th. As a result of the students’ community service, BCC was able to offer for the first time free computerized tax preparation and free electronic filing. The establishment of this program at BCC gives students the ability to provide this beneficial service in future years.

AFRICAN AMERICAN STUDIES

110  CITYVIEW BALLROOM  1:40-3:40  BOARD 20

LORI MULCAHY, DEBORAH A MALONE (ELLEN OLMSTEAD), DEPARTMENT OF ENGLISH, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

FROM THE CLASSROOM TO THE COMMUNITY: SHARING SOME HISTORIES OF MASSACHUSETTS AFRICAN AMERICAN WOMEN

After identifying and researching some of the most important African American Women in Massachusetts history, what can a student do with the fruits of her labor? This project explores some of the ways that students can give back to the community by sharing the knowledge they gain from their Honors Program activities with people beyond the campus. Additionally, this project explores some of the ways that students, excited by what they have learned, can spark awareness of, stimulate curiosity about and, ideally, spur others to expand research on the history of Massachusetts’ African American Women. The legal and technical aspects of sharing primary sources which may be copyrighted and the challenges of improving the visual quality of illustrations and photographs, which may be damaged or of poor quality, will be examined. Prototypes of some vehicles for sharing information—such as calendars, booklets, brochures and web pages, will be displayed.

111  CITYVIEW BALLROOM  1:40-3:40  BOARD 25

PATRICIA WARREN (ELLEN OLMSTEAD), DEPARTMENT OF ENGLISH, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

HIDDEN HERITAGE: AFRICAN WOMEN’S HERBAL FOLKLORE AND REMEDIES

In spite of their masters’ efforts at assimilation or obliteration, enslaved Africans retained elements of their original cultures. Africans transported plants and transmitted remedies that not only enabled African Americans to survive physically, culturally and emotionally, but that also benefited all Americans, who are most likely oblivious to the heritage of herbs and oils we take for granted on our store shelves. Traditional gardening, herbalism, and aromatherapy will be examined by performing research and by interviewing some of the matriarchs of New Bedford’s African American community.

ANIMAL SCIENCE

112  CITYVIEW BALLROOM  10:00-12:00  BOARD 54

KATHLEEN NESTOR (KATHLEEN ARCARO), DEPARTMENT OF ANIMAL SCIENCE, UMASS AMHERST, AMHERST, MA 01003

ARE PAHS ESTROGENIC?

There has been much controversy and inconsistency in the data published concerning the estrogenicity of certain environmental pollutants, specifically Polycyclic Aromatic Hydrocarbons (PAHs). The purpose of this study was to determine the estrogenic action of specific PAHs. These PAH residues have been commonly detected in human breast milk samples. PAHs are formed from the incomplete combustion of any organic material. They are constantly being released into the environment and potentially are harmful to humans and wildlife. The most common sources of exposure to humans are: eating fried and grilled foods, automobile exhaust, cigarette smoke, and smoke from wood burning. The effects of PAHs on human breast cell cultures were determined by measuring two estrogen regulated gene products, the human progester-
one receptor (PgR), and a novel protein, HEM45 (Human Estrogen Modulated protein) by utilizing Quantitative Reverse-Transcriptase Polymerase Chain Reaction (Q RT-PCR) technologies. Depending on the specific gene product, the preliminary data suggests that PAHs have the ability to act as both antagonists and agonists to the estrogen receptor. Future testing will hopefully show that the antagonistic action of PAHs for certain genes is caused by the inability of the compound to recruit essential transcriptional machinery. Further scrutiny of the current methods being performed for estrogenicity testing should be done in order to clarify the overall effects of PAHs.

**ANTHROPOLOGY**

**113 CITYVIEW BALLROOM 1:40-3:40 BOARD 22**

**JENNIFER GARNACHE (ANN MARIE MIRES), DEPARTMENT OF ANTHROPOLOGY, UMASS BOSTON, BOSTON, MA 02125**

**GIS: A TOOL TO AID FORENSIC INVESTIGATION**

The aim of this research is to utilize geographic information technologies in order to conduct a spatial analysis of unidentified human remains from the collection of the Massachusetts forensic anthropologist. The relative location - based on nearest street address and anthropological sketch maps — of these remains will be fine-tuned using a GPS, or Global Positioning System, which will then be incorporated into a larger GIS, or Geographical Information System. Computer generated maps, the output of the GIS, will illustrate spatial patterns in the geographical distribution of the unidentified remains (both whole and partial bodies) found throughout Massachusetts during the past two decades. The data will be integrated with local and national crime records, with the hope of connecting the unidentified remains in morgue and coroner collections with “missing” individuals documented at police stations. The principal objective of this project is to create a spatial database for Massachusetts that will act as a model for future nation-wide forensic database management, and thus aid in a timely resolution to forensic investigations.

**114 CITYVIEW BALLROOM 1:40-3:40 BOARD 79**

**NICHOLAS OBOLENSKY (R. BROOKE THOMAS), DEPARTMENT OF ANTHROPOLOGY, UMASS AMHERST, AMHERST, MA 01003**

**SMALL VOICES OF CHANGE FROM AN ANDEAN ORPHANAGE**

Over the past three decades rural society in highland Peru has undergone dramatic changes. This is especially the case among Quechua communities where national and global penetration have altered social relationships, including processes of socialization and identity formation. In the research presented these dynamics are viewed from the vantage point of a small, rural orphanage. An examination of the circumstances under which children come to be placed in the orphanage, how they behave with one another and children from intact families, and how they express their circumstances offers important insights into the tensions and contradictions of change in the broader community. The study is based on detailed observations made during Spring 2001 while volunteering at an orphanage, living with and supervising the children, and attending to their needs. Around the clock participant observation permitted detailed and intimate case studies. Preliminary results explore: 1) reasons underlying the recent surge in child abandonment, 2) a growing set of values that emphasize the individual over obligations to community, and 3) multiple modes of socialization that result in contested identity formation within and between individuals.

**115 CITYVIEW BALLROOM 1:40-3:40 BOARD 23**

**BRENDA PIRES (ELLEN OLMSTEAD), DEPARTMENT OF ENGLISH, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720**

**HEALING TRADITIONS OF SOUTHEASTERN MASSACHUSETTS’ COMMUNITIES OF COLOR**

For 400 years, African and indigenous peoples in what became Southeastern Massachusetts intermarried. Many people who identified/identify as African American, Cape Verdean and/or Native American were/are of mixed heritage. Consequently, the heritage of techniques of healing practiced today are a reflection of that fusion. This project will explore some of the home remedies practiced in today’s separate African American, Cape Verdean and Wampanoag communities and compare and contrast them.

**116 CITYVIEW BALLROOM 1:40-3:40 BOARD 19**

**MARY QUILTY (TIM SIEBER), DEPARTMENT OF ANTHROPOLOGY, UMASS BOSTON, BOSTON, MA 02125**

**AYURVEDIC MEDICINE: WHOSE TRADITION IS THIS?**

Ayurveda, literally the science of life, is a five-thousand-year-old holistic medical system originating in India. Based on primary research (participant observation, interviewing) and secondary research (literature review, media observation and collection), including one month of fieldwork in India, this project discusses Ayurvedic medicine and its beliefs and uses in both India and the United States. The main research questions are centered on how the practice of Ayurvedic medicine is performed in a transplanted as compared to its native environment, and what the native environment within a country as diversified as India really means. This work outlines the basic principles of Ayurveda and how
it differs from Western medicine, as well as ideas of tradition, modernization, globalization, and capitalism. Preliminary conclusions show that the generalization of Ayurveda as Indian medicine for all is erroneous and that Ayurveda, in an adapted form, is gaining a foothold in the Western world. In recent years, Ayurveda has been recognized as an alternative health practice by the National Center for Complementary and Alternative Medicine (NCCAM), a division of the National Institute of Health (NIH). Ayurveda's role in the future of preventative and curative care, as well as its potential social, medical, and economic impacts, could be significant. Given this potentiality, serious study from a traditional perspective as well as a transplanted or global view is required.

**Poster Session**

**ASTRONOMY**

**118**

**CITYVIEW BALLROOM**

**10:00-12:00**

**BOARD 37**

**CATHARINE COLBY, MARY CLARE BLAIS, RICHARD L COLLETTE, JR, JOAN B GALLAGHER, CHRISTINA HARWOOD, THOMAS LAWLO, JENNIFER R MAHER, JANET WILKINS, MIKKI L WILSON (MARCEY MAROLD), DEPARTMENT OF , NORTH SHORE COMMUNITY COLLEGE, DANVERS, MA 01923**

**STRATEGIC ANALYSIS: A VISION OF SPACE EXPLORATION THROUGH 2025**

As a consequence of the 2003 Columbia disaster, the direction and viability of the U.S. space program is in question and under intense scrutiny. Our study of manned, unmanned, and combined scenarios will use futurist methodologies such as media scanning, trend definition, variable analysis, time-line construction, scenario building, and cross-impact analysis to define our vision of possible, probable, and alternative futures of space exploration through the year 2025. Our approach is from the following perspectives: Society, Technology, Economy, Environment, and Politics/Regulation (STEEP). Societal issues address benefits to humanity, international cooperation and conflict, and education in aerospace technology. Our technological focus is on whether man's physical presence in space is required to continue further space exploration. We will examine potential scientific gains to be achieved in the pursuit of manned and unmanned interplanetary travel. Economic projections suggest that unmanned space exploration and privatization are cost-effective. Private contractors stimulate economic growth and innovative space technology, providing efficient budgetary planning. Satellites monitoring the Earth and other celestial bodies often preclude the necessity for manned vehicles. Due to political and regulatory mandates, NASA's decentralization often renders it inefficient and costly. The effects of productivity concerns and discontinuities of space program funding and budgets profoundly affect NASA's performance. As we investigate STEEP variables, we will define our own unique vision for the next quarter century of space exploration.
ASSESSING THE EFFECTIVENESS OF THE ESTROGEN RECEPTOR ACTION INDICATOR (ERIN) MOUSE

ERIN mice are transgenic animals that have been engineered to incorporate a transgene consisting of estrogen response elements, a minimal thymidine kinase promoter and the b-galactosidase (b-gal) reporter gene. It is known that activation of an estrogen receptor causes the receptor to localize and bind to estrogen response elements in the DNA and leads to transcription of downstream genes. In ERIN mice, the b-gal reporter gene is downstream from these estrogen response elements and is therefore transcribed whenever estrogen receptors are activated in a cell. Researchers can then use histochemical techniques to view b-gal protein and therefore interpret which cells contain activated estrogen receptors. Previous research has indicated that ERIN mice effectively detect estradiol-induced estrogen receptor activation in a number of target tissues, including the brain. Techniques used previously have indicated only a general location of estrogen receptors in these areas, as opposed to a cell-specific one. The present study aims to use ERIN mice to assess estrogen receptor activation in specific cells in the brain, specifically in the medial preoptic area (MPOA), the ventromedial hypothalamus (VMH) and the arcuate nucleus (ARC). Preliminary data suggests that ERIN mice effectively indicate cell-specific estrogen receptor activity in these brain regions. The pattern of b-gal expression is comparable to the known pattern of estrogen receptor location in these areas, although histochemical techniques must be further enhanced to optimize the amount of activity seen. Also, a relatively high level of b-gal expression is seen in oil-treated animals, suggesting the possibility of constitutive expression of the reporter gene in the areas observed. Further research must be done to conclusively determine the effectiveness of ERIN mice as a tool for assessing cell-specific estrogen receptor activity.

LIGHT-INDUCED C-FOS EXPRESSION IN THE LATERAL GENICULATE COMPLEX OF THE MONGOLIAN GERBIL

The intergeniculate leaflet (IGL) and ventral lateral geniculate nucleus (VLG) are thalamic structures that receive direct projections from the retina as well as a number of brainstem nuclei and, in turn, project to a variety of structures involved in circadian pacemaking and visuomotor control. The immediate-early gene, c-fos, is known to be expressed by active neurons and is commonly used as an indicator of activity in the brain. In order to analyze the light-induced activity of the IGL and VLG, gerbils were sacrificed at five time points over a 12:12 hour light-dark cycle. The activity of the IGL and VLG was quantified by counting the number cell bodies that were stained for the Fos protein in an immunocytochemistry procedure. The results from this experiment showed that the number of c-fos expressing cells increases linearly during the course of the light period. A second experiment was conducted, in which gerbils were exposed to a strobe light for the hour before they were sacrificed. The results from this experiment showed a reduction in Fos immunoreactive cells at the 8 AM and 1 PM time points as compared to controls. The 8 PM time point, however, showed an increase in Fos-labeled cells after strobe exposure. While previous research in nocturnal rats has shown that neurons of the IGL and VLG are activated by light and that constant light causes constant Fos induction, the results of these experiments in diurnal gerbils indicate that there might actually be a more complex reaction taking place.

A GENETIC ANALYSIS OF THE DROSOPHILA CELL DEATH GENE MORGUE

In Drosophila, the activation of apoptosis is controlled by the related Grim-Reaper proteins, which can promote caspase activation via inhibition of the DIAPs. Using a genetic modifier screen, the morgue gene was identified as an enhancer of Grim-Reaper-induced cell death. Genetic analyses are being conducted to further determine morgue’s role and function in Drosophila. Morgue is a novel protein that may function as an E2 ubiquitin conjugase or an E3 ligase. Morgue contains both an F box and a ubiquitin conjugase domain that lacks the active site cysteine required for attachment to ubiquitin. Using P element mutagenesis, a minimal Morgue component is promoter and the b-galactosidase (b-gal) reporter gene. It is known that activation of an estrogen receptor causes the receptor to localize and bind to estrogen response elements in the DNA and leads to transcription of downstream genes. In ERIN mice, the b-gal reporter gene is downstream from these estrogen response elements and is therefore transcribed whenever estrogen receptors are activated in a cell. Researchers can then use histochemical techniques to view b-gal protein and therefore interpret which cells contain activated estrogen receptors. Previous research has indicated that ERIN mice effectively detect estradiol-induced estrogen receptor activation in a number of target tissues, including the brain. Techniques used previously have indicated only a general location of estrogen receptors in these areas, as opposed to a cell-specific one. The present study aims to use ERIN mice to assess estrogen receptor activation in specific cells in the brain, specifically in the medial preoptic area (MPOA), the ventromedial hypothalamus (VMH) and the arcuate nucleus (ARC). Preliminary data suggests that ERIN mice effectively indicate cell-specific estrogen receptor activity in these brain regions. The pattern of b-gal expression is comparable to the known pattern of estrogen receptor location in these areas, although histochemical techniques must be further enhanced to optimize the amount of activity seen. Also, a relatively high level of b-gal expression is seen in oil-treated animals, suggesting the possibility of constitutive expression of the reporter gene in the areas observed. Further research must be done to conclusively determine the effectiveness of ERIN mice as a tool for assessing cell-specific estrogen receptor activity.

PASSAGE FROM THE DOCUMENT:

In Drosophila, the activation of apoptosis is controlled by the related Grim-Reaper proteins, which can promote caspase activation via inhibition of the DIAPs. Using a genetic modifier screen, the morgue gene was identified as an enhancer of Grim-Reaper-induced cell death. Genetic analyses are being conducted to further determine morgue’s role and function in Drosophila. Morgue is a novel protein that may function as an E2 ubiquitin conjugase or an E3 ligase. Morgue contains both an F box and a ubiquitin conjugase domain that lacks the active site cysteine required for attachment to ubiquitin. Using P element mutagenesis, loss-of-function mutant strains have been generated.

The immediate-early gene, c-fos, is known to be expressed by active neurons and is commonly used as an indicator of activity in the brain. In order to analyze the light-induced activity of the IGL and VLG, gerbils were sacrificed at five time points over a 12:12 hour light-dark cycle. The activity of the IGL and VLG was quantified by counting the number cell bodies that were stained for the Fos protein in an immunocytochemistry procedure. The results from this experiment showed that the number of c-fos expressing cells increases linearly during the course of the light period. A second experiment was conducted, in which gerbils were exposed to a strobe light for the hour before they were sacrificed. The results from this experiment showed a reduction in Fos immunoreactive cells at the 8 AM and 1 PM time points as compared to controls. The 8 PM time point, however, showed an increase in Fos-labeled cells after strobe exposure. While previous research in nocturnal rats has shown that neurons of the IGL and VLG are activated by light and that constant light causes constant Fos induction, the results of these experiments in diurnal gerbils indicate that there might actually be a more complex reaction taking place.

A GENETIC ANALYSIS OF THE DROSOPHILA CELL DEATH GENE MORGUE

In Drosophila, the activation of apoptosis is controlled by the related Grim-Reaper proteins, which can promote caspase activation via inhibition of the DIAPs. Using a genetic modifier screen, the morgue gene was identified as an enhancer of Grim-Reaper-induced cell death. Genetic analyses are being conducted to further determine morgue’s role and function in Drosophila. Morgue is a novel protein that may function as an E2 ubiquitin conjugase or an E3 ligase. Morgue contains both an F box and a ubiquitin conjugase domain that lacks the active site cysteine required for attachment to ubiquitin. Using P element mutagenesis, loss-of-function mutant strains have been generated. Genetic analyses of these strains indicate that morgue loss-of-function mutants are viable, but exhibit defects in development of the reproductive system and abdomen in adults. In addition, targeted expression of Morgue or a Morgue mutant protein lacking the F box, enhances the eye cell death phenotype induced by a chimeric R/Grim protein. Morgue directly associates with DIAP1 and SkpA, an SCF E3 ligase component. Morgue expression downregulates DIAP1 protein levels, suggesting that Morgue enhances the cell death-inducing activities of Grim-Reaper proteins by promoting the ubiquitination and turnover of DIAP1. Morgue may thus play a critical role in regulating the relative levels of cell death activators and inhibitors. Finally, sequence similarity searches identified a Morgue homolog from the mosquito Anopheles gambiae. No other homologs of Morgue were identified, suggesting Morgue may be restricted to insects or Arthropods.
which may be candidates for the uml gene. Using these Fugu genes, we have searched for corresponding sequences in the zebrafish. DNA in the region of uml have been identified using the zebrafish and Fugu genome projects and many genes have been found, some of which may be candidates for the uml gene.

We are using single nucleotide polymorphisms (SNPs) to map these ESTs and BACs relative to the uml locus. In addition, large sequences twenty-three ESTs and four large genomic clones (Bacterial Artificial Chromosomes or BACs) found in the same area of the zebrafish genetic map. We are trying to identify the gene disrupted in uml. uml has been genetically mapped to a closely linked polymorphic marker, z10372. There are approximately similar molecular weights when compared to Drosophila melongaster. Electron micrographs indicated that microtubules are organized into an orderly circular structure surrounded by pigment granules, which persists regardless of the location of the granules. Molecular motors were also found to colocalize with tubulin beads and lead stained microtubules. A portion of the cytoplasmic pool of both molecular motors was seen on the granule membranes as well. Our data indicate that molecular motors and microtubules might be involved in transport of pigment granules during light and dark adaptation in tobacco moths. This project will be of importance to researchers using D.melongaster as a model study for intracellular transport since Manduca is evolutionarily very close to Drosophila and is several orders of magnitude larger.

POSSIBLE MECHANISM OF PIGMENT MIGRATION IN THE EYES OF MANDUCA SEXTA MOTHS

The movement of pigment granules in the eyes of tobacco moths, Manduca sexta is coordinated by light so that during light adaptation granules move away from the cornea, and during dark adaptation they move towards the surface of the eye. The purpose of this study was to identify the molecular mechanism for this movement. Pigment granules were separated from cornea extracts by Percoll gradient centrifugation for biochemical analysis. Corneas were fixed and embedded for transmission electron microscopy at 80-100kV. The distribution of tubulin, kinesin-II, and dynein was analyzed using appropriate antibodies conjugated to gold beads of different sizes for visualization. We identified that Manduca sexta's kinesin-II, cytoplasmic dynein, and tubulin cross react with available antibodies on Western blots with approximately similar molecular weights when compared to Drosophila melongaster. Electron micrographs indicated that microtubules are organized into an orderly circular structure surrounded by pigment granules, which persists regardless of the location of the granules. Molecular motors were also found to colocalize with tubulin beads and lead stained microtubules. A portion of the cytoplasmic pool of both molecular motors was seen on the granule membranes as well. Our data indicate that molecular motors and microtubules might be involved in transport of pigment granules during light and dark adaptation in tobacco moths. This project will be of importance to researchers using D.melonaster as a model study for intracellular transport since Manduca is evolutionarily very close to Drosophila and is several orders of magnitude larger.

INTEGRATION OF THE LEARNING EXPERIENCE WITH STUDY ABROAD PROGRAM: COSTA RICA

Study abroad programs, in a wide variety of subjects, are an invaluable resource and learning experience for college students. The focus of this project was to evaluate a recent Bunker Hill Community College sponsored study-abroad trip to the neo-tropical rainforests of Costa Rica. We evaluated how well the students integrated the concepts of biology, rainforest conservation, and field research to traditional texts and classroom experiences. We also attempted to ascertain how relevant the trip was to the student's decision about their major, as well as to their basic understanding of biology and ecology. During a ten-day period the students visited several biological field stations in the Costa Rican rainforest performing field research, attending lectures and recording their thoughts and experiences in a journal. After the conclusion of the trip, each student was interviewed and asked to comment on the merits of this study abroad experience.

125  CITYVIEW BALLROOM  10:00-12:00  BOARD 65

EMILY MILLER (ROLF KARLSTROM), DEPARTMENT OF BIOLOGY, UMASS AMHERST, AMHERST, MA 01003

AXON GUIDANCE AND FOREBRAIN PATTERNING IN THE ZEBRAFISH EMBRYO: IDENTIFYING THE UML LOCUS

During optic nerve formation, retinal ganglion cell axons follow a specific pathway in the ventral forebrain. Axons from each eye cross over the ventral midline, forming the optic chiasm. Accurate axon guidance requires a complex combination of guidance cues that are expressed in the developing brain. In the zebrafish mutant umleitung (uml), axons fail to cross the ventral midline and either project to the ipsilateral tectal lobe or project bilaterally. uml mutants also have defects in forebrain patterning that might lead to these axon guidance defects. We are now trying to identify the gene disrupted in uml. uml has been genetically mapped to a closely linked polymorphic marker, z10372. There are twenty-three ESTs and four large genomic clones (Bacterial Artificial Chromosomes or BACs) found in the same area of the zebrafish genetic map. We are using single nucleotide polymorphisms (SNPs) to map these ESTs and BACs relative to the uml locus. In addition, large sequences of DNA in the region of uml have been identified using the zebrafish and Fugu genome projects and many genes have been found, some of which may be candidates for the uml gene. Using these Fugu genes, we have searched for corresponding sequences in the zebrafish...
database and assembled several large sequence “contigs” in the region of uml, thus, allowing us to perform a virtual genomic walk. We present the updated genetic map surrounding the uml locus and discuss potential candidate genes in the region.

126 CITYVIEW BALLROOM 10:00-12:00 BOARD 51

KIMBERLY SALAYCIK (KIMBERLY SALAYCIK), DEPARTMENT OF BIOLOGY, UMASS AMHERST, AMHERST, MA 01003

THE MEASUREMENT OF MICROTUBULE NUCLEATION AND GROWTH IN WOUND EDGE CELLS USING GFP-EB1

Using live cells expressing gamma-tubulin tagged with GFP, we recently reported that centrosome reorientation in wound edge cells varied with cell type (Yvon et al, 2002, MBC 13: 1871-1880). Epithelial cells, which are characterized by numerous non-centrosomal microtubules, did not reorient their centrosomes toward the direction of locomotion. In contrast, wound edge fibroblasts, which have a radial, centrosomal array of microtubules, did reorient their centrosomes toward the direction of locomotion. Reorientation required dynamic microtubules, cytoplasmic dynein/dynactin activity and could be modulated by altering cell-cell and cell-substratum adhesions. Importantly, all wound edge cells develop a polarized morphology and migrate into the wound. Thus centrosome reorientation is not required for polarized motility into a wound in the monolayer. Using a GFP-EB1 construct to mark microtubule plus-ends, we measured the number of microtubule growth events in epithelial LLCPK-EB1 cells and CHO-EB1 fibroblasts; we refer to these events as nucleations. Our results demonstrate that microtubule nucleation is biased toward the leading edge in cells that reorient the centrosome, but not in cells that do not show centrosome reorientation. In addition, the number of growth events at the centrosome is reduced in wound edge cells that do not reorient the centrosome, but not in cells that do not show reorientation. Finally, we demonstrate that in all wound edge cells, microtubule dynamic behavior is polarized: microtubules facing the wound are less dynamic than those facing away from the wound. These data support the idea that microtubule nucleation and growth events are cell type specific and contribute to the differences in microtubule organization in diverse cells.

127 CITYVIEW BALLROOM 10:00-12:00 BOARD 59

DOUGLAS SHOEMAKER (JEREMY HATCH), DEPARTMENT OF BIOLOGY, UMASS BOSTON, BOSTON, MA 02125

PREDICTING THE PRESENCE OF THE SCARLET TANAGER IN MASSACHUSETTS - A SPATIAL MODEL OF SUITABLE HABITAT

Models predicting the occurrence of a species can be important tools for biologists, land managers and conservationists. Using satellite imagery and landscape metrics a model was developed that predicts habitats suitable for nesting Scarlet Tanagers (Piranga olivacea) in Massachusetts. The colorful Scarlet Tanager prefers unbroken stands of deciduous trees. Specific spatial requirements were provided by Project Tanager (PT), a multi-year survey by the Cornell Lab of Ornithology undertaken to examine this species in the context of fragmented forests. PT produced a matrix that ranks the suitability of specific forest habitat based on regional location and landscape metrics, such as area and isolation. The addition of land characterization data provided by USGS satellite imagery enabled the PT matrix to be expanded and applied to a large area. Data were assembled and modeled within a Geographic Information System. Habitat-specific vegetative classes were identified and aggregated into patches, fragments and contiguous forests, each aggregate representing potential Tanager nesting habitat. Predictions of habitat suitability were made by analysis of patch area and degree of isolation from other forests. Habitats were ranked as high, moderate, or low suitability, or unsuitable. The resulting map predicted habitats suitable for Tanager nesting areas across the state. Visual analysis indicated large areas of high-ranking habitat in the west, and a reduction or absence of suitable habitat in urban and agricultural areas. Although this model awaits validation through ground-truthing, presence data from the Breeding Bird Survey is being used to test the predictive ability of this model.

128 CITYVIEW BALLROOM 10:00-12:00 BOARD 56

ESTHER SMITH (ADAN COLON-CARMONA), DEPARTMENT OF BIOLOGY, UMASS BOSTON, BOSTON, MA 02125

ENGINEERING PAH BIOREMEDIATING NAH GENES INTO ESCHERICHIA COLI AND ARABIDOPSIS THALIANA

Phytoremediation is a branch of bioremediation which seeks to utilize plant species in environmental pollution clean-up. Polycyclic aromatic hydrocarbons (PAHs) are toxic organic compounds that originate from fossil fuel burning, gas plants, wood-treating facilities, and petrochemical facilities. Acute exposure to the PAH naphthalene can lead to liver damage, hemolytic anemia and neurological damage in infants. Research has established that nah genes A-F from the soil bacterium Pseudomonas putida give the bacterium the capability to metabolize and biodegrade the PAH naphthalene to salicylic acid. The first four open reading frames of this gene cluster (A-D) have been shown to biodegrade the PAHs naphthalene, phenanthrene and fluorene. This project incorporates molecular biology techniques to engineer the PAH biodegrading nah genes A-D into the mustard plant model system Arabidopsis thaliana, which is expected to acquire the capacity to biodegrade PAHs for polluted environments. Each of these nah genes have been PCR amplified from a plasmid containing all four genes in tandem. Individual genes were subcloned into the non-PAH degrader E. coli, and tested for their ability to degrade PAHs in isolation. We will also present our engineering strategy and our progress for transforming Arabidopsis thaliana.
ALLOSTERIC COMMUNICATION IN E. COLI DNAK, A MOLECULAR CHAPERONE

DnaK was investigated as a model of protein folding and allostery. An understanding of the molecular mechanisms of protein conformational change could lead to treatments of diseases which result from related folding defects, such as Alzheimer's and prion diseases, as well as some forms of cancer. DnaK has two domains: a peptide-binding domain which binds to nascent or misfolded proteins, and an ATPase domain which regulates peptide binding and release kinetics. Because of DnaK's size, the entire protein cannot be subjected to NMR or crystallography directly. Instead, the two domains are purified separately with only one half isotopically labeled. The two domains are ligated and the protein is subjected to 15N NMR in the presence and absence of ATP and peptide. The resulting NMR peaks are then compared to determine the conformational change that DnaK undergoes in response to its substrates. This project is a work in progress.

CELLULAR EFFECTS OF EDEMA IN ZEBRAFISH

Zebrafish are the latest vertebrate model system, and we have used them to study the neuromast cells. Neuromast cells are part of their lateral line system and are mechanoreceptive sensory cells capable of detecting fluid motion and pressure changes, and start appearing 30 hours after fertilization. Neuromast cells differentiate from primordial cells that migrate from the head region toward the tail. Using an edema mutant phenocopy we examined how edema affects the neuromast primordia and their migration. The edema mutant phenocopy is generated by amputation at the 3rd somite located near the proximal region of the tail at 24 hours post-fertilization (Kunkel 2001). A stereotyped edema develops involving the pericardial cavity and the peri-yolk sac blood spaces in 100% of the tail amputated embryos, and may inhibit neuromast primordial migration. Thus far we have fixed samples for observation in the Scanning Electron Microscope (SEM), from 3 time periods: 24, 34, and 48 hours. We hypothesize that the edema disrupts an extracellular pathway that is essential to normal primordial migration and differentiation into neuromast cells. Preliminary SEM data has shown this to be true. To follow up these data, we will continue with an SEM study wherein we fix control and edema phenocopy embryos at a series of stages and trace the behavior of neuromast cells.

ROLE OF NMDA AND AMPA GLUTAMATE RECEPTORS IN THE BEHAVIORAL SENSITIZATION OF A RAT MODEL OF PARKINSON’S DISEASE

Parkinson's disease (PD) is an age-related pathology characterized by the depletion of dopamine neurons located in the midbrain. Our laboratory uses a rat model of PD in which rats receive a unilateral injection of the toxin 6-hydroxydopamine (6-OHDA) directly into the brain. When 6-OHDA lesioned rats are treated with a dopamine agonist three weeks later, they display rotational behavior away from the lesioned side ('contralateral rotation'), which reflects dopamine receptor supersensitivity following the lesion. Repeated treatment with dopamine agonists produces a further enhancement of this rotational behavior, a phenomenon known as ‘priming’. Priming has two distinct phases: induction and expression. In this study, we examined the role of the excitatory neurotransmitter glutamate in the induction and expression of priming by using antagonists at NMDA- and AMPA-type glutamate receptors. We found that stimulation of NMDA receptors is required for priming induction with apomorphine, but not SKF38393, while stimulation of AMPA receptors was not required for priming induction by either drug. In 6-OHDA rats primed with SKF38393, NMDA, but not AMPA receptor stimulation, was necessary for priming expression upon challenge with a low dose of quinpirole. These data suggest that NMDA receptors, but not AMPA receptors, play a significant role in the induction and expression of dopamine agonist priming in 6-OHDA lesioned rats.

DO PARKIN AND ARIADNE SHARE REDUNDANT BIOCHEMICAL PROPERTIES?

Parkinson's Disease (PD) is the second most common neurodegenerative disease in the U.S. Some families with Autosomal Recessive Juvenile Parkinson's Disease (AR-JP) carry loss-of-function mutations in Parkin, a protein that functions as a ubiquitin E3 ligase and helps target specific proteins for degradation. While all cells in AR-JP patients lack Parkin, cell death is restricted to dopaminergic neurons, suggesting that another E3 ligase with redundant function may function in other cells to confer protection. Several lines of evidence from our lab suggest that the structurally-related Ariadne gene may serve in this role. The focus of my work is to use in vitro biochemical methods to test the hypothesis that Parkin and Ariadne share both structural and functional homology. I am using GST pull-down assays to determine if these proteins bind
to the same protein substrates, including: CDCrel-1, α-synuclein, Pael-R, and synphilin-1. In vitro transcription/translation is used to generate 35S-labeled substrates, which are then incubated with purified GST-Ariadne or -Parkin. These assays will test the protein-protein interactions between Ariadne and Parkin and each substrate. Demonstrating redundancy of the Parkin and Ariadne proteins may help explain why only some cells are negatively impacted by the loss of Parkin gene in AR-JP. It may further help identify potential targets for future therapeutic intervention. Retarding or preventing the accumulation of damaged proteins in dopaminergic neurons would presumably protect these cells and diminish clinical symptoms.

### A SEARCH FOR AN INTERACTING PARTNER FOR DFZ-2 AT THE DROSOPHILA NEUROMUSCULAR JUNCTION.

The WNT pathway in mammalian epithelial cells has been shown to be involved in determining cell polarity by providing positional cues, and when disrupted, it can lead to uncontrolled cell growth—cancer. Recent evidence has implicated WNT and related proteins in signaling at the nervous system, a not entirely surprising finding considering the polar nature of neurons (i.e. dendrites vs. axons). A great deal of information regarding the WNT pathway has been obtained from studies on its homologous molecule—wingless (wg) in Drosophila. Both wg and its receptor D-Frizzled-2 (DFz-2) have been found at the Drosophila neuromuscular junction, and wg signaling has been shown to be required for proper development of this synapse. However the remaining components of the pathway have not been found there. In the absence of the “normal” downstream partner of DFz-2 at the neuromuscular junction, it is quite likely that DFz-2 binds to a different interacting partner(s). To find this molecule a yeast-2-hybrid screen using the c-terminus of DFz-2 as “bait” was performed. The c-terminus is used because it is the “normal” downstream partner of DFz-2 at the neuromuscular junction, it is quite likely that DFz-2 binds to a different interacting partner(s). Finding this molecule, yeast-2-hybrid screen using the c-terminus of DFz-2 as “bait” was performed. The c-terminus is used because it is the intracellular domain of the protein and likely to transduce the signal. I used the CLONETECH pLexA yeast-2-hybrid system and a Drosophila late embryonic cDNA library made in pB42AD plasmid for this purpose. Using growth selection markers, I intend to pull out specific proteins from the library that interact with DFz-2. DFz-2 has a potential PDZ binding motif, and so we expect to pull out at least one relevant PDZ domain containing protein. Identification of such novel interacting partner(s) of DFz-2 would lead to a better understanding of wg signaling and its requirement at the neuromuscular junction.

### THE INTERACTION BETWEEN MORGUE AND DIAP AND THEIR ROLE IN PCD AND UB/PROTEASOME PATHWAYS

Programmed cell death (PCD) is an essential process for the development and survival of multicellular organisms. It plays an important role early in life in organogenesis, maintains tissue homeostasis, is a response to infection, and a means to remove defective cells and to prevent the accumulation of deleterious or surplus cells. PCD is a highly regulated system. It is initiated by conserved cysteine proteases, known as caspases. Anti-apoptotic proteins (IAPs) bind to these caspases to inhibit their activity, thereby preventing cell death. Three activator proteins of apoptosis, Reaper, Hid and Grim induce cell death by binding to the anti-apoptotic proteins in Drosophila (DIAPs). Morgue was among three components discovered in Dr. Nambu’s lab that are all a part of the ubiquitin (Ub)/proteasome pathway, used to control protein levels via protein degradation and believed to be an important mediator in the Grim-Reaper PCD pathway. This pathway involves a variety of ubiquitin-conjugating enzymes, which function together with a multicatalytic protease complex (the proteasome) to regulate protein turnover within cells. Significantly, Morgue protein contains two distinct functional domains involved in ubiquitination, an F box, and a ubiquitin conjugase domain. We have demonstrated that Morgue binds to DIAP1, contributing to the process of deactivating it and initiating programmed cell death. Various plasmid constructs have been made of both Morgue and DIAP1 with specific deletions to determine the precise domains of Morgue and DIAP proteins that will interact. Glutathione S-transferase (GST) Gene Fusion System, for the expression, purification, and detection of fusion proteins produced in E. coli bacteria will be used to determine whether the Morgue ubiquitin conjugase domain binds the RING domain of DIAPs or if they associate through different regions of each protein.

### COMPARISON OF ESCHERICHIA COLI STRAINS IN WATER, BIRD DROPPINGS, AND DOG SCAT FROM BLACKS CREEK AND WOLLASTON BEACH, QUINCY, MA

Presence of Escheria coli in recreational water indicates fecal contamination and a potential threat to human health. Differentiating among strains of E. coli is a useful tool for identifying sources of fecal contamination in receiving waters. The major objective of this study was to determine the possible sources of E. coli coastal and tidal creek environments. Receiving waters and feces from dogs and birds from surrounding land were sampled. Coliform counts were conducted by the filter membrane method using mFC medium. Randomly chosen isolates from each sample were subcultured on Eosin Methylene Blue agar. The 16S-23S rRNA intergenic spacer regions were amplified by PCR. Identification of isolates was confirmed by determining the size of the PCR products in agarose gel electrophoresis (TGGE). The PCR-amplified DNA was further analyzed by thermal gradient gel electrophoresis (TGGE). Fecal coliform counts for dog scat were approximately 105 colony-forming units per gram (CFU/g), and 104 CFU/g in bird droppings. In water samples, fecal coliform counts were in the order of 102 CFU/100ml and 103 CFU/100ml. The TGGE results revealed a higher E. coli strain diversity in water samples than in scat. In the dog sample, more than 40% of the
isolates belonged to a single strain. In birds, one strain dominated more than 50% of the isolates. The dominant strains recovered from water, bird and dog scat were different. Our results indicate that the high diversity of E. coli strains in the receiving water may be the result of many animal and other source inputs, which are individually of lower diversity.

**CHEMISTRY**

**136 CITYVIEW BALLROOM 10:00-12:00 BOARD 72**

**CHUN-HSING CHEN (EMMANUEL OJADI), DEPARTMENT OF CHEMISTRY, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300**

**LASER FLASH PHOTOLYSIS AND CONCERTED ELECTRON-PROTON TRANSFER REACTIONS OF SYNTHESIZED N-METHYLATED PORPHYRIN**

Electron transfer processes in biological systems occur simultaneously with proton transfer in the reverse direction. Porphyrins are well known for their ability to serve as electron transfer reagents. In this work, we designed and synthesized a novel porphyrin system for use in the study and characterization of concerted electron proton transfer processes following photo excitation in presence of hydrogen bonded donor-acceptor systems. Tetracyanophenyl porphyrin was methylated to give N-methyl tetracyano-phenyl porphyrin. The purified methylated porphyrin was investigated for hydrogen bonding with various hydrogen donors including hexafluoro isopropanol, trifluoroacetic acid, and p-methoxy phenol in the ground and excited states. UV-Visible titration evolution spectroscopy and laser flash photolysis were used to examine concerted electron proton transfer redox reactions in presence of electron acceptors. Isotope effects were determined by the use of deuterated hydrogen bonded analogs. The results are compared to other porphyrins to explain the effect of electron push and pull on electron-proton transfer process in analogous porphyrins.

**137 CITYVIEW BALLROOM 10:00-12:00 BOARD 48**

**FERNANDO COUTINHO (BILL GRIFFIN), DEPARTMENT OF CHEMISTRY, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129**

**MEASUREMENT OF OPTICAL ROTATIONS USING A STUDENT MADE POLARIMETER**

Optical rotation measurements are a very important tool in confirming the purity of optically active samples including the resolution of enantiomers from a racemic mixture. In pharmacology enantiomeric purity is strongly linked to the efficacy of certain drugs. However, in order for this to be examined in the undergraduate laboratory expensive equipment often available only at the graduate level is required. The purpose of this study is to develop ways to determine the purity of optically active samples in an undergraduate laboratory using a student polarimeter. In order to examine this, the optical rotation of commercially available optically pure samples of (+) and (-) mandelic acid were measured using a student polarimeter constructed from inexpensive materials and a HeNe laser. A HeNe laser, commonly found as laser pointers, represents a light source much more available to the general public than a sodium source. Mandelic acid was chosen because of its large rotation at the sodium D-line (589 nm) of 155 degrees. From the optical rotation a value for the specific rotation was calculated at the laser frequency and compared to 589 nm. The values of the optical rotation at the sodium line using a commercial polarimeter and at the laser line using the student-constructed polarimeter were examined. The student polarimeter was also used as a method to confirm the successful resolution of the (+)-phenylsuccinic acid enantiomer from a racemic mixture using a stereoisomeric salt formation process. Measurements of the optical rotation of phenylsuccinic acid were also taken and reported for the wavelength of the HeNe laser.

**138 CITYVIEW BALLROOM 10:00-12:00 BOARD 46**

**MARLENE DEABREU (EMMANUEL OJADI), DEPARTMENT OF CHEMISTRY, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300**

**A NEW WATER-SOLUBLE PHTHALOCYANINE FOR PHOTODYNAMIC THERAPY: (1)SYNTHESIS AND PHOTONECROSIS OF TETRAHYMENA THERMOPHILA**

Phthalocyanines are highly colored compounds found to be effective photosensitizing agents for Photodynamic Therapy. Photodynamic therapy is a technique used for the treatment of carcinomas. The purpose of this study was to synthesize and test the photonecrosis activity of a novel water-soluble phthalocyanine on Tetrahymena thermophila. The non-aqueous magnesium phthalocyanine was converted to an aqueous form by n-alkylation reactions. The reaction process was monitored by UV-Visible absorption spectroscopy. Although the product showed good solubility in water, it was found to aggregate if left standing. Stock solutions of the product were prepared in dimethyl sulfoxide (DMSO) and injected into tetrahymena cultures. Results show photodynamic killing of tetrahymena upon exposure to red light in presence of the phthalocyanine as photosensitizer. The alkylated magnesium phthalocyanine was found to be an effective, water-soluble photosensitizer with the potential to be used for cancer treatment through photodynamic therapy.
INVESTIGATION OF ANTIFUNGAL AGENTS FROM THE CRANBERRY PLANT

Cranberries are a very important crop in Southeastern Massachusetts, and some areas of New Jersey and Wisconsin. Studies by our group and others have shown that whole cranberries and cranberry juice contain a number of antioxidant compounds and has been observed to inhibit the growth of several types of bacteria. One objective of our study is to develop assays for evaluating cranberry plant extracts for antifungal activity in a variety of yeast and plant pathogens. Assays were run on Potato Dextrose Agar plates with four general pathogens: Candida krusei, Candida tropicalis, Candida albicans, Cryptococcus neoformans. Using the filter diffusion method, it was observed that some proanthocyanidin-rich cranberry extracts had antifungal activity against C. krusei. Further analysis of the extracts is required to determine specifically which compounds within these extracts have antifungal properties. It may be necessary to developing new method for this assay using plates poured with test sample mixed into agar to avoid solubility problems with the disk-diffusion method. The antifungal cranberry
extracts were also observed to inhibit the growth of some tumor cells in a separate bioassay. Further studies of the nature of these extracts and their bioactivity are in progress.

**CHEMISTRY**

143  CITYVIEW BALLROOM  10:00-12:00  BOARD 39

**ROSE LAWLER** (VINCENT ROTELLO), DEPARTMENT OF CHEMISTRY, UMASS AMHERST, AMHERST, MA 01003

**SYNTHESIS AND FUNCTIONALIZATION OF BODIPY**

Research was focused on the synthesis and functionalization of 8-(4-Aminomethylphenyl)-4,4-difluoro-1,3,5,7-tetramethyl-4-bora-3a,4a-diaza-s-indacene, also known as BODIPY. One of millions of existing fluorescent molecules, it is set apart because of its favorable characteristics such as its stability and high fluorescent yield of 0.8, close to the ideal of 1.0. Fluorescent dyes are useful because they can serve as tags and therefore a method of labeling larger structures such as synthetic polymers or biomolecules such as enzymes, proteins and DNA. The dyes can then be used to determine morphologies such as in biological situations where the dye is a tag for the nucleus and therefore used to determine the location and shape of the nucleus under a microscope. After synthesizing the dye, suitably functionalized thiols for colloids were attached to BODIPY. This was of interest because gold colloids have useful binding properties with other biological molecules. A gold colloid tagged with BODIPY was synthesized. This research will allow for the visualization of the tagged colloids to check if they will enter cells and therefore to be able to determine if colloids will go inside cells non-invasively. BODIPY will be used as a fluorescent tag so that the colloids can be observed. This visualization has not been completed yet, however will soon be done.

144  CITYVIEW BALLROOM  10:00-12:00  BOARD 42

**ILVIN POLENA** (MARGARET KERR), DEPARTMENT OF CHEMISTRY, WORCESTER STATE COLLEGE, WORCESTER, MA 01602

**SYNTHESIS OF NEW LIGANDS FOR SINGLE SITE CATALYSTS USED IN THE PRODUCTION OF SYNDIOTACTIC POLYPROPYLENE**

The exploration of different catalyst ligand groups in the production of substituted syndiotactic polypropylene is a crucial requirement in catalyst synthesis. Many types of single site catalysts are available for the production of syndiotactic polypropylene, but little is known about catalyst activity and polymeric structure upon the introduction of functional groups into the polymer. Synthesis of various phenoxyimine ligands via Schiff base chemistry of starting from salicylaldehydes and fluorinated anilines has been done. Structural characterization of the ligands using various techniques will demonstrate synthetic viability. Future work will include the synthesis of single site catalysts with these ligands and testing of polymerization properties.

145  CITYVIEW BALLROOM  10:00-12:00  BOARD 71

**SHIDEH SHAFIE** (LILA GIERASCH), DEPARTMENT OF CHEMISTRY, UMASS AMHERST, AMHERST, MA 01003

**COMPARATIVE FOLDING STUDIES OF TWO HUMAN PROTEINS: CELLULAR RETINOIC ACID BINDING PROTEINS I & II**

The intracellular lipid binding proteins (iLBPs) make up a large family of sequence diverse proteins that exhibit similar native structures. The iLBP fold consists of two five stranded β-sheets that form a β clam that into which they bind their small hydrophobic ligands. (1) Cellular retinoic acid binding proteins (CRABP) I and II are two homologous proteins from the iLBP family. The two proteins are 77% sequence identical and have the same native structure. Though both proteins bind the same ligand, retinoic acid, in vivo assays reveal functional differences. CRABP II is found in the nucleus where it is thought to directly channel retinoic acid to the retinoic acid receptor (RAR). CRABP I remains in the cytosol and never makes direct contact with the RAR; it is proposed to utilize a cytosolic release mechanism. We propose to study the folding differences between CRABP I and CRABP II in order to establish which residues are significant to the folding mechanisms of these proteins. To examine the secondary structure, we used circular dichroism, while tertiary structure was monitored using fluorescence. Kinetics of folding will be observed using stop fluorescence technique. Insight into the CRABP I and II folding mechanism may shed further light on the functional differences as well.

146  CITYVIEW BALLROOM  10:00-12:00  BOARD 43

**ERIC STEELE** (DRAGIC VUKOMANOVIC), DEPARTMENT OF CHEMISTRY, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

**IS 1-HYDROXYPHENAZINE A METABOLITE OF PYOCYANIN?**

Pyocyanin (Pyo; 5-methyl-phenazinone) and 1-hydroxy-phenazine (1-HP) are natural antimicrobial pigments produced by Gram-negative bacterium Pseudomonas aeruginosa that show very rich biological activities. It is widely believed (J. Appl. Physiol. 85(6): 2298, 1998) that 1-HP is a metabolite or a degradation product of Pyo, however, we are first to propose the pathway of 1-HP generation via metal-mediated demethylation of Pyo. Direct Voltammetric and Adsorptive Stripping Voltammetric study indicated that in the buffered aqueous solutions Pyo and 1-HP make complexes with different stoichiometries with Mg2+, Ba2+, Cu2+, Pb2+ and Zn2+. For example, in the aqueous urotropin
buffered solutions Pyo forms 1:1 complex with Cu2+. Small cathodic shifts of Pyo complexes’ reduction peaks indicated more stable species, however excess of some metal ions made reduction peaks to appear at about 100 mV more positive potential, which is likely due to reduction on metal centers rather than on the ligands themselves. The electrochemical evidence of metal induced demethylation of Pyo is in concert with our previous electrospray mass-spectrometric and collisional activated dissociation studies of Pyo complexation.

FORMATION OF WATER THIN FILMS ON METAL OXIDE SURFACES

Metal oxides are commonly used as catalysts and catalytic supports, and water is often present in the reactant feed stream or as a product of reaction. Adsorbed water, in either its molecular or dissociated form, is thought to play a critical role in the mechanism of many metal oxide-catalyzed reactions. Using varying concentrations of potassium hydroxide solutions, we were able to establish dynamic equilibrium between the MgO powder and an environment with a constant relative humidity. Using TGA we were able to monitor water uptake and desorption from the surface of MgO powder under these known conditions. We have found that water both chemisorbs and reversibly physisorbs onto MgO surfaces forming liquid-like thin films under ambient conditions.

As advertised: Has advertising become too powerful and intrusive in America? Should limitations be placed on the industry?

This poster presentation considers whether restrictions should be placed upon the advertising industry in America. On a daily basis the average American is bombarded with a deluge of advertising. Through various mediums, corporations work to influence consumers by manufacturing a desire for their products. In a capitalistic society where corporations are given the opportunity to influence the thoughts and actions of individual consumers the point at which advertisement has gone too far is not generally agreed upon. Has the industry become too powerful, influential, and intrusive on the individual? Freedom of speech and expression have always been principal tenets of American society and any infringement upon the advertising industry would run contrary to such beliefs. However, federal restrictions have already been implemented in the case of cigarette ads. Should other products, such as fast foods, be similarly limited in their access to advertising? Laws pertaining to truth in advertising theoretically protect consumers from being misled, but are advertising agencies finding ways to circumvent the law? This poster presentation examines the ethical dilemmas that arise when considering the scope of possible restrictions on advertisers and the nature of their enforcement.
Poster Session

sales of its catered clambakes. The targeted publics included corporate clients on the North Shore capable of booking company functions of over two-hundred people as well as area families able to book clambakes for between fifty and a hundred guests for parties and celebrations. To reach these audiences, an advertising schedule featuring three ads was developed for area newspapers (The Salem Evening News, The Lynn Daily Item). Also designed were brochures, flyers and information kits to be distributed in C&C Lobster Co.'s retail store. These gave facts about clambakes, prices, and available menus. A company's website was also developed to include pages depicting catered clambakes. Before the project began, the company catered about sixty-five clambakes during the May-to-October season. The owners would like to see these numbers rise by 25%. The outcome of this project will be observable after October of 2003.

COMMUNICATION

151 CITYVIEW BALLROOM 10:00-12:00 BOARD 20

STEPHANIE DUSSOURLD (STEPHANIE DUSSOURLD), DEPARTMENT OF COMMUNICATION, SALEM STATE COLLEGE, SALEM, MA 01970

By examining the Boston Globe's front pages for the same randomly selected day (August 18) from 1950 to 2000, I hope to uncover and illuminate news values and patterns over the fifty-year span. This study, relying on a content analysis, will show what topics have been and continue to be covered in detail and given prominent attention as front page items. The investigation spotlights the types of news that readers in the greater Boston metropolitan area are exposed to via its largest paper.

152 CITYVIEW BALLROOM 10:00-12:00 BOARD 23

JACLYN JEGGOOD, DEPARTMENT OF COMMUNICATION, SALEM STATE COLLEGE, SALEM, MA 01970

PROMOTING ORZO TRATTORIA: A MEDIA PLAN
With the abundance of restaurants and bars competing with one another in the greater Boston metropolitan area, there has recently arisen a great need for each establishment to employ advertising, public relations, and media attention strategically to reach and keep its target patrons. This project reports on an advertising, public relations, and media plan for Orzo Trattoria, a family-owned, North Shore restaurant. The researcher, working as a voluntary media liaison and using hospitality experience along with a Communications education, created a media plan that includes a press kit (clippings, backgrounder, and fact sheet), the design of direct mail promotions and menus, target market research, special events planning, and research on advertising outlets. The project also encompasses establishment planning, the creation of a multi-media promotional piece, and local market comparisons. The eventual success of the project will be indicated by revenue outcomes.

153 CITYVIEW BALLROOM 10:00-12:00 BOARD 15

KATIE MURPHY (JOHN CHETRO-SZIVOS), DEPARTMENT OF COMMUNICATION, FITCHBURG STATE COLLEGE, FITCHBURG, MA 01420

BUILDING HUMAN COMMUNICATION SKILLS IN CHILDREN:
Human Communication influences and alters who we are and how we perceive things and people. Children are especially susceptible to the media’s messages that are communicated through the TV. However an opportunity may exist to use TV to build interpersonal skills, the idea for this show, The Hug-A-Bugs is to send a positive message in a way that children can relate to. The Hug-A-Bugs are about a group of animals that live together that are not necessarily bugs. They go on daily imaginary adventures that teach kids the values and importance of friendships while at the same time helping them to learn about the world around them. Each Hug-A-Bug has a specific role within the group as well as a flaw that kids can identify with. In order to create and produce the Hug-A-Bugs the concepts and theories presented in Human Communication are needed. A couple of beneficial Human Communication concepts I thought would be important in the process of creating the Hug-A-Bugs were from Parks (1925), Derber(2000), and Goffman(1959), as well as other theories on Human communication. Without these theories it would not be possible to relay the messages and communicate to the audience the stories and themes within the Hug-A-Bugs’ adventures.

154 CITYVIEW BALLROOM 10:00-12:00 BOARD 14

BENJAMIN REED (JOHN CHETRO-SZIVOS), DEPARTMENT OF COMMUNICATION, FITCHBURG STATE COLLEGE, FITCHBURG, MA 01420

CHANGING THE OPERATIONS OF AN OFFICE THROUGH NEW TRAINING MANUALS AND NEW TRAINING PROCEDURES
Employees, an organization’s procedures, and outside forces all impact and influence the way an organization performs and operates. Employee training is one procedure in an organization that contributes to the performance of that organization. The Fitchburg State College
(F.S.C.), Admissions Office Tour Guide Training Program was examined to learn how its training procedures affect the quality of the campus tours provided by their tour guides. Using Robert Johnson's (1998) model of the User-Centered Rhetorical Complex of Technology, the tour-guide training program was assessed based on the dimensions of culture, history, and learning. After evaluating the current training program, a new program was developed aimed at improving the overall training procedures. As part of this new program, a 40-page training manual was authored and integrated into the F.S.C. Admissions Tour Guide Training Program. Finally, the training program was reassessed using the Johnson model. The new training program was found to be more efficient and effective in training the tour guides. The revised manual was beneficial because of the organized fashion the material was presented in. As a result, the campus tour guides were better equipped for their daily job duties.

COMMUNITY OR PUBLIC SERVICE

155 CITYVIEW BALLROOM 10:00-12:00 BOARD 9

SAMANTHA BAKER (JOHN CHETRO-SZIVOS), DEPARTMENT OF COMMUNICATION, FITCHBURG STATE COLLEGE, FITCHBURG, MA 01420

GUIDE FOR CLUBS AND ORGANIZATIONS ON COLLEGE AND UNIVERSITY CAMPUSES

Colleges and Universities have many clubs and organizations that serve different purposes (Student Governments, Programs Committees, Sororities, and Fraternities) but also have many needs in common, such as fundraising, creative advertising, performing as a group, running meetings effectively, etc. Unfortunately, clubs and organizations on college campuses do not have one source they can go to for ideas to help them. The present work provides such a source for clubs and organizations in need of ideas or information on advertising, fundraising, icebreakers, and other topics. Research on these different ideas is also included. Information was collected mainly from books and internet research, but also contacts with people on other college campuses.

156 CITYVIEW BALLROOM 10:00-12:00 BOARD 4

FATMATA BRAIMA (JULIE MULVEY), DEPARTMENT OF STUDENT LIFE, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

THE SPECIAL OLYMPICS: COLLEGE STUDENTS HELPING THE COMMUNITY BY SHARING, CARING, AND CELEBRATING ACHIEVEMENT

This poster presentation will briefly trace the history of the Special Olympics and will include pamphlets and general information about the programs. The information will include a photo gallery, ways to get involved with the programs, and who and what are involved with the Special Olympics. The Special Olympics is an international organization created to give people with mental retardation opportunities to compete in sports such as basketball, bowling, volleyball, and figure skating. It acts as a support system for people with similar concerns and provides its athletes with a sense of community and a place of belonging. There is a Special Olympics chapter in each of the fifty states and in many parts of the world. Last year, the Student Life Office at Massasoit Community College hosted the South Suburban Track and Field Meet and it was quite a success. This presentation will show how Massasoit students play a vital role working in conjunction with the greater community to achieve a common goal for the benefit of the Special Olympics participants.

157 CITYVIEW BALLROOM 10:00-12:00 BOARD 11

DONNA LYNNE DEMANARIG (WILLIAM MILLER), UMASS EXTENSION, UMASS AMHERST, AMHERST, MA 01003

THE LEARNING FIELD: UNDERSTANDING SUCCESS AMONG CAMBODIAN AMERICAN COLLEGE STUDENTS

Many Cambodians immigrated to the United States during extremely challenging circumstances that often included the separation and loss of family members, homes and property. Currently, Cambodian Americans are confronted by a variety of risks and challenges that are reflected in low levels of income and education, and high rates of gang membership and unemployment. Cambodian Americans are at a disadvantage when their educational or professional achievements are compared to the general population or to other immigrant groups. Many Cambodian Americans, nevertheless, overcome various risks and challenges and are able to succeed. This study considers a sample of Cambodian American college students in western Massachusetts to determine the factors that have helped them to succeed. Cambodian American students at five different colleges will be interviewed. They will complete questionnaire measures that assess their adjustment to college life, their degree of acculturation and assimilation into American society, and their orientation towards individualism and collectivism. Their opinions will also be solicited on what experiences or factors have helped them to provide information on resiliency in high-risk populations that is of interest to researchers. Results from this research will be presented in a small setting to organizations such as the UALRC (United Asia Learning Resource Center) at the University of Massachusetts at Amherst and Upward Bound, an organization that help low-income and first-generation youths, giving these groups the necessary information to help them attempt their goals in providing resources and support to immigrant groups.
COMMUNITY OR PUBLIC SERVICE

158  CITYVIEW BALLROOM  10:00-12:00  BOARD 10

ANASTASIA DUBROVSKY  (JOHN REIFF), OFFICE OF COMMUNITY SERVICE LEARNING, UMASS AMHERST, AMHERST, MA 01003

A SECONDARY ENGLISH CURRICULUM ON POVERTY AWARENESS
I have been involved with a community-based project for which I have been designing a collection of lesson plans to be integrated into the Youth Against Hunger (YAH!) Curriculum of the Food Bank of Western Massachusetts. In my presentation, I will discuss these lesson plans that I have designed to introduce the topic of poverty awareness in a secondary-level English course. These lesson plan units will be implemented and distributed by the Food Bank to heighten youth awareness and community involvement in the fight against hunger. The lesson plans include fiction, poetry, memoirs, and song lyrics. Also included is an action plan, with suggestions for possible youth activities, and a bibliography of resources and texts for educators interested in integrating social justice themes into their curriculum.

159  CITYVIEW BALLROOM  10:00-12:00  BOARD 3

PATRICIA MURPHY, DEIRDRE LAWSON (JOAN ARCHES), COLLEGE OF PUBLIC AND COMMUNITY SERVICE, UMASS BOSTON, BOSTON, MA 02125

HEALTHY INITIATIVE COLLABORATIVE: COMMUNITY UNIVERSITY PARTNERSHIP (HICCUP)
The students of the College of Public and Community Service (CPCS) at UMass Boston have committed to a yearlong service learning collaborative project. The project, Healthy Initiative Collaborative: Community University Partnership (HICCUP) will carry out participatory action research with the youth at Harbor Point. The youth, ages 12-16, will focus first on defining their health concerns and what makes a healthy community. Participants will expand their understanding of health to include psychological, social, spiritual, economic, political, as well as physical components of well being. As they make the connection between their personal well being with that of their community as a whole, they will identify projects and activities that they feel would make their community a healthier one for youth. To accomplish this the youth, in collaboration with the CPCS students, will learn a theory and method of practice called Social Action. It is practiced widely in Europe and builds on the work of Paulo Freire. This planning and action process emphasizes participation and empowerment as collaborative members: 1) identify and document problems, 2) analyze why the problems exist, 3) arrive at an action plan, 4) carry out the action and 5) continuously reflect upon learning. As part of the community problem solving process participants will learn to prioritize their needs and assess solutions for meeting those needs.

COMMUNICATION DISORDERS

160  CITYVIEW BALLROOM  10:00-12:00  BOARD 2

STACEY ROTH  (SHELLEY VELLEMAN), DEPARTMENT OF COMMUNICATION DISORDERS, UMASS AMHERST, AMHERST, MA 01003

AWARENESS OF ACCENT PRODUCTION VERSUS ACCENT PERCEPTION AMONG SEQUENTIAL BILINGUALS OF SPANISH AND ENGLISH
This study examined whether 16 adult sequential bilinguals of Spanish and English, who have no background knowledge of phonology, were able to perceive phonological differences in the speech of bilinguals within their own second language, and whether their awareness was greater during their own speech production, or while assessing (listening to) the speech of other sequential bilingual speakers. Each participant was asked to participate in three activities for this study. The first component was production. Each participant received two sample sentences and was asked to produce each sentence with a “strong” accent in their first (native) language. Then, they were asked to state what was wrong (non-native) about that accent. The second activity required each participant to produce two sample sentences with a “strong” accent in their second (acquired) language, and then state what was wrong with that accent. The third activity tested each participant’s perception of other bilingual speakers. Each participant watched a video clip of a bilingual speaker producing a sentence in their second language. Based on their observation, they identified and stated the characteristics of a “strong” accent. All responses were recorded for interpretation. Based on the results of this study, sequential bilinguals of Spanish and English perceive only the same differences that they produce. In conclusion, second-language speakers may be unaware of certain phonological differences between languages and may require professional assistance to focus attention on accent modification.
COMMUNITY OR PUBLIC SERVICE

161 CITYVIEW BALLROOM 10:00-12:00 BOARD 1

AMY TESSIER, RACHAEL WADE (ERICA SCHARRER), DEPARTMENT OF COMMUNICATION, UMASS AMHERST, AMHERST, MA 01003

GOT ISSUES - A MIDDLE SCHOOL YOUTH OUTREACH EVENT
Got Issues? is a community-based project focused on enhancing the academic and social experiences of youth at Amherst Regional Middle School (ARMS). We will gather information directly from the students to create awareness on issues that help or hinder their progress in school and report on our findings in our presentation. With a network of influential administrators, faculty members, community representatives, and university students, we are organizing a forum for the 7th and 8th graders at ARMS. We created a questionnaire that the students completed this past December. The information we compiled will aid in the foundation for an open discussion. In preparation for this event, research is being conducted on effective methods for engaging and attaining information from students. The issues forum is to be held on April 10th. We hope to have 100 to 150 students participate in the workshops in which they will work in small groups discussing issues related to their success at school. We will then reconvene to debrief on the issues that arose from the discussions. Evaluations will be done on the effectiveness and efficiency of the forum. We will present on the ideas that students voiced in the workshops. The information will be used by faculty to further develop the policies at ARMS.

162 CITYVIEW BALLROOM 1:40-3:40 BOARD 76

JANET WILKINS (MARILYN GLAZER-WEISNER), DEPARTMENT OF SPANISH, NORTH SHORE COMMUNITY COLLEGE, DANVERS, MA 01923

SECOND LANGUAGE ACQUISITION THROUGH SERVICE LEARNING
Service learning is a dynamically growing program in higher education, offering course-based, credit-bearing learning experiences. College students participate in organized service learning experiences that fulfill academic requirements while meeting community needs. Upon returning to the classroom setting from the service learning venue, students reflect on the service activity to gain further understanding of course content, a broader appreciation of the discipline, and a deeper sense of civic responsibility. The goal of our research is to determine how effective North Shore Community College students have been in their efforts to enhance the learning process for bilingual middle-school students in an inner-city, after-school remedial program. The data will reveal how the interaction of college students with middle-school students has encouraged and enhanced learning, while developing mutually reciprocal benefits. The La Vida After School Program in Lynn, MA provides an opportunity for students enrolled at NSCC to be exposed to Spanish spoken by native speakers in order to supplement their own second language acquisition in the classroom. While listening to the sounds of the target language, students at NSCC provide bilingual middle-school students with homework assistance through positive role modeling. Careful examination of student preparation for MCAS testing, homework assignments, interviews, and journals will be used to draw conclusions that are expected to show results in improved performance of the La Vida students in language acquisition and attitudes toward school work.

COMPUTER SCIENCE

163 CITYVIEW BALLROOM 10:00-12:00 BOARD 29

LUCAS BLACK (BILJANA JOHN), DEPARTMENT OF COMPUTER SCIENCE, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

THE NEW COMPUTER AGE OF WIRELESS
The BlueTooth standard represents a set of rules for wireless communication among devices used in the homes. Examples are digital cameras, BlueTooth-enabled color laser printers and computers with wireless home networking adapters in them. A person can have all of his/her home computing devices inter-connected without the expense of installing cables and yet share printing, exchange files, and even access the Internet. BlueTooth devices communicate with each other by using small radio transceivers called radio modules embedded into their microprocessor chips. Special software called linked manager helps the BlueTooth devices find each other, establish a link and then send and receive data, at the rate of 1 Mbps over a distance of about 33 feet (10) meters. The 802.11 standard is a speedy wireless technology letting both mobile and fixed location clients communicate with others at a rate up to 2 Mbps. Thanks to this technology, cellular phones enable people read their e-mail while driving in their cars. In 1999, the IEEE body enhanced the 802.11 standard and the 802.11b High Rate standard evolved. Two higher speeds were added, 5.5 Mbps and 11 Mbps. One criticism for the standard comes from the fact that both 802.11 and 802.11b standards do not define communications between access points. This has to do with the roles that the Network and Transport layer of the OSI model do not play while a user is being “handed off” among access points. As a result the vendors of the access points now define the protocols for roaming. This report will focus on transmission methods, security methods and risks, protocols and how these techniques can and will be used in our everyday lives.
ZENWORKS
ZENworks is a powerful desktop management tool which reduces the amount of time and effort that the network administrator needs to spend to support workstations in a company. This tool is an extension of the Novell Directory Services (NDS) to include information like desktop preferences, distribution of applications and printer drivers, as well their configuration. ZENworks is a great time saving feature because changes made once in NDS can be immediately distributed to thousands of workstations on the network. In addition, it provides secure remote control over workstations thus making it easy to troubleshoot problems on the users’ workstations without leaving her/his own workstation. Another great feature offered by ZENworks is its ability to let mobile users postpone downloads of large documents until they are connected to the network at the office, as well as have new upgrades of drivers for hardware be automatically distributed at login time. The benefits and flexibility of ZENworks are of great assistance to both users and administrators.

WIRELESS TRANSMISSION
While Transmission Media such as Copper and Fiber Optic are faded out at the end of the twenty first century, Wireless Technology came as the latest rage in network transmission using infrared light. by sending light impulses in its operation, fiber optic cable should have credit for wireless technological expansion. Infrared Light waves and Radio Frequency waves are two types of transmission signals by sending computer data. Directed and diffused infrared represent two common subgroups of infrared wireless. In fact, directed infrared is used in the wide area network (WAN), and diffused infrared is used in local area network (LAN). It is obvious that wireless technology is preponderant in the development of human life. Education, health care, investment banking, home, and offices are some good examples of wireless users. According to research, one sixth of the population worldwide will be using wireless technology by the year 2004. On the other hand, the use of certain devices without wire has been around for years. Remote control for television sets, pressing a button to open a garage door, and using a cordless phone are some wireless devices that people have used in a daily basis without noticing.

THE OSI REFERENCE MODEL, PROTOCOLS, AND CONNECTIVITY DEVICES
Protocols are sets of rules for communication among networking entities. There are hundreds of protocols in the world of telecommunication, grouped into protocol suites. The most prevailing protocol suite is the TCP/IP one. Each member of the protocol suite specializes in certain functions. To be able to easier figure out what a particular protocol does during the transmission of packets from a source device to a destination one, the Open System Interconnection Reference Model is being used. This model is a non-tangible tool divided into seven layers (Application, Presentation, Session, Transport, Network, Data Link, Physical) and the data traveling within a computer is forwarded from a layer to layer with certain control information added to the packets. On the destination side, each layer removes the control data appended to the packets by its counterpart on the source side as the packets are moved upward toward the Application Layer. Some protocols are connectionless, they do not offer guaranteed delivery of data, but are speedy. Others are connection-oriented protocols. This group exercises error, data-flow, and sequence control to the packets they are transmitting. The OSI Model is also used to explain the functions of the different connectivity devices, like switches, bridges, routers, gateways, and other communication hardware related components, like Network Interface Cards (NICs), communication media, and connectors.

SMART TOY CAR CHASER
In this talk we discuss the design, construction and implementation of a Smart Toy Car Chaser. The system consists of two remotely controlled toy cars one controlled by a human (leader) and another automatically controlled by a computer (chaser). A web camera is used to take dynamic images of the scene. Image processing algorithms have been developed to process the raw data and generate the position and orientation of each car. This amounts to the development of a position/orientation sensor using a web camera, which works fine for our needs. The next thing that we will have to work on is developing feedback algorithms that take the image processing data and automatically
control the motion of the chaser so that it catches-up to the leader. All programming will be done in C and the entire system will be implemented on a PC running Linux.

168  CITYVIEW BALLROOM  10:00-12:00  BOARD 33

JAMES MUTURI (JOSEPH KASPRZYK), DEPARTMENT OF COMPUTER SCIENCE, SALEM STATE COLLEGE, SALEM, MA 01970

DESIGNING A UNIVERSITY STUDENT RELATED DATABASE
By graduation time, a candidate in the field of Computer Science is expected to be relatively fluent in and conversant with the fundamental principles that form the basis of the field. However, the student is often not exposed to practical experiences whose magnitude and complexity truly reflect a real-world production environment. My goal is to gain in-depth, hands-on experience in the process of designing and implementing a simulation of a realistic database. The system will support the following functionalities among others: course registration, adding/dropping courses, transcript request, course creation, term schedule preparation, schedule modification, printing class schedule, and preparation of the dean's list. There are two main parts in any database system: the database itself and an application, which brings the database into “life”. The implementation depends on the type of implementation model selected. The two popular models in commercial use are Relational and Object-Oriented. I chose the Relational model because it stands out over other models in its level of maturity, efficiency and simplicity from the user/designer point of view.

169  CITYVIEW BALLROOM  10:00-12:00  BOARD 35

PATRICIA PARRISH (PAT PARRISH), DEPARTMENT OF COMPUTER SCIENCE, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

THE ROLE OF PARTITIONS AND REPLICAS IN NETWARE
A partition is a logical section/grouping of containers in NDS. Creating partitions and then replicating and distributing them among multiple servers in NDS is a very practical management technique. The reason for dividing the NDS database into these smaller units is done so that the information about the objects and their properties and values can be managed easier. Users benefit from this because now the server physically closest to them will authenticate them during login and check their identification each time they ask to use a resource. The bottom line is more effective performance of the network. Another benefit is of the fault tolerance nature. Since the information is replicated among servers scattered around the NDS tree, when a server goes down taking the information about network objects with it, another server, a member of the same replica ring as the “fallen” one, will take upon itself to service these objects. There are four types of replicas: master, read/write, read-only, and subordinate references. It is very important that they are used in a balanced manner with regard to how many of each kind there are on a network. If there are too few used, or they are not placed on strategically located servers you are volatile in the case of a server crash. If too many replicas are created of the same partition, the performance of the network suffers. The NDS Manager is the tool used to setup, monitor, and troubleshoot partitions and replicas.

170  CITYVIEW BALLROOM  10:00-12:00  BOARD 34

BULAT SULTANOV (BILJANA JOHN), DEPARTMENT OF COMPUTER SCIENCE, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

THE POWER OF THE NEW TECHNOLOGY FILE SYSTEM (NTFS) IN MICROSOFT WINDOWS 2000
The term SECURITY in the networking world is a multi-tier entity. Each tier affects a different aspect of the network and controls a different kind of restriction placed on the resources represented within the network. For example, when a user logs on to a Microsoft Windows 2000 network, which means that this object has passed the authentication test presented by the server. Another tier is represented by the NTFS permissions which control the different access that the user has to the shared objects like files and folders. NTFS lets you also control access to files and folders on a local machine or the entire network. The sets of permissions administered on the domain controller are correctly evaluated when merged with the sets of permissions administered on the local machine. Permissions in Windows 2000 are cumulative, which means that some permissions already granted to a user and these are added to the permissions granted to group objects whose member the user is. The administrator must see the complete picture before concluding whether the user has an appropriate access to a resource or not. Troubleshooting techniques will also be presented, as well as several other features as part of security, like encryption and auditing.

171  CITYVIEW BALLROOM  10:00-12:00  BOARD 26

SINDHURA SUNKARA (MARC POMPLUN), DEPARTMENT OF COMPUTER SCIENCE, UMASS BOSTON, BOSTON, MA 02125

PUPIL DILATION AS AN INDICATOR OF COGNITIVE WORKLOAD IN HUMAN-COMPUTER INTERACTION
Pupil dilation is known to respond quickly to changes in several exogenous and endogenous variables, most prominently the brightness in the visual field and a person’s cognitive workload while performing a visual task. Pupil dilation is rarely analyzed in usability studies although it can be measured by most video-based eye-tracking systems and yields highly relevant workload information. This is mainly due to two problems: first, the variety of factors that can influence pupil dilation, and second, the distortion of pupil-size data by eye movements: the size of the

63
pupil as seen by the eye-tracker camera depends on the person's gaze angle. In the present study, we tackled these two problems to increase the usability of pupil dilation as a measure of cognitive workload in human-computer interaction. We compared the effects of cognitive workload and display brightness on pupil dilation and investigated the interaction of these two factors. Cognitive workload was found to be the dominant factor influencing pupil dilation. Moreover, we developed and implemented a neural-network based calibration interface for eye-tracking systems, which is capable of almost completely eliminating the geometry-based distortion of pupil-size data for any human subject. The results of our study considerably facilitate the use of pupil dilation as a quick and reliable indicator of a person's cognitive workload.

CRIMINOLOGY

172  CITYVIEW BALLROOM  1:40-3:40  BOARD 8

EMILY BATCHELDER, JILL M BICE, TAMMY L BRONSON (THOMAS MALLOY), DEPARTMENT OF HISTORY, MOUNT WACHUSETT COMMUNITY COLLEGE, GARDNER, MA 01440

VICTIMOLOGY & RESTORATIVE JUSTICE

Over the last few decades the victim's rights movement has emerged as one of the most significant issues within the American criminal justice system. In transforming the system from one in which victims were essentially ignored to one where they are present at all critical aspects of criminal proceedings, this issue demonstrates the importance that the victim's rights movement has now and will have in the future. By focusing on children's rights as victims in domestic situations and women's rights as victims of sexual assault, this project will examine the system through a victim's perspective and will show how this movement has impacted the nature and understanding of these crimes. In addition, this project will also explore the philosophy and practice of restorative justice, a new model of mediation and reconciliation between victims and their offenders. By examining these issues on a local and national level through interviews, site visits and research from secondary sources, this project will raise awareness of the often overlooked and forgotten faces of crime.

173  CITYVIEW BALLROOM  1:40-3:40  BOARD 54

KEILA PUELLO (CAROL LIEBMAN), DEPARTMENT OF CRIMINOLOGY, NORTHERN ESSEX COMMUNITY COLLEGE, HAVERHILL, MA 01830

DOMESTIC VIOLENCE

This research explores different areas of domestic violence. It includes information on the education and training now expanding in school curricula, in police agencies, in the courts and for physicians in healthcare centers due to the overwhelming exposure and attention the media has provided in the recent years. The research shows domestic violence is gender specific, with the majority of the batterers being male. It details possible reasons why men batter, including several warning signs of a potential batterer. The study briefly touches on whether or not arresting batterers does more harm than good. It lists possible reasons why battered women stay and some of the many challenges facing them. It also provides several options and resources available for those who are battered. Methodology used includes library research, Internet research, and conversations with the director of a batterer intervention program and counselors from a shelter for battered women; additional information and handouts were obtained from seminars on domestic violence.

174  CITYVIEW BALLROOM  1:40-3:40  BOARD 9

JESSICA ROCHE, DAVID C DIONNE, TIFFINI A PIESYK (THOMAS MALLOY), DEPARTMENT OF HISTORY, MOUNT WACHUSETT COMMUNITY COLLEGE, GARDNER, MA 01440

PROTECTING CIVIL LIBERTIES WHILE COMBATING TERRORISM

Since September 11, 2001, terrorism has emerged as a vital area of focus in America. One issue that has arisen is the need for national security, which sometimes conflicts with the protection of individual rights. The dispute involves the difficulties of protecting American lives while maintaining civil liberties for all citizens. This project will cover such topics as how certain aspects of the Patriot Act affect the United States, important information about profiling, and the issue of how to try presumed terrorists. Through information gathered from government sources, as well as organizations concerned about preserving civil liberties, this poster-board presentation will address selected topics dealing with how well civil rights can truly be preserved while combating terrorism.
**ECONOMICS**

<table>
<thead>
<tr>
<th>175</th>
<th>CITYVIEW BALLROOM</th>
<th>10:00-12:00</th>
<th>BOARD 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>KATRINA KELLOGG (ARTHUR MACEWAN), DEPARTMENT OF ECONOMICS, UMASS BOSTON, BOSTON, MA 02125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FROM BRAZIL TO ARGENTINA: AN ANALYSIS OF CONTAGION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The currency crises of 1995-2002 rocked the international financial markets, and their long-term effects are still developing. A primary question in understanding these crises is the extent to which crisis in an individual country is the result of weakness in domestic economic fundamentals, and the extent to which it is the result of external factors. This paper will review potential financial contagion from the Brazilian currency crisis of 1998/9 to Argentina. Financial contagion is measured by significant co-movement in stock indices and sovereign spreads after controlling for fundamentals, defined here as good news/bad news as dummy variables. The methodology for this research is derived from a study by Baig and Goldfajn of the International Monetary Fund, reviewing potential contagion from Russia to Brazil. This method includes a background analysis of the public and private positions of each country leading up to the crisis in Brazil, using general economic indicators such as: Gross Domestic Product, debt burden, interest rates and trade balance. An Ordinary Least Squares (OLS) regression will be used to review the impact directly and indirectly of capital market flows from Brazil to Argentina. Short-term debt exposure in relation to foreign banks and debt rollover is compared qualitatively as compared to other developing markets. Finally, I will conduct an empirical test of contagion using Reduced Form Vector Auto Regressions (VARs) and Impulse Response Functions derived therefrom. The results of this test will suggest evidence that will help determine if contagion occurred from Brazil to Argentina.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>176</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>RENAY MCMANUS (ROGER TAYLOR), DEPARTMENT OF ECONOMICS, NORTHERN ESSEX COMMUNITY COLLEGE, HAVERHILL, MA 01830</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A DISCUSSION OF THE EURO, COMMON CURRENCY OF THE EU.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>This paper discusses the lengthy evolution of the Euro, the common currency of the European Union (EU). In 1957 the Treaty of Rome declared a common European market whose aim was to increase economic prosperity, and contribute towards a closer union among the peoples of Europe. During the next 30 years, EU officials realized the need for a single currency to knock down the trade barriers that were inhibiting the EU from realizing full economic potential. The pros and cons of a single currency were then debated. In 1998 the Maastricht Criteria for eligibility was created. In January 2002 the Euro currency was officially launched. Launch stories from selected countries are included in the paper. Problems that lie ahead are also discussed.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EDUCATION**

<table>
<thead>
<tr>
<th>177</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 28</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRISTEN ABDOW (MICHELLE PIERCE), DEPARTMENT OF EDUCATION, SALEM STATE COLLEGE, SALEM, MA 01970</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEACHING AND LEARNING IN A TWO-WAY BILINGUAL EDUCATION PROGRAM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The responsibility of public schools to provide equal educational opportunities for all students is subject to widely varying interpretation as is seen in the controversy surrounding bilingual education today. Is there evidence that the bilingual approach succeeds with children at the earliest grade levels? This study, conducted in a two-way kindergarten program and involving observations, field notes, and a teacher interview, examines the characteristics of the two-way environment, the teaching strategies used by instructors, and the learning strategies used by young children. The data collected suggest that children in two-way programs use one another as a language resource. Teachers promote this collaborative effort, and the program encourages cross-cultural relationships. The data collected indicate that generally both groups of children involved in a two-way bilingual program achieve grade level or higher gains not only in academic content but also in second language development. The two-way program appears to be an effective method for educating minority and majority language speakers.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>178</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 40</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAOMI CAMPBELL (WILLIAM MILLER), UMASS EXTENSION, UMASS AMHERST, AMHERST, MA 01003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAMPUS OUTREACH FOR VIOLENCE PREVENTION AND COMMUNITY EDUCATION: ARE EDUCATORS PREPARED FOR THEIR DUTIES?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Violence against women is a serious and prominent issue in our society. Many women fall victim to all types of violence. Support for victims and education for violence prevention is available through Everywoman’s Center, located on the University of Massachusetts, Amherst campus, serving the campus community and Hampshire County. A major component of the services offered by Everywoman’s Center is the Educator Advocate program that conducts educational and outreach programs. Educator Advocates complete an intensive, 70-hour training</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
program that prepares volunteers to run programs and facilitate workshops on a variety of topics that address violence against women. This study will determine if the training program provides the knowledge and skills Educator Advocates need to effectively serve as outreach educators. Volunteers who recently completed their training will fill out a survey that assesses their preparedness to run programs on a range of topics. In addition, all volunteers who have served as Educator Advocates for the past year or longer will participate in an in-depth interview to speak about their experiences running programs and how the training program can be enhanced. This information will be used for determining what aspects of the training work particularly well and what areas are in need of improvement. Ultimately this information will help the quality of outreach and education services that Everywoman’s Center offers in Western Massachusetts.

179  CITYVIEW BALLROOM  1:40-3:40  BOARD 72

JESSICA FITTS (ANN SCOTT), DEPARTMENT OF EDUCATION, MASS COLLEGE OF LIBERAL ARTS, NORTH ADAMS, MA 01247

TEACHING ENGLISH TO IMMIGRANT CHILDREN: IS IMMERSION THE BEST METHOD?
The debate over whether Spanish-speaking children will be immersed in English-only classrooms has neglected the data showing that English immersion for Spanish-speaking immigrant children causes an epidemic usually referred to as “Spanglish”. The data suggest that without the proper training prior to complete immersion, Spanish-speaking children continue this mixture of English and Spanish and it becomes harder for them to learn and use the English language effectively. This poster presentation will illustrate my research into the statistics on the teaching of Spanish to very young children in Massachusetts schools. My presentation summarizes the strengths and weaknesses of each mode of teaching English to immigrant children, and it concludes by advocating an “in-between” or mixed mode that improves the quality of the English language in the classroom.

ENGLISH LITERATURE

180  BACK BAY 2 COMPLEX  11:00-12:00  PANEL 2

ALICIA KENDALL (LULU SUN), DEPARTMENT OF ENGLISH, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

AMERICAN LITERATURE CURRICULUM DEVELOPMENT
This study was conducted to investigate the effectiveness of the current standards and influences in curriculum development for high school American Literature courses in Massachusetts. Curriculum development is a large part of a teacher’s job; it is the driving force behind everything that goes on in the classroom. This study was conducted in order to ensure that the process is not static and is changing along with the rapidly advancing educational setting. The primary methods of study on this topic used were library research and a survey of Massachusetts’ schools written by the author. Based on the research and survey results, I conclude that curriculum development standards vary noticeably in Massachusetts, despite the presence of strict curricular guidelines and standardized testing in the Massachusetts schools. The schools surveyed all had varying curricula as well as guidelines for text selection, even though they all responded that they followed the Massachusetts Curriculum Frameworks. Also, major forces in curriculum development of the past, such as literary canons, still evidently play a role today. New to today’s curriculum development, however, is an increase in the amount of multi-cultural literature included in curricula. In order to bring the research to a conclusion, I have compiled a “wish list” of works to be studied in a curriculum. Each of the works on the list is followed by a rationale, based on the research, as to why it has been included. This curriculum is designed to reflect the changes that have already been made, and still need to be made, in current curriculum development.

181  CITYVIEW BALLROOM  1:40-3:40  BOARD 3

KRISTIN LOIKO (GLEN BREWSTER), DEPARTMENT OF ENGLISH, WESTFIELD STATE COLLEGE, WESTFIELD, MA 01086

LITERACY IN CHILDREN
As a member of Sigma Tau Delta, an English Honor Society that is one of the largest members of the Association of College Honor Societies, I share in the strong belief that literacy should be encouraged for everyone. Encouraging young children especially to read has proven effective in inspiring an ongoing love for literature. In this poster presentation, I will demonstrate a strong push for encouraging elementary school students to read. In a campaign to promote literacy, members of the Westfield State College chapter of Sigma Tau Delta volunteered their personal time to go into elementary school classrooms and read to students. My poster will serve as a representation of the work they did, using photography along with recorded reactions of students, teachers, and Sigma Tau Delta members. Data on elementary school students and literacy levels will also be included. The Sigma Tau Delta campaign was highly successful, and both the members and the students to whom they read greatly benefitted.
**ENVIRONMENTAL STUDIES**

183  CITYVIEW BALLROOM  10:00-12:00  BOARD 55

MAUREEN KELLY  (WILLIAM HAGAR), DEPARTMENT OF BIOLOGY, UMASS BOSTON, BOSTON, MA 02125

**A COMPARATIVE FOOD WEB STUDY IN PONDS USING STABLE ISOTOPE ANALYSIS**

Stable isotope levels are used to study food webs because organisms accumulate the stable isotopes of what they eat; each successive trophic level in the pond has a higher level of stable isotopes. This study compares the food webs of three local ponds: Maquan Pond is an acid sensitive pond with a pH of approximately 6, Furnace Pond is a eutrophic pond with a pH of approximately 7, and Great Sandy Bottom Pond is a reservoir with a pH of approximately 7. The food webs of the ponds will be compared using the values of delta 15 N and delta 13 C of their organisms and detritus as indicators of trophic levels. These values will be plotted against each other to graphically represent each food web, and the length of the food web will be determined by the difference in the range of delta 15 N values from the detritus to the top predator. Nutrient poor ecosystems have been found to have longer food webs than nutrient rich ecosystems. My hypothesis is that Maquan Pond will show the longest food web because it is nutrient poor relative to Furnace Pond which is nutrient rich and also relative to Great Sandy Bottom Pond with a higher pH.

184  CITYVIEW BALLROOM  10:00-12:00  BOARD 57

CATHERINE MOROSKI  (DANIEL BRABANDER), DEPARTMENT OF ENVIRONMENTAL STUDIES, UMASS BOSTON, BOSTON, MA 02125

**PB CONCENTRATIONS IN CAMPUS DRINKING WATER: ANALYSIS AND REMEDIATION**

Lead is one of the most ubiquitous toxic metals of concern in urban water supply systems. For example, in 2000 34% of the Massachusetts Water Resources Authority (MWRA) participating communities in the greater Boston area did not pass the EPA's Action Level (AL) criteria that 90% of the homes have lead concentrations below the 15 ppb AL. Similarly, at UMass Boston water tests on drinking fountains in 2001 found lead concentrations ranging from 26-220% of the lead AL. Three methods of remediation have been used. In some buildings, point-of-use filters have been installed on drinking fountains. In others, a zinc orthophosphate treatment system will be employed. In one location the water is being continuously flushed to limit the lead leachate. To date, no follow-up testing has been conducted. This project will re-evaluate campus water quality and determine what action, if any, is needed to comply with the law and provide for safe drinking water. Water samples will be analyzed using ICP-MS analysis. These results will be compared with those produced by Hach. We will determine whether these kits, touted for their convenience and portability, can provide data with enough accuracy that they can take the place of expensive conventional analyses. This is particularly important to assess if the results generated by these test kits are going to be used to inform policy decisions.
blocking the receptor from endogenous estrogen, lignans may interfere with hormone induced cancers. The present study was conducted to
determine the effects of flax oil on the MCF-7 breast cancer cell line. The High Lignan Flax Oil, a product of Spectrum Naturals, was tested on
the MCF-7 cells in a fourteen day focus assay. The focus assay measures post-confluent cell growth and development representing tumor-like
formations, known as foci. The focus assay consisted of three 48 well plates, the first plate displayed a dose response to estrogen, the second
plate displayed a dose response to flax oil, and the third plate displayed a dose response to flax oil in the presence of trace amounts of
estrogen. The assay was repeated six times. Because of flaxseeds’ high lignan count and high levels of alpha-linolenic acids (ALA), it is
predicted that the oil should show evidence that it is an anti-estrogenic compound due to competition in the presence of estrogen. This would
result in fewer foci at higher concentrations of flax oil in the assay. The results thus far have shown that there is a statistically significant
decrease in the foci as measured by fluorescence of rhodamine stain.

FINANCE

186 CITYVIEW BALLROOM 10:00-12:00 BOARD 22

SAMANTHA INMAN (JAMES THEROUX), DEPARTMENT OF MANAGEMENT, UMASS AMHERST, AMHERST, MA 01003

THE ROLE THAT FINANCING PLAYS IN THE FAILURE OF PRIVATELY HELD ENTREPRENEURIAL FIRMS.
Through library research and interviews with company presidents, bank loan officers, and bankruptcy judges, this study examines the role of
financing and how it relates to business failures, revealing principles that can help entrepreneurs succeed with their start up endeavors. Data
from the study indicate that financing is not the primary cause of failure; but it is a major factor. The primary reasons for business failures,
based on case study data, are undercapitalization, employee larceny, and mismanagement. Additional factors that some bankruptcy judges
believe to explain failure include: the economic environment of the market in which the business operates, inefficiencies of the business, and
obsolescence of the business’s product or service.

GEOGRAPHY

187 CITYVIEW BALLROOM 1:40-3:40 BOARD 18

HEATHER RUEL (RICHARD WILKIE), DEPARTMENT OF GEOGRAPHY, UMASS AMHERST, AMHERST, MA 01003

THE INVASIVE WATER CHESTNUT INSPECTION AND IRADICATION PROGRAM FOR THE CONNECTICUT RIVER WATERSHED
Water Chestnut (Trapa natans) was originally imported from Asia as a decorative water plant, but now its introduction threatens to adversely
affect local waterways. Invasive species are defined as non-native species that once introduced to an environment, can adapt to local
conditions quickly, and adversely affect native populations. The goal of environmentalists is to eradicate invasive species, or to control them
until a naturally occurring control can be found. For this project, a Garmin GPS unit was used to collect data points for precise infestation
location. Topographical maps of the area and bathymetric maps of the ponds and lakes were used in the field as well. ARCVIEW was the
software program used to develop mapping themes. A network of volunteers was developed through a series of articles prepared by the
Project Coordinator. This project was successful because it showed the progress of Water Chestnut invasions can be limited. With prompt
species location, and focused volunteer efforts to pull these plants from our waterways, this invasive plant can be controlled. However, yearly
vigilance and action will be needed to keep known infestations under control. The data provided by this project can be used to determine the
degree of infestation and prioritize the need for removal. It will help determine the best way to eradicate Water Chestnut, and to verify
project success.

GEOLOGY

188 CITYVIEW BALLROOM 1:40-3:40 BOARD 14

KARLA HUBSCHWERLIN (R. MARK LECKIE), DEPARTMENT OF GEOLOGY, UMASS AMHERST, AMHERST, MA 01003

CLIMATE EXTREMES OF THE WESTERN PACIFIC WARM POOL
Today, the Western Pacific Warm Pool (WPWP) is a stable body of warm water because of the strong Trade Winds and constricted ocean
circulation due to the narrow Indonesian sea passage. This study’s focus was to compare the WPWP structure between interglacial times, like
today, and the last glacial maximum (LGM) 18,000 years ago when sea level was much lower, and ocean and atmospheric circulation were
stronger. This study was also conducted to determine if there was an increase in primary production during the glacial period as observed elsewhere in the ocean. Two levels of Ocean Drilling Program Hole 806B were analyzed: the LGM and the penultimate interglacial period about 125,000-130,000 years ago. In each sample, population structure of planktonic foraminifera (single celled protists with a carbonate shell) and multi-species discrete size fraction stable isotope analyses were conducted. During glacial and interglacial periods, planktic species generally follow the same isotopic pattern from juvenile to adult. Stable isotopic analyses show a shift in δ18O toward the heavier values during the LGM reflecting greater ice volume and perhaps cooler surface water temperatures in the tropics. There is also a shift towards heavier δ13C values indicating higher productivity in surface waters during the LGM. In the population analyses, Neogloboquadrida dutertrei is much more common in the LGM sample. This tropical high productivity species indicates greater oceanic divergence at the equator. Therefore, both the population structure and the carbon isotope analyses indicate that productivity was higher during the LGM.

189  CITYVIEW BALLROOM  1:40-3:40  BOARD 16
ERIK OLSON (MICHELE COOKE), DEPARTMENT OF GEOLOGY, UMASS AMHERST, AMHERST, MA 01003

FAULT SYSTEM EVOLUTION
Millions of people live above the evolving Puente Hills Thrust system of the Los Angeles basin. The early system was composed of the nearly vertical Whittier and Chino strike slip faults. Over time the blind thrust faults, Coyote Hills, Santa Fe Springs, and the Los Angeles sequentially developed. By modeling the Puente Hills Thrust system at different periods in time it is possible to assess various factors that may control the development of each subsequent fault. Three factors, strain energy density (SED), stress intensity factor, and Navier Coulomb stress, are used assess the propagation of the fault system. In each model, the SED always had the greatest concentration on the western edge of the youngest fault. The area of high SED concentration also enveloped at least a portion of the plane of the next expected fault. The stress intensity factor was in agreement with the SED values in predicting growth of the next fault. The Navier Coulomb stress was used to estimate the future fault orientation. By combining all of these factors we were able to predict the location of each subsequent fault in the models. Therefore by examining these factors in a fault system which is still evolving it may be possible to extrapolate the location of future faulting. This extrapolation would be useful in the circumstances of long term nuclear waste storage, where the development of a new fault over a few thousand years would be potentially hazardous.

190  CITYVIEW BALLROOM  1:40-3:40  BOARD 17
FLETCHER SCHNEEFLOCK (MIKE WILLIAMS), DEPARTMENT OF GEOLOGY, UMASS AMHERST, AMHERST, MA 01003

TIMING OF PROTEROZOIC DEFORMATION IN THE MAZANO MOUNTAINS, AND IMPLICATIONS FOR THE GROWTH OF CONTINENTS
The continental crust in the southwestern United States was formed dominantly in the early Proterozoic with the accretion of multiple systems of island arcs. The geologic history of continent building is complex, and interpretations are difficult because of limited Proterozoic rock exposure and overprinting of later deformations. Field work was undertaken in the Manzano Mountains in the summer of 2002 to further understand and constrain the timing and interaction of deformation and plutonism during continent building. The Manzano Mountains are a fault-bounded basement uplift on the eastern margin of the Rio Grande rift, and because of their position between two major accretionary boundaries are well suited to crustal research. Early Proterozoic quartzites and schists comprise the uplift, which is intruded locally by the granitic 1.42 Ga Priest Pluton. The dominant structures in the southern Manzano Mountains are map-scale, upright, gently plunging F2 folds with a dominant NE striking, steeply west-dipping S2 axial planar foliation. The priest pluton cross-cuts S2, but contains a weak S2-parallel magmatic foliation, suggesting late syndeformational emplacement. Early results show an S2-related west-side up shear fabric along the pluton boundary. Microstructurally, High aspect ratio grains suggest high temperatures, while grain boundary bulging and subgrain nucleation suggest lower temperatures and strain rates. Both are common in single thin sections, suggesting a complex, multi-phase deformational history. Also, textural variations in similar samples equidistant from the pluton suggest complex strain-rate curves, fluid distributions, or divergent post-pluton histories. Forthcoming monazite geochronology is essential in sorting out the timing of fabric development in the southern Manzano Mountains, and should increase understanding in crustal conditions at the time of pluton emplacement and the nature of the Proterozoic middle crust. However, these results already indicate an important, relatively late-stage deformation history during or after the cooling of the 1.42 Ga Priest Pluton.

191  CITYVIEW BALLROOM  1:40-3:40  BOARD 15
ELIZABETH SMITH (SHEILA SEAMAN), DEPARTMENT OF GEOLOGICAL SCIENCE, UMASS AMHERST, AMHERST, MA 01003

PALEOENVIRONMENT OF THE LOWER DEVONIAN EASTPORT FORMATION IN LUBEC, MAINE
The Eastport Formation in Lubec, Maine consists of interbedded volcanic and sedimentary rocks. Previous estimates of the age of these rocks are controversial (Gates and Moench, 1981). Only certain fossils of the sedimentary rocks, on which dating has been partially based, have been studied in detail (Berdan, 1970). This study is an analysis of both the volcanic and the sedimentary rocks to gain a better understanding of the paleoenvironment. Mineral assemblages were studied in thin sections of the volcanic rocks and x-ray fluorescence spectroscopy was used to determine major and trace element concentrations. Fossil suites were collected to provide further information about the depositional environment. The volcanic rocks consist of a bimodal suite of basalts and rhyolites, consistent with an environment of continental extension
Poster Session

and rifting. Major elemental analyses show the rocks to be slightly alkaline, which further supports an extensional tectonic regime in which melting of the upper mantle occurred beneath thick continental crust. Differing faunal assemblages in sedimentary rock localities present a complex environmental setting. Some of these faunas are characteristic of the Eastport formation, however some are characteristic of older formations, suggesting that some sedimentary units in the Eastport formation have been classified incorrectly. The varying assemblage of bivalves, gastropods, and ostracodes suggests a marginal marine environment, characterized by isolated smaller environments of differing salinities and/or water depths. The integration of geochemical studies of the volcanic rocks with the study of fossil assemblages in the sedimentary rocks indicates that the Eastport Formation was deposited in a dynamic setting of varying marine affinity, consistent with the development of extensional centers and small ocean basins in the Appalachian Mountains Acadian collisional belt.

INTERNATIONAL STUDIES

192 CITYVIEW BALLROOM 1:40-3:40 BOARD 10

AMANDA LEVESQUE (KRISHNA MALLICK), DEPARTMENT OF PHILOSOPHY, SALEM STATE COLLEGE, SALEM, MA 01970

IF YOU IGNORE IT, IT WON'T GO AWAY- THE NUCLEAR THREAT OF NORTH KOREA

The focus of this presentation is the impending nuclear threat from North Korea. An overview of current foreign relations will give a background for the presentation of the argument that North Korea is a viable threat to the United States and should be treated as such. Maps, timetables, and summaries of past agreements (and disagreements) will be used to show this point. The purpose of this individual research project is to inform the general public about the facts concerning this crisis so that they can have a better understanding of the world they live in and the threats that we face as citizens of the world.

193 CITYVIEW BALLROOM 10:00-12:00 BOARD 6

YANYU LI (DOUGLAS LARSON), DEPARTMENT OF ACCOUNTING, SALEM STATE COLLEGE, SALEM, MA 01970

DOING BUSINESS IN CHINA

China’s entry into the World Trade Organization (WTO) on December 11, 2001, has great significance for international business. The objectives of my study are to give potential investors an overview of doing business in China and to introduce pertinent features of Chinese culture, especially in light of its evolution and modernization. Consulting current Chinese laws and regulations, and consulting the professional literature, I show that China has been rapidly changing its legal, economic, and foreign trade policies since it opened its doors to foreign investors twenty years ago. Interviewing with an American teacher who taught in China provides an insight of Chinese current education system and potential education market. This work will benefit potential investors who must know the business environment, investment policies, trade opportunities and risks, as well as the human resources and culture of contemporary China. A lack of updated information or awareness of the speed of change in China will undermine the prospects of any business ventures there.

KINESIOLOGY

194 CITYVIEW BALLROOM 1:40-3:40 BOARD 67

JOSHUA NOTA (GARY KAMEN), DEPARTMENT OF KINESIOLOGY, UMASS AMHERST, AMHERST, MA 01003

MOTOR UNIT FORCE-FIRING RATE RELATIONSHIP IN YOUNG AND ELDERLY

Muscular force is regulated by central driven alterations of individual motor unit (MU) firing rate, as well as additional recruitment of other MUs. Previous studies indicate a sinusoidal relationship exists between MU firing rate and resultant muscular force. However, since aging places restrictions on the nervous system, the firing rate and force relationship in older individuals may be altered. This study could infer a link between age-related nervous system degeneration and the elderly’s struggle to maintain an independent quality of life. The purpose of this study is to investigate the relationship between a MU’s firing rate and the resultant muscular force in young and older individuals. Two younger female subjects (ages 18-22) were required to match a computer displayed force trajectory pattern by using varying degrees (0 to 60% MVC) of dorsiflexion. A three-channel needle electrode, inserted in the tibialis anterior, recorded intramuscular EMG during these ramp and hold contractions. Firing rate of individual MUs were analyzed using customized MU identification computer software. Of the 19 MUs analyzed to date, 12 began firing at 10% MVC, six began firing at 20% MVC, and one began firing at 30% MVC. Seven MUs fired through the entire contraction. Results to date indicate MU firing rate and force maintain a nonlinear sinusoidal relationship in younger subjects. For example, mean firing rate for a particular MU was 12.6 pulses/sec at 10% MVC, 23.6 pulses/sec at 20% MVC, and 38.2 pulses/sec at 30% MVC. Data analysis from experiments in older adults is pending. We expect to see noticeable differences in firing rate modulation in the older individuals, which would comprise evidence of an altered force-firing rate relationship with aging.
EVIDENCE OF PLATEAU POTENTIALS IN YOUNG AND OLDER ADULTS

It has been demonstrated in human neuronal cells that intrinsic properties, specifically plateau potentials, can cause self-sustained firing of motor units. It is well known that older individuals have difficulties in postural balance. Since plateau potentials may play a significant role in continued firing of postural muscles, it makes sense to study plateau potentials in older humans. The purpose of this study will be to examine the role of plateau potentials in young and older adults. The subject was first seated comfortably into a chair with their hip and knee set at 90-degree angles. The foot was positioned under a force transducer which measured dors/plantar flexion. The data was collected by inserting a 25 gauge needle into tibialis anterior (TA). The subject then dorsiflexed their foot and followed a computer generated force trace until a single motor unit was observed on the oscilloscope. At a given time, the muscle was vibrated using a muscle vibrator. The vibration then recruited a second motor unit that remained firing even after the vibratory stimuli was removed; thus displaying the actions of plateau potentials. This study will use 4 young adults (aged 18-30) and 4 older adults (aged 65+). Both male and female subjects will be used, and each subject will perform 15-25 trials. Preliminary results have shown that in 2 of 18 trials newly recruited motor units fired following the vibration stimulus (i.e., evidence of plateau potentials). Additional studies underway will attempt to determine the existence of plateau potentials in older adults.

THE DETECTION AND IDENTIFICATION OF INDIVIDUAL SOUNDS IN CONTEXT

How do you recognize what people say when they speak? How do you process the different sounds? Although a common sense answer might be that you hear each sound individually, one after the other and put them together to recognize whatever word they form, research shows that this is not the case. Rather, our perceptions of individual sounds are affected by those that surround it. For example, the detection and identification of one consonant in a cluster of two is strongly influenced by the other (Repp). This experiment examines specifically how an individual sound's context influences its detection and identification. Experimenters first recorded and spliced together vowel consonant syllables with consonant vowel syllables to create vowel consonant consonant vowel strings. Encoding these strings in a sentence, mixing them with different levels of noise to create stimuli, they presented these stimuli to native speakers for identification of the consonants. The expected results are that the first consonant will be less easily detected than the second. Also, the first consonant is likely to be mistaken to be similar or identical to the second consonant. The reverse will be true of the second it's likely to be mistaken as different from the first even if it's similar or identical to it (Repp). For example, otgo might be heard as odko. The conclusion to be drawn from these results is that even though the signal provides equally robust information about both the consonants, listeners still can’t identify one without taking its context into account.

SHORT CUTS SHORT FICTION JOURNAL

Short Cuts enriches UMass with the potent imagination of undergraduate fiction. Our journal provides an opportunity for all students to find empowerment in writing short fiction. It gives undergraduate short story writers the chance to have their work printed in a publication that celebrates the unique place of that genre. Short Cuts shares intriguing stories that might otherwise have remained stuffed in notebooks or lost among computer files. The dedication of our staff and the eloquent words of our writers make Short Cuts a powerful force in UMass-Amherst’s literary community. Not only does Short Cuts publish student work, it also unites undergraduates who learn about publication by taking active roles in the process. The staff works energetically to collect submissions, select stories, edit, collaborate with the printing house, and distribute the 500 free journals to the UMass community. Each year, our staff works toward the publication party and the Undergraduate Research Conference. The party gives our writers the chance to share their stories. Through the Undergraduate Research Conference, Short Cuts is introduced to the greater community of Massachusetts public institutions of higher education. It is through the beauty, passion, and heartfelt thoughts of stories that the diverse individuals that compose all communities come together.
ELIZABETH CASSIDY (SUSAN MARTELLI), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

JAMES JOYCE: THE EARLY YEARS IN DUBLIN
This visual presentation of James Joyce's early life will show timelines, maps, photographs, and anecdotes of Joyce's family, friends, education, and early career. As a young man and writer, Joyce strove to shed light on what he felt was wrong with Dublin life and society. He wrote about life in Dublin in a collection of short stories full of vivid imagery and symbolism. The themes of these stories range from the effects of adhering to the social and religious conventions of the time, to death and loss of innocence. Joyce wrote about subjects that society would rather not read about in the local newspaper, often causing delays in publishing his work. This collection of short stories, first published individually in newspapers, was written between the years of 1904-1907, and finally culminated in an anthology called “Dubliners”, published in 1914. Although the stories in “Dubliners” are fictional, the characters, scenes, and situations are based on Joyce's family, friends, and experiences growing up in Dublin. A visual correlation between Joyce's early years in Dublin and the lives of his characters in “Dubliners” will be presented.

MARKETING

EDGAR CONTRERAS NAJEEB BADAR, BRIAN M DURAND, SUN YEREN (SHARDA GUPTA), DEPARTMENT OF MARKETING, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

ENHANCING CUSTOMER SHOPPING EXPERIENCE: A CASE STUDY
In this paper, we apply our understanding of consumer decision making to analyze consumer-buying behavior at Stop & Shop. Diagnostic marketing research, using both primary and secondary data, is undertaken to identify creative and innovative ways to enhance customer-shopping experience at Stop & Shop. Finally, we recommend a brand new “Hot Spot” strategy for Stop & Shop to help them add customer value and cultivate long-term customer relationships.

LISA SIEMASZKO MICHELE BARAKO, ERIC G KOEHLER, NICOLE NESBITT .TRISH TEARNY ,VICKY VOLTATZIS, (NORA GANIM BARNES), DEPARTMENT OF MARKETING, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

SOUTHCOAST ECONOMIC DEVELOPMENT
The Southcoast Economic Development Partnership is looking to increase economic development in the Southcoast Massachusetts region. This region includes communities from I-195 to the Cape Cod Canal. The method we used to conduct research is telephone interviews with presidents and CEO's of Northeast and National Companies. On average we have a response rate of 20%. It is our job to research which back-office operations (data process, reservation centers, call centers, and telemarketers) in the Northeast region, along with National hotels and resorts, financial services, and insurance companies that would be willing to expand into the Southcoast area of Massachusetts. We have found that roughly 10% of companies contacted from the Northeast would consider expanding into Southeastern Massachusetts. In addition to finding out whether various companies want to expand, we are also finding out which factors they consider to be most important when considering a new location. Some of the most important factors for these businesses are cost and availability of labor, telecommunications infrastructure, and proximity to markets. In conclusion, through this research we intend to give the Southcoast Development Partnership a better understanding of what companies would like to have emphasized in this area. Our results will give them a better focus in targeting customers.

MATHEMATICS & STATISTICS

BYRON SIMMONS (KIM HICKS), DEPARTMENT OF ENGLISH, HOLYOKE COMMUNITY COLLEGE, HOLYOKE, MA 01040

AREA UNDER A CURVE
The Problem: Consider the curve C with equation y=x cubed. Choose an arbitrary point P on the graph of C and let the coordinates of P be (p,p cubed). Let L be the tangent line to C at the point P. If one extends this line it will intersect C in another point, say Q. Denote the coordinates of Q by (q, q cubed). We will investigate and establish a relationship between the area between the area bounded by the x axis,
the curve $C$ and the vertical lines $x=p$ and $x=0$, and that bounded by the curve $C$ and the vertical lines $x=q$ and $x=0$. If possible, we will extend this result to an arbitrary curve and also generalize the result to other odd degree power functions such as $f(x)=x$ to the fifth.
MICROBIOLOGY

GROWING UP ON ACID AND HEAVY METAL: GROWTH CURVE EXPERIMENTS WITH ACIDOPHILIC HEAVY METAL ENRICHMENTS

Horizontal gene transfer is the exchange of genetic material from one species to another. In environmental settings, the role of genetic exchange is not yet fully understood. Davis Mine, an abandoned pyrite mine located in Charlemont, Massachusetts, serves as the model environment to conduct a study on this phenomenon due to its low bacterial diversity. Organisms isolated from the mine’s two locations, the green biofilm and the main shaft pond, are under constant selective pressure based on the low pH and the high concentration of heavy metals. The hypothesis is that because genes for heavy metal resistance are carried on plasmids, isolates from Davis Mine can be characterized in order to examine similar plasmids across species. Enrichments have been prepared in heavy metal concentrations of 2mM Cd, Cu, Ni and 50mM Zn. Growth curve experiments were conducted in order to determine the minimum inhibitory concentrations (MIC). The resulting MIC show enrichments from Davis Mine growing at significantly higher concentrations than those tolerated by Escherichia coli with the exception of Cu. Further work includes the identification of gene cassettes such as czc and ncc and the isolation of plasmids.

MULTIMEDIA

THE TRIAD BOILERPLATE - DEVELOPING A REUSABLE SOFTWARE BASE FOR INTERACTIVE MULTIMEDIA PROJECTS IN LINGO

By identifying key components of multimedia projects and careful use of Lingo, the native programming language for Macromedia Director and Shockwave, techniques can be developed to create a boilerplate for multimedia projects that track a user’s input in real-time and support complex interactivity. This study examines the development of The Triad Boilerplate through three different projects and then considers development strategies for future versions. Endless Battle is a turn-based war game which implements a custom message handling system and a real-time system that controls some interactions and interface elements. Triad is an arcade style-puzzle game using a core engine that is streamlined from Endless Battle and expanded with a dynamic keyboard binding interface. Cow Wranglers is a Shockwave 3D game developed from a true boilerplate. The Boilerplate used for Cow Wranglers is the Triad engine with all of the Triad game-specific code and material removed from it. As a result of using this boilerplate, Cow Wrangler was produced and prototyped rapidly. The experience from the production of these projects has dictated that future development of the boilerplate will include refinement of the Lingo code and other key components, such as networking. While the three projects in this study were created in Director with Lingo, the key components of the boilerplate are not specific to Lingo but are portable into other multimedia languages, such as MacroMedia Flash ActionScript.

NURSING

PUTTING AN ABUSIVE PARENT BEHIND BARS

The purpose of this presentation is to convey the horrific reality of child abuse and educate health care professionals about the “red flags” of suspected abuse. Legal ramifications are discussed through a case example. In response to involvement in an actual case of child abuse, a literature review was conducted to gain a greater understanding of this phenomenon. This case was followed from the initial assessment to criminal prosecution. This case of child abuse began with the assessment of six-week-old Michael and ended in the conviction and incarceration of the perpetrator. The long-term medical complications this four-year-old now faces and the emotional and financial effects on the family are difficult to comprehend. Michael’s case reaffirms the importance of raising awareness of child abuse for health care professionals who can play a role in identification, intervention, and most importantly, prevention. Child abuse is a significant concern in society. The effects are devastating to the child, the family, and the community. Health care professionals can be educated to recognize the red flags and to potentially prevent abuse from resulting in chronic medical conditions or the death of an innocent child.
JENNIFER BENOIT (CHARLENE CAMPBELL), DEPARTMENT OF NURSING, SALEM STATE COLLEGE, SALEM, MA 01970

PASS IT ON: SEXUAL RISK-TAKING BEHAVIORS OF COLLEGE STUDENTS
Research shows an increased incidence of sexually transmitted diseases (STDs) among the college-aged population. By the age of 24, one out of three sexually active individuals will have contracted an STD, typically clamidia, genital herpes, or warts. We administered a voluntary survey to students on a college campus. Our initial hypothesis is that about 25% of those surveyed will have engaged in sexual risk-taking behaviors and, of these individuals, about one-third will report having contracted an STD. Our data, analyzed and compared to national statistics, is intended to be part of an effort to promote campus-based education in this area and make resources available.

GABRIELLA ERDOSY (STEPHANIE M. CHALUPKA), DEPARTMENT OF NURSING, UMASS LOWELL, LOWELL, MA 01854

CRITICAL REVIEW OF THE LITERATURE ON INDOOR AIR QUALITY
Indoor air quality (IAQ) has great importance as Americans spend 90% of their time indoors and one third of the people are exposed to poor air quality in the workplace. Along with conventional IAQ issues, the recently increased danger of biological and radioactive terrorist attacks adds to the significance of this problem. This critical review of the literature related to IAQ addresses the most serious risks of environmental exposure in order to develop methods to enhance public awareness and summarizes solutions for decreasing risks and improving IAQ. This literature review organizes its findings into several major groups. It describes different causative factors that trigger various health problems. It details ways to improve poor IAQ, including mathematical modeling, development of detection systems, design and planning. It outlines government regulations, publications and training materials that are essential to enhancing IAQ in the workplace. This paper also summarizes a new and very important side of IAQ: how government agencies assign high priority to research, prevention, detection and education related to biological and radioactive terrorist attacks. This critical review and organization of the current literature provide a blueprint for developing new teaching methods in order to improve public knowledge and awareness about IAQ issues.

KIRSTEN WRIGHT (KRISTEN SETHARES), DEPARTMENT OF NURSING, UMASS DARTMOUTH, N. DARTMOUTH, MA 02747-2300

THE COGNITIVE STATUS OF ELDERS ON A REHABILITATION UNIT
Confusion has a sudden onset, is difficult to assess, and leads to a greater risk of falls and other preventable injuries (Neelon, Champagne, McConnell, Carlson and Funk, 1992). It is estimated that 24-80% of patients are confused during hospital stays. The purpose of this study was to describe the cognitive status of clients on a rehabilitation unit in a community hospital. The sample included 28 clients with a mean age of 77 years and multiple diagnoses. Data was collected using the Neecham Confusion Scale during shift assessment by student nurses. The Neecham Confusion Scale evaluates physiological, cognitive, and affective indices and determines level of risk as minimal, moderate, or large. The mean score for the group was 27.4, with a range of 18-30, indicating normal function. Seventeen percent of the individuals in this study were at risk for, or actually confused. All patients with a score less than 24, indicating mild or early acute confusion, were hospitalized with wounds resulting from immobility at home. These results indicate a need to assess the cognitive status of all patients, regardless of their admitting diagnosis, as confused individuals who are at greater risk for injury in all settings. The evaluation of actual or potential confusion is an important part of nursing care.

DEREK BENOIT (ROBERT STEEPER), DEPARTMENT OF BIOLOGY, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

MANAGING MODERATION: USING A MODERATION MODEL FOR POSITIVE LIFESTYLE CHANGES TO COMBAT OBESITY IN THE UNITED STATES
The type of lifestyle you choose to live is a very important decision that directly affects your quality of life. Positive lifestyle choices prevent certain sicknesses and even prolong your life. However, many Americans choose convenience over health, and this is causing a huge increase in the level of obesity in the United States. Inactive lifestyles appear to be the biggest culprit for these skyrocketing rates. Recently, a study conducted by the Centers for Disease Control found that of 11,631 U.S. high school students, grades 9 through 12, just 12.37 percent of the students engaged in 20 minutes of vigorous physical activity three or more times a week (Smith, 2000). It appears that physical activity has been replaced with passive entertainment, such as watching television or movies, or playing video games (Smith, 2000). Dr. Barry Franklin states that the real problem is that the escalating levels of obesity parallel our technology and our automated society; we've literally engineered physical activity out of our lives (Good Morning America, 2002). There are a variety of proposals that have been introduced to
help Americans take control of their increasing waistlines, but very few that offer realistic expectations. The truth is we need a program that allows people the freedom to find their own balance. My proposal does just that, and is based on a theory called Moderation Management. Historically, Moderation Management was developed to treat people with problems with alcohol. I will take this theory and relate it to other areas of life such as nutrition and fitness to argue that obesity can be controlled by putting control back into the hands of people without altogether denying them the foods they love.

NUTRITION & FOOD SCIENCE

212 CITYVIEW BALLROOM 1:40-3:40 BOARD 66

ELIZABETH KOBS (WILLIAM MILLER), DEPARTMENT OF COMMUNITY OR PUBLIC SERVICE, UMASS AMHERST, AMHERST, MA 01003

HOW EFFECTIVE ARE NUTRITION NEWSLETTERS?
Newsletters are a popular method of providing information to the general public, primarily because they can reach a large population quickly and easily. The impact of newsletters as an educational tool is not often clear or proven. “The Pumpkin Post”, created by UMass Extensions Nutrition Education Program provides nutrition information to parents as part of a statewide effort to enhance the health and nutrition of food stamp recipients. This research will assess the impact of the newsletter for individuals who receive it and their families. Self-report questionnaires will be distributed in the March edition of the newsletter to parents whose children participated in preschool nutrition education classes. Children will return parent questionnaires to their teachers. Individuals will respond to a variety of questions concerning the extent to which they read and value the newsletter as a source of nutrition information and whether they have changed their food and nutrition habits as a result. The results of this assessment will be shared with the creators of the newsletter and the Director of the Extension Nutrition Education Program. It will inform design and dissemination strategies for future newsletters and will also serve to educate Extension Nutrition Education Programs in other states regarding the potential for newsletters as an educational supplement to preschool nutrition classes.

213 CITYVIEW BALLROOM 1:40-3:40 BOARD 74

MARY REBAL (MARILYN ABERNETHY), DEPARTMENT OF NUTRITION & FOOD SCIENCE, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA

OSTRICH AND BUFFALO MEATS AS BEEF ALTERNATIVES
The purpose of this research was to determine if ostrich and buffalo can satisfactorily serve as beef alternatives when nutrition and sensory characteristics are considered. Two experiments were performed, with three variables in each. The first experiment consisted of one 50%beef/50%buffalo, one 50%ostrich/50%beef and one 100% beef meatloaf all produced from a standardized recipe. The amount of ostrich and buffalo meat was increased to 75% in the second experiment with the 100% beef meatloaf remaining the control. A trained six-member sensory panel was used to evaluate the meatloaf samples. Data was also collected on drip loss and nutrient composition. At fifty percent substitution for beef, buffalo was virtually undetectable and even preferred over the one hundred percent beef sample. The ostrich sample scored a compiled mean of (4.12+0.83/5.00). This was the only data that was calculated to have a statistically significant difference, p<0.01, when compared to the all beef sample at a compiled mean of (4.58+0.64/5.00). Results from personal preference questions were inconclusive as well. Nutritionally, buffalo and ostrich contain higher quality nutritional characteristics than beef. The buffalo and ostrich meatloaves both contained lesser amounts of calories, fat, saturated fat and cholesterol and a higher protein content than the beef meatloaf in experiments one and even more so, as the percentage of substitute was increased in experiment two. A future study with a larger number of participants, and a representative sample of meat-eating consumers would yield higher-quality results.

PHARMACY & PHARMACOLOGY

214 CITYVIEW BALLROOM 10:00-12:00 BOARD 64

JEREMIAH FARELLI (JERROLD MEYER), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

EFFECT ON BDNF CONCENTRATIONS IN NEONATAL RAT BRAINS AFTER MDMA ADMINISTRATION
The drug 3,4-Methylenedioxymethamphetamine (MDMA, Ecstasy) is an increasingly popular drug in the United States and across Europe. Use of MDMA in teens and young adults occurs commonly in the context of rave parties, and the frequency of acute MDMA side-effects (such as hyperthermia, organ failure, coma, and death) have been linked to drug use under conditions of dehydration, high temperature, and the extensive strenuous dancing typically experienced at raves. Recent studies have shown that MDMA damages serotonin (5-HT) fibers in the brains of rats after administration. Studies have also shown an extended reorganization of serotonergic axonal fibers following developmental
MDMA exposure in various areas of the brain. Neurotrophic factors such as brain derived neurotrophic factor (BDNF) may be responsible for this. In this study, we are looking at the concentrations of BDNF in the striatum, hippocampus, and visual cortex following developmental MDMA exposure in rats. We expect to find higher than normal concentrations of BDNF in areas of the brain where reinnervations of 5-HT fibers occur. The study should be completed by May of 2003.

PHILOSOPHY

215 CITYVIEW BALLROOM 1:40-3:40 BOARD 13

JOAN HAWES (KRISHNA MALLICK), DEPARTMENT OF PHILOSOPHY, SALEM STATE COLLEGE, SALEM, MA 01970

PRESIDENT BUSH WANTS TO REWRITE ENVIRONMENTAL LAWS

Environmental laws and protocols, such as the well-known Endangered Species Act of 1973 that protects species threatened with extinction, are intended to protect the earth. What is the status of environmental policy in 2003 under the current administration? Using information taken from a variety of print and media sources with a specific focus on President Bush’s plans to rewrite the Clean Air Act, this researcher argues that current policy promotes the interests of industry at the expense of the environment. The thesis is advanced that administration policies favoring special-interest groups, as evidenced by proposed legislation, will lead not to environmental gains but rather to environmental damage.

216 CITYVIEW BALLROOM 1:40-3:40 BOARD 50

DAVID ROTHAUSER (KEVIN KLEMENT), DEPARTMENT OF PHILOSOPHY, UMASS AMHERST, AMHERST, MA 01003

INTERACTIVE REASONING SOFTWARE: TEACHING THE SYNTAX, SEMANTICS AND ALGORITHMIC PROCESSES EMPLOYED IN PROPOSITIONAL LOGIC

My effort to understand the relationship between logic, computers, and the limits of computability has resulted in the creation of a logic calculator. The pedagogical applications of the project are twofold; it will serve as a learning tool for both introductory and advanced logic students. In order to discover, for certain statements, whether they must be true, cannot be true, or are true under some but not all possible conditions, one can examine all of the different possible truth-values of a statement’s simple parts. Beginning logic students are taught to do this by drawing truth tables. The Interactive Reasoning Software will aid in this activity, and by alerting students of wrong answers while they fill in the values of the tables, the IRS will help students develop valuable intuitions about the relationships between the basic logical operators. The interface of the calculator teaches the proper syntax of propositional logic by only allowing certain buttons to be pressed after others. The code will be made available for advanced logic students to study the inner-workings of the calculator in order to understand more deeply the algorithms we employ to make certain kinds of decisions.

PHYSICS

217 CITYVIEW BALLROOM 10:00-12:00 BOARD 36

ROBERT AQUADRO (PAUL VOSS), DEPARTMENT OF GEOLOGICAL SCIENCE, UMASS AMHERST, AMHERST, MA 01003

UPPER ATMOSPHERIC TEMPERATURE MEASUREMENT

Temperature plays a pivotal role in our understanding of meteorology, chemistry, and climate. Air temperature measurements are especially difficult at higher altitudes where low air density and intense radiation can produce systematic errors. This research focuses on developing a new method of measuring air temperature at high altitudes. We develop a new air-temperature sensor that is capable of sampling uncontaminated air away from the bulk instrument while minimizing the undesirable effects of solar radiation and probe conduction. This device, an orbiting sensor, is capable of scanning through a wide range of velocities, allowing the effects of radiation to be estimated and corrected for in the estimation of true air temperature. We analyze the thermodynamic, fluid dynamic, kinetic, and electrical properties of this orbital temperature sensor, and show it to be a robust design. A planned intercomparison of our sensor and a standard ground-based meteorological station are discussed. In conclusion, we demonstrate the feasibility of a new orbiting air-temperature sensor. Preliminary analysis suggests that the system is robust and suitable for both ground-based and balloon-based measurements.
TOTAL INFORMATION AWARENESS AND HUMAN PRIVACY

The ethical dilemma created by the Pentagon's Total Information Awareness program (TIA) and similar systems presents a direct conflict between the basic human right to privacy and the right to safety, and is not easily resolved. TIA intends to record every financial transaction in the United States. Although initially rejected by the Senate, it remains very much alive, receiving around $30 million in funding in 2003. This program is intended to track terrorists. However, many feel that it poses a grave risk to American privacy, and some critics question the credentials of its architect, Admiral Poindexter. As more and more private information becomes accessible through computers, the role of government in regulating or using personal data will become increasingly crucial. A brief overview of these programs and the questions they raise will be presented.

MASSACHUSETTS INDEPENDENT VOTERS: THE MIDDLE OF THE ROAD OR A DIFFERENT HIGHWAY?

While party politics have dominated American government during the twentieth century, a recent trend in the number of voters unaffiliated with one of the major parties has led political scientists to wonder what role independent voters play in elections. By examining independent voters in Massachusetts (a state with traditionally strong ties to the Democratic Party) the outcome of state elections are better understood. Questions that will be examined include such issues as: Where are these independent voters? What issues motivate them? And why are these voters not enrolled in a Party? Through statistical analysis of voter registration records and public opinion polls, Massachusetts state elections will be examined in terms of the independent voters who make up almost 50% of the electorate. Particular attention will be paid to the 2002 gubernatorial election.

MALE AND FEMALE COLLEGE STUDENTS’ PERCEPTION TOWARD THE ACCEPTABILITY OF ABORTION

For many years, abortion has been a highly controversial and political issue. Although there has been much research done on abortion, there has been limited research on the moral acceptability and guilt of abortion. This study was conducted to investigate college student attitudes regarding the moral acceptability and perception of guilt following an abortion. Participants in this study were presented with scenarios depicting a pregnancy that would interfere with career, a pregnancy as result of a rape, and a pregnancy that suffered from a severe fetal abnormality. The study also examined the differences between men and women’s perception of guilt of a scenario character. The sample was from a small New England College. The participants of the study were 90 males (49%) and 93 female (51%) college students. Forty-eight percent of participants were 18-20 years old, 38% were 21-25, and 14% were over 25 years old. The F&S morality scale was developed to examine moral acceptability as well as guilt perception. A preliminary result of the two-way ANOVA's indicated no significant differences of moral acceptability or guilt attributions between scenario circumstances or sex of participant. We concluded that one's opinion of abortion does not vary among men and women or due to life circumstances.

GENDER AND TASK MOTIVATION: THE VALUE OF VROOM’S VALENCE-INSTRUMENTALITY-EXPECTANCY THEORY FOR COLLEGE STUDENTS IN A UNIVERSITY SETTING

This research examines Vroom's (1964) Valence-Instrumentality-Expectancy (VIE) model of motivation. This multiplicative model requires that each of three variables (valence, instrumentality, expectancy) be high in order for task motivation to be high. Valence refers to affective orientations toward particular outcomes; expectancy refers to the degree to which a person believes her preferred outcomes to be probable, and instrumentality taps whether a person believes that one outcome will lead to other desirable outcomes. Much previous research has tested this model using a gender-biased sample, often ignoring the female workforce. In my research I feel it is important to examine the effects of Vroom's variables on women because their visibility in the workplace is increasing. To investigate Vroom's Theory, participants were
asked to complete 15 questions from the analytical section of the Graduate Record Exam under one of eight randomly-assigned conditions which reflected high and low levels of each of Vroom's three variables. Participants predicted their performance before the test and rated their confidence and motivation both before and after the task. Consistent with Vroom's Theory, preliminary results confirm that participants performed best on the test when instrumentality, valence, and expectancy were all high. Specifically, regardless of expectancy (high or low), women performed equally well, whereas men performed better under high than low expectancy conditions. These gender differences demonstrate that there are discrepancies in task motivation among males and females as demonstrated by Vroom's model.

**222 CITYVIEW BALLROOM 1:40-3:40 BOARD 62**

**JANINE ARMSTRONG (ALICE CARTER), DEPARTMENT OF PSYCHOLOGY, UMASS BOSTON, BOSTON, MA 02125**

**THE ROLE OF SOCIAL SUPPORT FOR HIGHLY STRESSED FAMILIES**
Understanding the role of social support for highly stressed families could influence the approaches clinicians use to assist such families. This study examines the role of social support for parents experiencing high and low levels of stress. Several aspects are addressed: the quality of their parenting, the well-being of the parents, and the problem behavior of their children. The subjects were recruited as part of a larger project called The Connecticutt Early Development Project. The parents of children who were between 12 and 36 months of age (n=1280) filled out questionnaires which included the Life Events Inventory (LEI), the Parenting Stress Index Short Form (PSI/SF), the Beck Anxiety Inventory (BAI), the Center for Epidemiology Depression Scale (CES-D), and the ITSEA Competence and Total Problem scale. These questionnaires were filled out on two occasions, approximately one year apart. Pearson correlations will be used to analyze the relationship between variables. Also, linear regression analyses will be used to determine what accounts for the variance between year one and year two. Results of this study may help determine if social support plays an important role for families experiencing high levels of stress.

**223 CITYVIEW BALLROOM 1:40-3:40 BOARD 33**

**JANE BRUCE (T. BRIDGETT PERRY GALVIN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702**

**COLLEGE STUDENT’ PERCEPTIONS OF BINGE DRINKING**
In recent years the increase in binge drinking by both underage and college age students has received much attention. Tragedies resulting from binge drinking have included increased numbers of traffic fatalities, accidental alcohol poisoning, and accidental deaths at fraternity functions. Due to the seriousness of the consequences of this behavior, this study was designed to examine college students’ perceptions of binge drinking. Participants included 180 college student volunteers who read one of three scenarios portraying a party atmosphere with a college student engaging in a different level of drinking in each scenario. The students completed measures assessing their perceptions of the scenario character's alcohol use, their own alcohol use, problems they have experienced due to alcohol, and their perceptions of their friend's and family's alcohol use. Results showed that, compared to men, women anticipated positive outcomes regardless of alcohol consumption and their own alcohol use. Influences and perceptions of binge drinking by college students are discussed.

**224 CITYVIEW BALLROOM 1:40-3:40 BOARD 56**

**HEATHER CONLAN (T. BRIDGETT PERRY GALVIN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702**

**PERCEPTIONS OF BLAME TOWARDS SUICIDE**
To examine perceptions of suicide, 233 college students (111 men) completed a survey packet containing one of four scenarios and questions assessing blame. The scenarios represented a young/old and male/female suicide victim. Results suggested that women showed more empathy towards the suicide victim than men. Although women feel more empathy for the victim, there was no distinction between women and the age of the victim. In addition, women did not appear to place blame on the family of a young suicide victim any more than men. However, findings revealed a trend suggesting both men and women placed more blame on the older suicide victim than the younger suicide victim. Additionally, it was found that people who had high self-esteem were less likely to participate in risk-taking behavior. Implications for future research on the perceptions of blame for families and support networks are discussed.

**225 CITYVIEW BALLROOM 1:40-3:40 BOARD 35**

**ERIN COTE (ANNA FLANAGAN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702**

**THE PERCEIVED EFFECTS OF LOCUS OF CONTROL ON ACADEMIC ACHIEVEMENT, STRESS, ANXIETY, AND DEPRESSION OF LATE ADOLESCENTS**
Large amounts of research have shown that people with an internal locus of control perform better in school and have better overall physical health than people with an external locus of control. Internals have also been associated with less stress, less anxiety, and less depression. People with an internal locus of control believe they possess control over their life. Conversely, people with an external locus of control believe that luck or powerful others control their life. The objective of this study was to examine college students’ perceptions of internal and...
external scenario characters’ stress, anxiety, and depression levels. Participants (n = 180) were 59 men and 129 women. Students took the Personal Efficacy subscale of a locus of control measure and the Perceived Stress Scale. They also read one of six scenarios that were manipulated for grade point average and locus of control. Participants completed the Depression Anxiety and Stress Scale according to their perceptions of the scenario character. Results revealed that participants rated external scenario characters to be more stressed, more anxious, and more depressed than internal scenario characters (all ps < .03). Participants also rated scenario characters with a D average to be more depressed than characters with an A or B-/C+ average. There was no significant interaction between the two manipulated variables. There was a moderate correlation between participants’ level of stress and their locus of control ($r = -.35$, $p < .05$). Specifically, the more stressed participants were, the more external they rated themselves.

**PSYCHOLOGY**

226  CITYVIEW BALLROOM  1:40-3:40  BOARD 24

**NATALIE DEED** (ROD KESSLER), DEPARTMENT OF ENGLISH, SALEM STATE COLLEGE, SALEM, MA 01970

**METCO OR NO-GO: A STUDY OF RACIAL IDENTITY, SELF-ESTEEM, AND ACHIEVEMENT**

This study compares and contrasts two groups of inner-city African-American high school students. One group consists of students in the METCO program, a program that busses Boston inner-city youth to predominately white suburban schools. The second group consists of students enrolled in a Boston public school that is predominately African American. Students in both groups complete scales measuring racial identity, self-esteem, and attitudes toward academic achievement. The data contribute answers to these questions: (1) Is racial identity stronger among African-Americans attending majority-black schools? (2) Is racial identity correlated with attitudes toward academic achievement? (3) Are there links between self-esteem, racial identity, and attitudes toward academic achievement?

227  CITYVIEW BALLROOM  1:40-3:40  BOARD 36

**BRIGITE DOSSANTOS** (T. BRIDGETT PERRY GALVIN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

**COLLEGE STUDENTS’ ATTITUDES TOWARDS MENTAL ILLNESS AND PSYCHOLOGICAL HELP-SEEKING: THE EFFECTS OF PRIOR EXPOSURE AND KNOWLEDGE**

Research has shown that people with mental illnesses and people seeking psychological services are stigmatized and rejected by society. This study was designed to examine attitudes toward depression and psychological help-seeking and to determine the relation between these attitudes and prior exposure to mental illness and counseling. Participants included 136 college students who were assigned to read one of four scenario conditions. The scenarios depicted a student as either displaying the symptoms of major depression or the behaviors of sub-clinical academic troubles. In addition, the scenario characters were either seeking therapy or dealing with the problems alone. Participants completed a measure of acceptance of this character, along with measures of prior exposure to and use of professional therapy and attitudes toward therapy. Results showed that non-depressed characters and characters seeking therapy were more favorably evaluated in respect to likelihood of future success, quality of relationships and general personality traits and characteristics. In addition, prior exposure to therapy was positively associated with positive attitudes towards seeking psychological help. Possible implications of these findings are discussed.

228  CITYVIEW BALLROOM  1:40-3:40  BOARD 48

**ERICA FLEMING** (ANNA FLANAGAN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

**PERCEPTIONS AND BLAME ATTRIBUTION OF RAPE IN RELATION TO SEXUAL ORIENTATION AND ALCOHOL CONSUMPTION OF SCENARIO CHARACTERS**

Many risk factors have been investigated in relation to rape of women; two such factors are alcohol consumption and sexual orientation of the rape victim. No studies have looked at risk factors for male rape victims. The purpose of this study was to investigate perceptions of male rape victims of various sexual orientations and levels of alcohol consumption. Surveys were given to 180 (44 male and 136 female) undergraduate students with a mean age of 22 (SD = 2.98). The independent variables in this study were: sexual orientation of the scenario character (three levels: homosexual, heterosexual, bisexual) and alcohol consumption of the scenario character (two levels: sober, intoxicated). Participants were assigned to read one of six scenarios and were then given scales measuring perceived trauma of the scenario character. In addition, participants completed measures regarding their rape myth acceptance and attitudes toward homosexual persons. The researcher found that participants perceived different levels of disclosure shame for the three sexual orientations. Specifically, heterosexual victims were perceived to experience significantly more shame than bisexual victims. No significant difference was found for levels of alcohol consumption, and no interaction was found. A strong correlation ($r (180)=.50$, $p = .01$) was found for participants’ rape myth acceptance and participants’ attitude toward homosexual persons. Specifically, participants with high rape myth acceptance reported high levels of intolerance toward homosexuals.
INTERACTIONS BETWEEN CONSCIOUS & UNCONSCIOUS MEMORY IN THE HUMAN BRAIN

This study evaluated interactions between implicit and explicit memory on a recognition task. Three experiments were performed with 8 subjects in each; the second was a precise replication of the first. Subjects completed two encoding tasks. The first encoding task, meant to induce repetition priming, required subjects to study words under conditions meant to minimize explicit memory for those words. Subjects then studied a new list of words (half of which had appeared in the first task) under standard encoding conditions. In a recognition test for words presented in the second task, subjects were presented with all words previously encountered and an additional set of baseline words. Priming is demonstrated by decreased response latency for words appearing in the first task. A recall test, immediately following the recognition test, confirmed that subjects had minimal explicit memory for words appearing in the first task; most subjects could not recall any of the words. In a third experiment, neural correlates of the effects shown in the recognition task were evaluated using fMRI. The neural correlates implicated are consistent with previous studies of repetition priming and further substantiate the validity of the design. The results indicate that conscious and unconscious forms of memory interact, that recognition tests reflect the combined effects of both forms of memory, and that this interaction can be seen at both a behavioral and neural level. The results support memory systems theory and a process-reinstatement model of priming.

PRENATAL COCAINE EXPOSURE AND THE RESULTING ALTERATION OF THE STRESS RESPONSE SYSTEM: A PRECLINICAL INVESTIGATION OF THE ROLE OF GABA

Exposure to cocaine in utero produces alterations in the behavioral and neurochemical stress response system rendering a child incapable of effectively reacting to stress in adulthood. The present study attempts to examine how prenatal cocaine-exposed rats respond to acute stress exposure and the gamma aminobutyric acid (GABA) antagonist picrotoxin. Treating normal adult rats with picrotoxin should lead to an increased activation of the stress response system so that the animal would appear more stressed. Rat pups were born to dams in one of two treatment groups, saline or cocaine. The pups were housed in pairs and given free access to rat chow and water. The behavioral testing involved observation in an open field apparatus and an elevated plus maze, and both in combination with a forced swim separately. Each assessment also included injections of a high and low does of picrotoxin and saline utilizing a Latin Square Design. The resulting neurochemistry is explored after the last day of assessment in the elevated plus maze using a c-fos stain for immunocytochemistry. Studying the neurochemical/behavioral effects of stress on prenatal-cocaine exposed rats leads investigators closer to pinpointing the specific mechanisms damaged while positing avenues of possible pharmacological interventions.

SEXUAL HARASSMENT AND JURY DECISION-MAKING: THE EFFECTS OF INADMISSIBLE EVIDENCE AND GENDER OF THE JUROR

This study examined the influence of inadmissible evidence and participant gender on legal judgments of hostile work environment sexual harassment that involved either a female victim of male sexual harassment (typical case) or a male victim of female sexual harassment (atypical case). Despite the increase in atypical cases of harassment, most prior research has focused on typical cases. This leaves many questions unanswered about the extent to which findings from typical cases generalize to atypical ones. Two hundred eleven students read either a typical or atypical hostile work environment sexual harassment case and were exposed to critical case evidence that was ruled either admissible, inadmissible, or was not presented. After reading the case, participants made numerous legally-relevant judgments by completing questionnaires about the case. ANOVAs were performed to examine the extent to which case type, evidence admissibility, and participant gender influenced these judgments. Results reveal that regardless of participants’ gender, they judged atypical cases to be less severe and less pervasive than typical cases. On a ten-point Likert scale, in which ten was seen as more severe and pervasive than one, participants judged typical cases to be $X = 7.38$ and atypical cases to be $X = 6.23$ ($F(1, 199)=13.59$, $p<.01$). In addition, in both types of cases, evidence ruled inadmissible had the same impact as evidence ruled admissible, suggesting that participants were unable to discount this information when arriving at their judgments.
PSYCHOLOGY

232  CITYVIEW BALLROOM  1:40-3:40  BOARD 47

STEPHEN HOWLEY (T. BRIDGETT PERRY GALVIN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

CLOTHING AND THE PERSON: THE RELATIONSHIP BETWEEN PERCEPTIONS OF ACADEMIC ABILITY AND INDIVIDUAL STYLE OF DRESS

Recent literature suggests that people in the workplace often judge others’ potential for performance on a number of factors including their style of dress. However, little evidence exists that supports the idea that college students are aware of this bias in decision making. Given that these students will be entering the workforce upon graduation, it is important that they have some awareness of the importance of such issues as style of dress on how others perceive them. Therefore, this study was designed to examine student’s perceptions of their peers’ academic ability based on their style of dress. Participants included 126 college students who were randomly assigned to reading one of four scenarios depicting either a neatly or sloppily dressed male, or a neatly or sloppily dressed female. Survey questions then assessed the participants’ perceptions of academic ability of the scenario character and the character’s competence as a partner in a group project. Results indicated that a neatly dressed male was seen as more competent academically than a sloppily dressed male. Moreover, males were rated higher than females regardless of the female’s dress. Implications for future research investigating perceptions held by different majors and different age groups are discussed.

233  CITYVIEW BALLROOM  1:40-3:40  BOARD 44

WILLIAM KENNEDY (T. BRIDGETT PERRY GALVIN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

COMPARING PERCEPTIONS OF VIOLENCE IN ANIMATED AND FEATURE FILMS.

Historically, studies about perceptions of media violence have not compared people’s reactions to Animated versus Live-Action violence. The objective of this study was to examine both general reactions to the two types of violence as well as gender differences in perceptions of these two forms of media. Participants(n=110), 54 men and 56 women, were randomly assigned to view one of four film clips, which were 5 minutes long and contained equal number of acts of violence from either Animated or Live-action films. After viewing the film clip, participants completed a variety of measures regarding personal history, attitudes toward aggression, and levels of empathy. In addition they rated their levels of acceptance and offensiveness of the film violence. Results revealed that women find both forms of media violence more offensive than do men. When comparing the Animated to Live-action violence, both men and women found animated violence more offensive. In addition, participants who reported higher levels of empathy reported lower personal levels of aggression. Implications of findings are discussed relative to media violence viewed by children. Specifically, implications are drawn regarding the degree of influence and effects of viewing animated violence on children.

234  CITYVIEW BALLROOM  1:40-3:40  BOARD 51

ERIN KIVELL (SUSAN WHITBOURNE), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

COLLEGE ASPIRATIONS AND MID-CAREER ATTAINMENTS: A COHORT-SEQUENTIAL STUDY

The career aspirations and eventual professions of 241 men and women from two cohorts of college alumni (ages 31 and 42) were examined in relation to gender and the Psychological Well-Being Scale (PWBS) as part of a larger study of psychological development. Job aspirations were obtained when participants were in college and were rated according to the Dictionary of Occupational Titles (DOT) in terms of whether or not they matched actual attainments 10 and 20 years after college graduation. Contrary to prediction, age 42 participants whose job achievements matched their aspirations had lower scores on four of the six PWBS scales: Autonomy, Personal Growth, Positive Relations to Others, and Purpose in Life. A chi-square analysis of gender by match produced significant results and confirmed the hypothesis for cohort 3, but not for cohort 2. In cohort 2 women were just as likely as men to achieve their job aspirations formed in college. These data provide the first evidence on long-term career aspirations and achievements and their relationship to life satisfaction in middle adulthood.

235  CITYVIEW BALLROOM  1:40-3:40  BOARD 60

CYNTHIA KLUBNIK (BONNIE STRICKLAND), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

EFFECTS OF A SALIENT SELF-IMAGE AS A COMPASSIONATE PERSON ON HIV/AIDS RELATED STIGMA

The stigma attached to people with Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) can be detrimental to the recruitment of volunteers to work with infected individuals. The contact that occurs between these two groups is important because it can directly benefit people with HIV/AIDS as well as spread knowledge and awareness of the disease. For this contact to occur, the general public must be enticed to volunteer. The purpose of this study is to examine how the salience of one’s self-image as a compassionate person affects helping behavior directed towards a stigmatized group. College students at a large northeastern university will be asked to fill
out a survey and report whether or not they would be willing to participate in a program that required volunteering with a cancer (non-stigmatized) or HIV/AIDS (stigmatized) patient. Before deciding whether or not to participate, half of the subjects will fill out a questionnaire that requires that they respond to statements about their self-identities as compassionate people on a Likert scale. It is hypothesized that those participants in the compassion salient condition will be more likely to agree to volunteer than those in the control condition will. More specifically, it is hypothesized that participants who are given the opportunity to volunteer with HIV/AIDS patients will be more likely to do so in the compassion salient condition than in the control condition because the participant's self-image as compassionate will override the stigma associated with these patients.

**Poster Session**

<table>
<thead>
<tr>
<th>236</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 57</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KATHERINE LOMBARDO</strong> (ANNA FLANAGAN), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COLLEGE STUDENTS’ PERCEPTIONS OF RELIGIOUS PREJUDICE**

Recent world events have led to an increased awareness of religious differences. Within a particular religion, individuals’ religiosity can be defined by how much their religion impacts other areas of their life. Intrinsics are those for whom religion influences all aspects of their life, whereas extrinsics are those for whom religion is less influential in their life. Current research shows that Christians who are extrinsically religious are more prejudiced than those that are intrinsically religious. The present study asked 180 undergraduate students (138 women, 42 men) to read one of six scenarios which manipulated the scenario character’s religion (Buddhist, Christian, Muslim) and level of religiosity (intrinsic, extrinsic). Participants then answered questions about the scenario character’s prejudice toward other religions as well as completed personal measures of social desirability, religiosity, and prejudice toward other religions. The study suggested that people did not perceive a difference in prejudice levels of the three religions. It was found, however, that participants perceived intrinsically religious scenario characters as being more prejudiced toward other religions than extrinsically religious scenario characters (t(178)=4.81, p=.01). Further, it was shown that participants high in social desirability perceived scenario characters to be more prejudiced than participants low in social desirability (t(178)=2.10, p=.04). The participants’ levels of intrinsic and extrinsic religiosity were also investigated and will be discussed in relation to the participants’ levels of social desirability, perceived prejudice of the scenario character, and personal prejudice toward other religions.

<table>
<thead>
<tr>
<th>237</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 64</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHANNON MCCUMBER</strong> (SHANNON MCCUMBER), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**INFANT ARITHMETIC**

The purpose of this study is to attempt to replicate the results of Karen Wynn’s famous study concerning infants and their ability to do simple addition and subtraction tasks. In this study, 32 infants with an average age of five and a half months are separated into two groups. There is a subtraction group, where 16 infants will see the subtraction event of 2-1. The addition group of 16 infants will see the addition event of 1+1. In both groups of infants, half of them (8) see the correct answer to their mathematical problem and the rest see a wrong answer. This methodology was utilized because it needed to be an exact replication of Wynn’s original study and her methodology. In Wynn’s study, she found that the infants looked longer at the wrong answers to their problems than the correct answers. Thus, she concluded that the infants possess some sort of ability to understand simple numerical concepts. We hope that our results will mimic those of Wynn’s due to the fact that we used her exact layout and methodology in our application of the experiment. In our replication of this study, we have yet to finish analyzing the data, thus our conclusions are not yet known. Hopefully when the results are tabulated, our results will be similar to Wynn’s conclusions in her famous infant study.

<table>
<thead>
<tr>
<th>238</th>
<th>CITYVIEW BALLROOM</th>
<th>1:40-3:40</th>
<th>BOARD 58</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OLUWAFUNMILAYO OGUNBODEDE</strong> (ESTER SHAPIRO), DEPARTMENT OF PSYCHOLOGY, UMASS BOSTON, BOSTON, MA 02125</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PSYCHOSOCIAL ADJUSTMENT AND ACADEMIC ADAPTATION OF AFRICAN INTERNATIONAL STUDENTS IN THE UNITED STATES**

A significant number of African international students leave their country of origin in order to pursue educational opportunities. However, very few studies have been done on the adaptation of African international students in the United States. The purpose of this study is to identify the factors contributing to acculturation and acculturative stress, and to measure their impact on the psychosocial well-being of these students. The sample consists of 114 students from sub-Saharan countries who maintain citizenship status in their native countries. These graduate and undergraduate students were recruited from public and private universities and community colleges in New England, Mid Atlantic, Midwest and Southern parts of the United States. The following self-report measures will be administered: African Student Questionnaire, Acculturative Stress Scale for International Students, the Acculturation Index, and College Adjustment Scales. This data will be analyzed using bipartite split, stepwise regression analysis, bivariate correlation, partial correlation and ANOVA. It is hypothesized that high levels of acculturative stress will be associated with low levels of psychosocial well-being; that strong endorsement of African cultural identity will be associated with higher levels of psychosocial well-being; that males will report significantly lower levels of acculturative stress and higher levels of psychological well being than females; and that those who endorse integration will experience less difficulty in psychological adjustment.
INTERPARENTAL CONFLICT AND DISRUPTIVE BEHAVIOR PROBLEMS IN PRESCHOOLERS

JENNA SIPPEL (ELIZABETH HARVEY), DEPARTMENT OF PSYCHOLOGY, UMASS AMHERST, AMHERST, MA 01003

Interparental conflict is associated with a number of different behavior problems. This study was conducted to try and identify how different conflict dimensions (frequency and severity) and conflict strategies (avoidance/capitulation, stonewalling, verbal aggression, physical aggression, child involvement, and emotional abuse) are associated with different behavior problems (hyperactivity, oppositional-defiance, and comorbid hyperactivity/oppositional-defiance) in preschool-aged children. It is important to identify factors that are associated with specific types of behavior problems in preschool-aged children, because such factors may contribute to understanding the development and prevention of these problems. It also tested conflict strategies as potential moderators of conflict frequency and severity. The parents of 104 types of behavior problems in preschool-aged children, because such factors may contribute to understanding the development and

TIP-OF-THE-TONGUE PHENOMENON: DO AGE AND GENDER PLAY A ROLE IN HIGHER LEVELS OF OCCURRENCE?

VALERIE PETERSON (TERESA LYONS), DEPARTMENT OF PSYCHOLOGY, SALEM STATE COLLEGE, SALEM, MA 01970

The Tip-of-the-tongue phenomenon (TOT) is known for its frustration-producing effects; it can be defined as the nagging feeling of knowing a word but not being able to retrieve it. In my study, older and younger participants of both sexes answered a brief TOT questionnaire before answering general knowledge questions to test their memory for this phenomenon. The purpose of this research was to find whether a person's age and sex affects the amount of TOT experiences. My hypothesis that older women would tend to have the highest frequency of such phenomena derives from my having encountered many women over the age of 55 who complain that they have more TOT's than do their male counterparts. Participants include 80 adults from the Boston North Shore: 20 males and 20 females ages 20-30 and 20 males and 20 females ages 55 and up. Also included are a discussion of results and their implications and a consideration of improvements in the design of future study.

BODY IMAGE, IDENTITY, AND AGING IN WOMEN

ALLISON SALVIA (ROBERT DONOHUE BROOKE SEBASTIAO), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

Although most research on female body image has primarily focused on younger women, several studies show that negative attitudes toward the body remain an important concern for women throughout their lives. The present research explores the relationship between age and body image in females. It also examines the differences in female body image between families and the relationship between female body image and identity. 50 Undergraduate females, their mothers, and their maternal grandmothers completed a 102 item questionnaire pertaining to body image and identity. The Multidimensional Body-Self Relations Questionnaire (MBSRQ) was used to get a complete assessment of the participant's body image. The Identity and Experiences scale (IES-G) was used to examine the participant's use of identity assimilation (not changing in response to age-related experiences), accommodation (changing in response to these experiences), and balance (using both assimilation and accommodation). Data have been collected from 30 undergraduates, mothers, and grandmothers, and the remaining 20 are currently being collected. It is predicted that there will be little relationship between appearance and weight related body image and age. However a positive relationship between health and illness related body image and age is expected. A positive relationship between the body image scores of daughters, mothers, and maternal grandmothers is also predicted. For identity processes, it is expected that participants who use a balanced approach will have the highest body image scores followed by participants who use assimilation. Participants who use accommodation are expected to have the lowest body image scores. We expect these findings to have relevance for understanding both how body image differs among generations of women and how body image is related to identity across the adult years.

PERCEPTIONS OF THE EFFECTS OF RESIDENTIAL STATUS AND SOCIAL ACTIVITIES ON ALCOHOL CONSUMPTION

FRAMINGHAM, MA 01702

Socialization has been shown to be positively related to alcohol consumption in college students. This study was conducted to determine whether the amount of social activities that college students attended was related to their drinking habits. One hundred twenty college students, with a mean age of 21.25 years, participated in a survey containing one of four scenarios depicting a college student who varied in residential status and social activity. Participants then completed scales asking questions about their perceptions of the scenario characters drinking habits as well as questions related to their own personal drinking habits. Results indicated a significant positive correlation between days per week students attended social activities that involved alcohol and days per week students attended any social activities. The value of assessing social activities of college students in relation to alcohol consumption is discussed.

BODY IMAGE, IDENTITY, AND AGING IN WOMEN

ALLISON SALVIA (ROBERT DONOHUE BROOKE SEBASTIAO), DEPARTMENT OF PSYCHOLOGY, FRAMINGHAM STATE COLLEGE, FRAMINGHAM, MA 01702

Although most research on female body image has primarily focused on younger women, several studies show that negative attitudes toward the body remain an important concern for women throughout their lives. The present research explores the relationship between age and body image in females. It also examines the differences in female body image between families and the relationship between female body image and identity. 50 Undergraduate females, their mothers, and their maternal grandmothers completed a 102 item questionnaire pertaining to body image and identity. The Multidimensional Body-Self Relations Questionnaire (MBSRQ) was used to get a complete assessment of the participant's body image. The Identity and Experiences scale (IES-G) was used to examine the participant's use of identity assimilation (not changing in response to age-related experiences), accommodation (changing in response to these experiences), and balance (using both assimilation and accommodation). Data have been collected from 30 undergraduates, mothers, and grandmothers, and the remaining 20 are currently being collected. It is predicted that there will be little relationship between appearance and weight related body image and age. However a positive relationship between health and illness related body image and age is expected. A positive relationship between the body image scores of daughters, mothers, and maternal grandmothers is also predicted. For identity processes, it is expected that participants who use a balanced approach will have the highest body image scores followed by participants who use assimilation. Participants who use accommodation are expected to have the lowest body image scores. We expect these findings to have relevance for understanding both how body image differs among generations of women and how body image is related to identity across the adult years.
children aged 38 to 50 months completed the Disruptive Behavior Rating Scale and the Conflicts and Problem-Solving Scales to get a measure of the child’s behavior and of marital conflict respectively. A number of significant mean differences between the four behavior groups and conflict strategies were found. Mothers and fathers of children with comorbid hyperactivity/oppositional-defiance reported using stonewalling and physical aggression conflict strategies with significantly higher frequency than mothers and fathers of children with no behavior problems. Fathers reported the same effect when using avoidance/capitulation, physical aggression, and child involvement strategies. A 2x2 ANOVA (Frequency X strategy) will also be conducted for each conflict strategy with the oppositional-defiant score on the DBRS as the dependent variable. If the effects of conflict frequency and severity are moderated by conflict strategy, this will have important implications for prevention, enabling parents to receive training on effective conflict resolution strategies.

243 CITYVIEW BALLROOM 1:40-3:40 BOARD 39

KARYN STAFFORD (MICHAEL MILBURN), DEPARTMENT OF PSYCHOLOGY, UMASS BOSTON, BOSTON, MA 02125

SEXUAL INTELLIGENCE AND SEXUAL RISK-TAKING BEHAVIOR IN A GAY, LESBIAN, BISEXUAL, AND TRANSGENDER SAMPLE

Previous studies have found that measures of sexual intelligence, a model of sexuality that incorporates cognitive, emotional, and social factors of sexuality, is negatively correlated with measures of sexual risk-taking behavior. This study investigates this relationship in a population of individuals identifying as gay, lesbian, bisexual, or transgender. Study participants are given questionnaires to measure their sexual intelligence, and their sexual experiences that have involved risk for sexually transmitted diseases or unwanted pregnancy. It is expected that the same negative correlation between sexual intelligence and sexual risk-taking behavior will be replicated among most participants to this study. However, differences are expected between this sample and previous predominantly heterosexual samples, due to such factors as long standing beliefs that the risks of transmission of sexually transmitted diseases between women are extremely low or negligible, different cultural norms and values regarding sexuality in some gay subcultures, and the burden of a stigmatized sexual orientation and lack of social support for same-sex relationships.

244 CITYVIEW BALLROOM 1:40-3:40 BOARD 32

MELISSA TOMEY (MICHAEL MILBURN), DEPARTMENT OF PSYCHOLOGY, UMASS BOSTON, BOSTON, MA 02125

THE EFFECTS OF NON-SYNERGISTIC MOTIVATORS ON CREATIVITY

Creativity is becoming more important for businesses success; companies need to create and innovate to stay on top. Studying the motivation behind creative behavior helps us better understand how to provide supportive environments that foster creativity. This study tests the effects of specific social environmental conditions on adults about to engage in open-ended problem solving. Two conditions will be created: one that restricts choice and one that provides information only. Undergraduate students from the University of Massachusetts Boston will be asked to fill out the Measurement of Interest and Experience and to “design a new theme park attraction” using Microsoft Word. The experimental subjects will be required to include certain elements such as describing how their attraction is safe. The control subjects will not be required to include such elements. A modified version of the Guttman self-esteem scale will be administered after the condition. Four independent judges will judge the creative products. The assessments will be made using the Consensual Assessment Technique. Multiple regression analysis will test the effect of the motivation manipulation on creativity scores, controlling for interest, experience and self esteem scores. The responses of participants with high interest but low self-confidence who are placed in the condition of restraint and lower autonomy are predicted to show lower creativity.

245 CITYVIEW BALLROOM 1:40-3:40 BOARD 61

ZACHARY WALDON (TIFFANY CUNNINGHAM), DEPARTMENT OF PSYCHOLOGY, UMASS BOSTON, BOSTON, MA 02125

ALTERATIONS IN THE GABAA SYSTEM DUE TO PRENATAL COCAINE EXPOSURE LEADS TO PROMINENT CHANGES IN STRESS RESPONSE

Many children are born exposed to cocaine in the womb. Studies have shown that prenatal exposure to cocaine causes children and adults to show difficulties later in life coping with unstructured settings and stressors. In this pre-clinical animal rodent model, pregnant dams were injected with cocaine hydrochloride for the equivalence of two trimesters, in equivalent amounts similar to those found in crack-addicted pregnant women. After weaning, the offspring were periodically stressed by forced swimming and their behavior was observed in an open field and in a tail-flick apparatus, both tests evaluating response to stressors. Looking at prenatal cocaine exposure, gender and the differing developmental phases throughout the life span as variables revealed conclusive and remarkable trends in the data. Focusing on specific pathways in the brain that deals with and regulates stress response, the GABAA system was manipulated with the antagonist, picrotoxin and with the agonist, muscimol. While not all of the data have been unveiled, there is strong evidence that the GABAA system is compromised by the prenatal cocaine insult. This new evidence of alterations in the GABAA system as a result of cocaine exposure in utero could lead to new treatments for stress responding in cocaine-exposed children.
COMPARISON OF FOUR GENERATIONS OF COLLEGE STUDENTS ON PERSONALITY DEVELOPMENT

College students are thought to be undergoing a period of intense personality and identity crises, as defined by Erik Erikson in his theory of personality development (1969). This study will examine cohort differences across four generations of college students at the same institution. The continuation of this study with University of Rochester students hopes to provide insight on personality development throughout four different cohorts of college students. The goal of this current project is to recruit and test another cohort for the study to learn more about the effects of social context on development. Recruiting a new cohort will lay the foundation for further investigation of Erikson’s (1969) theory of personality development. Erikson’s (1963) stages of personality are calculated by the Inventory of Psychosocial Development (IPD), which was developed to measure the first six stages of Erikson’s psychosocial theory. In this and in prior cohorts, the questionnaires were distributed in the Student Union of the University of Rochester in order to acquire enough participants. Two recruitment trips have been made in order to ensure an adequate number of participants.

COGNITIVE ABILITIES OF YOUNG CHILDREN WITH BEHAVIOR PROBLEMS

Researchers have found that children with ADHD show cognitive impairments compared to non-ADHD children. Children with ADHD display deficits in verbal abilities, mathematical abilities and motor coordination. While previous studies looked at these areas broadly, the current study looked at specific components of these abilities in preschool children who show difficulties with hyperactivity, aggression and/or inattention. The 175 children recruited by the Early Behavior Development Project were divided into 7 subgroups: hyperactive only, aggressive only, inattentive only, hyperactive/aggressive, hyperactive/inattentive, hyperactive/inattentive/aggressive and no behavior problems using parent reports of behavior on the Behavior Assessment System for Children (BASC). During assessments conducted in their homes the children were administered the McCarthy Scales of Children's Abilities. A series of one-way ANOVAs of 19 McCarthy subtests were performed to assess cognitive and motor ability difference across the 7 subgroups. For the significant ANOVAs a Tukey HSD test was done. As a result of these tests it was found that significant differences do exist in three of the McCarthy subtests. On the arm coordination subtest, a subtest measuring motor coordination, the inattentive only group performed significantly worse than the hyperactive only group, the hyperactive/aggressive group and the hyperactive/inattentive/aggressive group. On the Draw-a Design task, a subtest measuring both Perceptual Performance and Motor Coordination, both the aggressive only group and hyperactive/inattentive/aggressive group scored performed significantly worse than the control group. Lastly, on the Conceptual Grouping task, a subtest, which measures Perceptual Performance, both the aggressive only group and no behavior problem group performed significantly better than did the hyperactive/aggressive group and the hyperactive/inattentive/aggressive group. These results show that in most domains there are not significant cognitive and motor ability differences among preschool-aged children with different types of behavior problems or when compared to non-ADHD children. When differences do exist it seems that the children who show comorbid symptoms, those who are hyperactive, inattentive and aggressive show the greatest deficits. These results contribute to our

CHILD ABUSE: ACKNOWLEDGING RESILIENT SURVIVORS

Individuals victimized by child abuse, despite the sympathies their stories might evoke, are often stigmatized by society as irreversibly damaged or handicapped. Standards and expectations of these individuals are lowered, and they are stigmatized and typically expected to fail in many if not most aspects of life. Much research in this area, in line with society’s perspective, accentuates the damaging consequences of child abuse. This study, through background research on resilience and interviews with five victims of child abuse, will illuminate the possibilities for positive outcomes. Might survivors emerge with particular strengths, insights, capacities, and actual life successes? A sample of child abuse survivors with positive stories to tell is drawn from a pool obtained through a local social service agency, H.A.W.K., (Help for Abused Women and Children) and the Department of Social Services. Interviews are built around a qualitative, semi-structured instrument designed with enough flexibility to put respondents at ease. Results will potentially challenge the unrelentingly negative and often misdirected depiction of child-abuse victims, a depiction that unintentionally fuels societies’ prejudices against these individuals, potentially damaging them even further.
CHILDHOOD OBESITY

The number of children (ages 6 through 17) who are overweight (not caused by physiological, genetic or biological sources) increased substantially between 1986 and 1998, especially in African-Americans and Hispanics. By 1998, 21% of African-American and 22% of Hispanic children were overweight, compared to 12% of white children with the sharpest increase in boys and those living in southern states. Overweight is the most common health problem facing US children (approximately 10 million children are at risk or overweight). Data for adults suggest that overweight prevalence has increased by more than 50% in the last ten years. Data for children also suggest that the prevalence of overweight continues to increase rapidly. Child obesity has become such a problem to the extent that it is now considered an epidemic. It will take great effort from many sources like parents, family, community, health professionals, schools and public education to help our children live healthy and emotionally stable lives for now and for their future.

SOCIOLOGY

A COOK POND CARE GUIDE-PORTUGUESE TRANSLATION

Cook Pond has been a valuable historical, recreational and ecological resource for the City of Fall River, including providing power for Fall River’s first cotton mill. Unfortunately, various sources of pollution are impeding peoples’ abilities to enjoy these resources. The purpose of this project is to expand past educational and cleanup efforts on Cook Pond into the Portuguese community. These efforts to educate have focused primarily on education in English and have included the creation of a 22-page Cook Pond Care Guide and holding a community forum about the Pond. The author has created an initial Portuguese translation of the Cook Pond Care Guide, and will work with the directors of Bristol Community College’s Luso Centro and Natural Science Department, as well as members of Massachusetts Community Water Watch, to distribute copies of the translated Care Guide and to increase participation among politicians and members of both the English and Portuguese speaking communities. The author will also organize a bilingual community forum to take place on Thursday, April 24, which will further educate the community about Cook Pond. Through these efforts, the author will attempt to develop a methodology for educating diverse communities about environmental issues.

BRIDAL GUIDES AND THE MESSAGES THEY SEND: COMPARING AND CONTRASTING THEMES

The purpose of this project was to study bridal guides, and identify major themes and how they were presented similarly and differently in bridal guides geared specifically towards African Americans and bridal guides geared towards whites. This is an important topic because weddings are so central to our culture, and although the use of bridal media is widespread, it has not been widely studied. A content analysis of four popular bridal guides published between 1995-1998, two African American guides and two white guides, was conducted. Three major themes were tracked in the text: tradition/individuality, religious/secular, and family/friends. Quotes from the text that included the themes were analyzed to compare the differences and similarities between how African American guides and white guides dealt with these themes. Also analyzed and compared were the drawings and photographs in the guides. The bridal guides had many similarities, rather than differences, in how they presented the themes. All of the guides encouraged asserting one’s individuality rather than following tradition, presented religion as rigid and restrictive, and encouraged the exploitation of family and friends by encourage constant leaning on them for help. There were also some differences between the guides regarding the religious involvement of the bride and groom. The visuals, as well as text in all of the guides implied that whiteness is to be desired by all, and that western traditions (such as the white dress) are dominant.

“IMAGING PERFECTION”: THE SOCIAL CONTROL OF AMERICAN WOMEN THROUGH MEDIA IMAGES

Feminist scholars agree that magazines targeting women present images that are designed as mechanisms of social control that include, but are not limited to, encouraging excessive consumerism and projecting an unrealistic body image. This study was conducted to test that argument and to determine if these images produce a negative effect on women. Methods used are as follows: 1) A survey was conducted to evaluate the responses from women to images obtained from these magazines and the overall effect these magazines had on the women, 2) Research into feminist literature was used to identify the mechanisms of social control implemented in these magazines, 3) Image
an analysis of women's magazines was also used. These approaches allowed for a simple longitudinal study of the effects of media images on women. Study results are pending the analysis of the data. The study may show that advertising images manipulate consumerism in women. Additionally, they may produce psychological damage in women, such as: low self-esteem, anorexia, bulimia, or body dysmorphic disorder.

**SOCIOLOGY**

**253**  
**CITYVIEW BALLROOM**  
**1:40-3:40**  
**BOARD 55**

**CYNTHIA SANDEN, JOSHUA COLLETTE (THOMAS MALLOY), DEPARTMENT OF HISTORY, MOUNT WACHUSETT COMMUNITY COLLEGE, GARDNER, MA 01440**

**EFFECTS OF HIGH INCARCERATION RATES ON THE URBAN COMMUNITY**

In recent years, the United States has earned the distinction of having the highest rates of incarceration in the world. The impact of these high rates of incarceration falls most heavily on urban communities, and, as a result, African Americans and women, especially Hispanics, are disproportionately affected by these policies. Each group faces unique challenges because of these rates of incarceration, and this presentation will look at the social, political and economic effects on their communities, and more specifically, their families. Through the use of empirical data, interviews, site visits and research into alternatives to incarceration a comparison will be drawn between Massachusetts' urban communities and similar communities across the United States. Consequently, a heightened awareness of these disenfranchised groups will be gained, and it is hoped, a greater understanding of their plight will be realized.

**254**  
**CITYVIEW BALLROOM**  
**1:40-3:40**  
**BOARD 53**

**BRIDGET ST. PIERRE (LOUIS LABELLA), DEPARTMENT OF PSYCHOLOGY, NORHERN ESSEX COMMUNITY COLLEGE, HAVERHILL, MA 01830**

**NAZI EUTHANASIA**

In 1939, the Nazi party under the control of Adolf Hitler, in cooperation with many doctors throughout Germany, started and practiced the T4 or Euthanasia program in which they secretly murdered thousands of mentally and physically handicapped children. The program later expanded to include handicapped adults. This project examines the Nazi Euthanasia Program from beginning to end. Using library and internet research, many aspects of this program are covered and examined. First observed will be the rationale of the Germans around the 1930's and an explanation how earlier thinkers may have influenced toleration to such a practice. Next, there will be an explanation of the actual program. Topics discussed will include how the program was started, who was in charge, the bureaucracy behind the program, methods of murder, how the program became exposed and the public reactions that followed, how the program ended, and the program's aftermaths. The project ends with a brief explanation of the Euthanasia program that exists today in the Netherlands and how it compares and contrasts to the Nazi Euthanasia program.

**STUDIO ART**

**255**  
**CITYVIEW BALLROOM**  
**10:00-12:00**  
**BOARD 74**

**GERTRUDE MAGEZA (JOHN REEVES), DEPARTMENT OF SOCIOLOGY, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129**

**HIV/AIDS - HOW ELSE IT CAN AFFECT US**

This is the third decade that the world has lived with HIV/AIDS, and the impact is devastating. The focus of the disease has mostly been on the infection itself, but this study will focus on how HIV/AIDS affects those who are not infected but instead are affected by the disease. Half of the people infected by AIDS in the world are women who are traditionally the backbone of communities. This epidemic can rob households and communities of a livelihood. It fragments families all over the world. In some parts of the world families lose the ability to produce or afford food. It can jeopardize education and health systems, triggering migration, and devastating the plight of women and children around the world. In some communities as parents fall ill and die, family burdens shift to children. Young children who take on the responsibilities of adults can no longer go to school. History, culture and skills that are passed on from generation to generation for the survival of a people are threatened. With this study I aim to highlight the effect of HIV/AIDS in different regions in the world. The angle I have approached is not a medical one, as so much is available on AIDS as an infection. In this research based study I hope to bring alive the side of AIDS that is not so obvious, and that is the sociological effects on the people that do not have HIV/AIDS, but are having to live with it's effects.
VISUAL ARTS

256  CITYVIEW BALLROOM  10:00-12:00  BOARD 75

MELINDA AMARAL (DENISE DONATELLI), DEPARTMENT OF VISUAL ARTS, BRISTOL COMMUNITY COLLEGE, FALL RIVER, MA 02720

BLACK AND WHITE PHOTOGRAPHY
Creating a series of black and white photographs was a project undertaken as part of a black and white photography class. Portraits, landscapes, manipulations, self-portraits, and many other imaginative and creative photographs were taken with a 35mm SLR camera. Older photographs were taken with a Canon AE-1, and newer photographs with a Pentax ZX-M. All photographs were developed at the BCC lab using glossy or pearl finished paper.

257  CITYVIEW BALLROOM  10:00-12:00  BOARD 76

KELLY CARRICO (SUSAN MARTELLI), DEPARTMENT OF ENGLISH, MASSASOIT COMMUNITY COLLEGE, BROCKTON, MA 02402

FOLK ART IN SEVERAL MEDIUMS
This poster presentation is of six handcrafted folk art pieces in different mediums. In the style of Rosemaling, the cribbage board table and the game board are painted with acrylic on wooden surfaces. During the late 18th century a form of Norwegian folk art, Rosemaling, was developed in the countryside of Norway. This style of painting uses many shades of the primary colors. Another piece is a miniature wooden sea chest, which depicts a nautical theme using acrylic. Lighthouses decorate the sides and a large compass is painted on the lid of this piece. Two of the pieces are oil paintings on canvas. The first is of an oak dining chair with spring flowers in a vase on the seat and a hat hanging on the back. The second painting shows a perspective looking down a street in a Nantucket Island village. An American flag is hung next to the front door and spring flowers are in bloom. The final painting is of a desktop and the medium is oil on wood. On the desktop are books, a love letter, a glass vase with flowers, and a table lamp. This piece is a study of highlighting and shading techniques.

258  CITYVIEW BALLROOM  10:00-12:00  BOARD 73

ANA PALACIOS (COURTNEY MCGLYNN), DEPARTMENT OF VISUAL ARTS, BUNKER HILL COMMUNITY COLLEGE, BOSTON, MA 02129

COMMUNICATION DESIGN BROCHURE
Every school has to present itself with a brochure in order to attract prospective students to its programs and facilities. The piece should present in a small format, what is it that makes this school better or more appropriate to the student than others. The brochure I developed and designed is for students seeking an education in visual and media communication. Making use of a design program (Illustrator 9.0), I was able to present the Communication Department programs (Graphic Design, Media Technology, and Fine Arts) at Bunker Hill Community College in an 8 by 10 brochure. The brochure contains 12 pages of information with an easy-to-make cube to be displayed by the prospective student, a CD that would contain a complete version of the college catalog, and a mail-back request card for further information. Every page follows visual coherence in type, color, and logos. I designed 3 logos to represent the image of each program in the department.
# Index of Primary Presenters

## Name and Abstract No.

<table>
<thead>
<tr>
<th>Name</th>
<th>Abstract No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdow, Kristen M.</td>
<td>177</td>
</tr>
<tr>
<td>Albano, Marie</td>
<td>101</td>
</tr>
<tr>
<td>Amaral, Angela M.</td>
<td>107</td>
</tr>
<tr>
<td>Amaral, Melinda B.</td>
<td>256</td>
</tr>
<tr>
<td>Andrade, Fatima L.</td>
<td>220</td>
</tr>
<tr>
<td>Andrade, Shannon C.</td>
<td>197</td>
</tr>
<tr>
<td>Angie, Amanda D.</td>
<td>221</td>
</tr>
<tr>
<td>Aquadro, Robert J.</td>
<td>217</td>
</tr>
<tr>
<td>Armstrong, Janine M.</td>
<td>222</td>
</tr>
<tr>
<td>Arruda Jones, Jodi</td>
<td>80</td>
</tr>
<tr>
<td>Arsenault, Danielle A.</td>
<td>119</td>
</tr>
<tr>
<td>Atlas, Jordan</td>
<td>13</td>
</tr>
<tr>
<td>Baker, Samantha</td>
<td>155</td>
</tr>
<tr>
<td>Ball, Jacob J.</td>
<td>53</td>
</tr>
<tr>
<td>Batchelder, Emily A.</td>
<td>172</td>
</tr>
<tr>
<td>Beers, Randy S.</td>
<td>207</td>
</tr>
<tr>
<td>Bellemere, Andrew C.</td>
<td>120</td>
</tr>
<tr>
<td>Benoit, Derek J.</td>
<td>211</td>
</tr>
<tr>
<td>Benoit, Jennifer L.</td>
<td>208</td>
</tr>
<tr>
<td>Bisson, David S.</td>
<td>32</td>
</tr>
<tr>
<td>Black, Lucas R.</td>
<td>163</td>
</tr>
<tr>
<td>Boudreault, Amanda</td>
<td>85</td>
</tr>
<tr>
<td>Bradley, Christopher W.</td>
<td>148</td>
</tr>
<tr>
<td>Braima, Fatmata</td>
<td>156</td>
</tr>
<tr>
<td>Bruce, Jane M.</td>
<td>223</td>
</tr>
<tr>
<td>Burnham, Erin E.</td>
<td>81</td>
</tr>
<tr>
<td>Butland, Alyne</td>
<td></td>
</tr>
<tr>
<td>Callahan, Marita J.</td>
<td>26</td>
</tr>
<tr>
<td>Campbell, Naomi</td>
<td>178</td>
</tr>
<tr>
<td>Carrico, Kelly J.</td>
<td>257</td>
</tr>
<tr>
<td>Carroll, Adam</td>
<td>38</td>
</tr>
<tr>
<td>Carter, John E.</td>
<td>14</td>
</tr>
<tr>
<td>Carter, Stephanie T.</td>
<td>121</td>
</tr>
<tr>
<td>Cassidy, Elizabeth</td>
<td>198</td>
</tr>
<tr>
<td>Chen, Chun-Hsing</td>
<td>136</td>
</tr>
<tr>
<td>Cipolla, Craig N.</td>
<td>3</td>
</tr>
<tr>
<td>Clark, Lisa m.</td>
<td>149</td>
</tr>
<tr>
<td>Colby, Catherine E.</td>
<td>118</td>
</tr>
<tr>
<td>Conlan, Heather A.</td>
<td>224</td>
</tr>
<tr>
<td>Contreras, Edgar A.</td>
<td>199</td>
</tr>
<tr>
<td>Cote, Erin L.</td>
<td>225</td>
</tr>
<tr>
<td>Cotter, Alexander K.</td>
<td>79</td>
</tr>
<tr>
<td>Coutinho, Fernando M.</td>
<td>137</td>
</tr>
<tr>
<td>Coy, Catherine M.</td>
<td>122</td>
</tr>
<tr>
<td>Cullivan, Jenna L.</td>
<td>82</td>
</tr>
<tr>
<td>DeAbreu, Marlene C.</td>
<td>138</td>
</tr>
<tr>
<td>Deed, Natalie P.</td>
<td>226</td>
</tr>
<tr>
<td>DeLong, Jonathan B.</td>
<td>15</td>
</tr>
<tr>
<td>Demarang, Donna Lynne L.</td>
<td>157</td>
</tr>
<tr>
<td>Demoree, Casey J.</td>
<td>150</td>
</tr>
<tr>
<td>DiMatteo, John</td>
<td>8</td>
</tr>
<tr>
<td>Djuretic, Ivana</td>
<td>123</td>
</tr>
<tr>
<td>Dong, Jing</td>
<td>28</td>
</tr>
<tr>
<td>Donovan, Jaclyn M.</td>
<td>39</td>
</tr>
<tr>
<td>DosSantos, Brigitte</td>
<td>227</td>
</tr>
<tr>
<td>Dubrovsky, Anastasia A.</td>
<td>158</td>
</tr>
<tr>
<td>Dussourd, Stephanie K.</td>
<td>151</td>
</tr>
<tr>
<td>Ehli, Lisa</td>
<td>65</td>
</tr>
<tr>
<td>Erdosy, Gabriella S.</td>
<td>209</td>
</tr>
<tr>
<td>Erickson, Todd J.</td>
<td>40</td>
</tr>
<tr>
<td>Fairley, Alexander V.</td>
<td>95</td>
</tr>
<tr>
<td>Farco, Trisha</td>
<td>41</td>
</tr>
<tr>
<td>Farelli, Jeremiah D.</td>
<td>214</td>
</tr>
<tr>
<td>Ferrante, Krista S.</td>
<td>66</td>
</tr>
<tr>
<td>Ferreira, Maria</td>
<td>250</td>
</tr>
<tr>
<td>Finch, Fiona H.</td>
<td>74</td>
</tr>
<tr>
<td>Fitts, Jessica</td>
<td>179</td>
</tr>
<tr>
<td>Fleming, Erica V.</td>
<td>228</td>
</tr>
<tr>
<td>Flores, R Marie V.</td>
<td>124</td>
</tr>
<tr>
<td>Ford, Rebecca L.</td>
<td>109</td>
</tr>
<tr>
<td>Forloney, Kristin L.</td>
<td>205</td>
</tr>
<tr>
<td>Fox, Barbara W.</td>
<td>67</td>
</tr>
<tr>
<td>Fraitman, Joseph B.</td>
<td>96</td>
</tr>
<tr>
<td>Funk, Lindsay C.</td>
<td>63</td>
</tr>
<tr>
<td>Garnache, Jennifer E.</td>
<td>113</td>
</tr>
<tr>
<td>Gass, Thomas J.</td>
<td>16</td>
</tr>
<tr>
<td>Gaudet, Elizabeth</td>
<td>164</td>
</tr>
<tr>
<td>Gauvin, Melissa</td>
<td>202</td>
</tr>
<tr>
<td>Germain, Frantzy</td>
<td>165</td>
</tr>
<tr>
<td>Giarratani, Nicholas</td>
<td>54</td>
</tr>
<tr>
<td>Glenn, Kristi E.</td>
<td>31</td>
</tr>
<tr>
<td>Golden, Mary S.</td>
<td>139</td>
</tr>
<tr>
<td>Goldsmith, Jamie B.</td>
<td>97</td>
</tr>
<tr>
<td>Grant, Suzanne S.</td>
<td>9</td>
</tr>
<tr>
<td>Graziano, Rocky</td>
<td>105</td>
</tr>
<tr>
<td>Grealey, Michael</td>
<td>29</td>
</tr>
<tr>
<td>Guer, Stacey A.</td>
<td>42</td>
</tr>
<tr>
<td>Guer, Scott</td>
<td>229</td>
</tr>
<tr>
<td>Hanna, Ramy M.</td>
<td>166</td>
</tr>
<tr>
<td>Hansen, Russell P.</td>
<td>22</td>
</tr>
</tbody>
</table>
Harris, Katharine M. 140
Hastings, Kimberly J. 83
Hawes, Joan M. 215
Helgaard, Kristin M. 84
Hickey, Erin E. 75
Holleman, Tammy M. 230
Hollister, Cindy A. 231
Howley, Stephen E. 232
Hubschwerlin, Karla A. 188

Inman, Samantha M. 186
Iqbal, Sidra 17
Iwerks, Rebecca H. 27

Jefgood, Jaclyn M. 152
Jennings, Andrew J. 43
Johnson, Marta J. 106
Jordan, Clara 141
Judges, Marcie C. 76

Kellogg, Katrina L. 175
Kelly, Maureen H. 183
Kendall, Alicia L. 180
Kennedy, William H. 233
Kenney, Rachael R. 251
Kent, Jeanne Y. 44
Kester, Rachel S. 10
Kivell, Erin M. 234
Klimowicz, Angela M. 98
Klubnik, Cynthia A. 235
Kobs, Elizabeth A. 212
Kondo, Miwako 142

LaFond, Elizabeth R. 55
Lanza, Stephen J. 25
Latham, Andrew H. 18
Lavigne, David 167
Lavorgna, Amanda M. 56
Lawler, Rose D. 143
Linton, Molly J. 23
Le Clerc, Katelyn M. 248
Legesse, Henock A. 91
Levesque, Amanda N. 192
Li, Yanyu 193
Libby, Justin B. 4
Liebsch Smith, Jennifer A. 33
Linton, James-Ethan 86
Loiko, Kristin S. 181
Lombardo, Katherine M. 236
Lopes, Eurides F. 45
Lowell, Mark C. 218
Lownie, Scott M. 35

Mageza, Gertrude N. 255
Malli, Kristen L. 46
Marchand, Gary H. 182
Mattson, Gina M. 36
Maynard, Rebecca J. 19
Mayo, Josiah A. 5
McCumber, Shannon 237
McEvoy, Marty J. 73
McGee, Julie A. 72
McManus, Renay 176
Mei, Valerie J. 203
Menard, Chasity A. 104
Miller, Courtney A. 204
Miller, Emily S. 125
Moran, Steven J. 87
Moren, Holly R. 57
Moroski, Catherine A. 184
Mulcahy, Lori A. 110
Murphy, Katie m. 153
Murphy, Carolyn L. 58
Murphy, Patricia M. 159
Muturi, James M. 168

Nestor, Kathleen M. 112
Nota, Joshua 194

Obolensky, Nicholas H. 114
Ogumbode, Oluwafunmilayo 238
Olson, Erik L. 189
Palacios, Ana I. 258
Palumbo, Gina M. 7
Panarello, Kathy M. 249
Parrish, Miriam A. 92
Parrish, Patricia E. 169
Peterson, Valerie A. 239
Pickett, Marina L. 47
Pierce, Jennifer N. 64
Pikora, Kathryn G. 11
Pires, Lisa M. 1
Pires, Brenda J. 115
Polena, Ilvin 144
Pomerantz, Sarah R. 6
Powers, William A. 219
Proulx, Jason 20
Puello, Keila 173

Quilty, Mary T. 116
Quinn, Ryan 88

Rebal, Mary E. 213
Reed, Benjamin A. 154
Ritter, Carolyn S. 77
Index of Primary Presenters by School

Bristol Community College
Amaral, Melinda B. 256
Amaral, Angela M. 107
Arruda Jones, Jodi 80
Ferreira, Maria 250
Ford, Rebecca L. 109
Mulcahy, Lori A. 110
Pires, Lisa M. 1
Pires, Brenda J. 115
Proulx, Jason 20
Rodrigues, Jill 252
Warren, Patricia 111
Zartman, Britt G. 71

Bunker Hill Community College
Benoit, Derek J. 211
Black, Lucas R. 163
Contreras, Edgar A. 199
Coutinho, Fernando M. 137
Flores, R Marie V. 124
Gaudet, Elizabeth 164
Germain, Frantzy 165
Hanna, Ramy M. 166
Liebsch Smith, Jennifer A. 33
Mageza, Gertrude N. 255
Palacios, Ana I. 258
Parrish, Patricia E. 169
Sultanov, Bulat. 170

Cape Cod Community College
Witter, Paul 51

Fitchburg State College
Baker, Samantha 155
Butland, Alyne
Clark, Lisa M. 149
Malli, Kristen L. 46
Murphy, Carolyn L. 58
Murphy, Katie M. 153
Reed, Benjamin A. 154

Framingham State College
Andrade, Fatima L. 220
Bruce, Jane M. 223
Carter, John E. 14
Conlan, Heather A. 224
Cote, Erin L. 225
DosSantos, Brigite 227

Holyoke Community College
DiMatteo, John 8
Funk, Lindsay C. 63
Schrengohst, Karina 59
Simmons, Byron 201
Simmons, Byron 89

Mass College of Liberal Arts
Boudreault, Amanda 85
Carroll, Adam 38
Farco, Trisha 41
Fitts, Jessica 179
McEvoy, Marty J. 73
Quinn, Ryan 88
Smith, Heidi 48
Wandrei, Jason W. 50
Wrzesinski, Jane. 52

Massachusetts Bay Community College
Albano, Marie. 101
Panarello, Kathy M. 249

Massasoit Community College
Bradley, Christopher W. 148
Braima, Fatmata. 156
Carrico, Kelly J. 257
Cassidy, Elizabeth. 198
Cotter, Alexander K. 79
Glenn, Kristi E. 31
Lanza, Stephen J. 25
Lopes, Eurides F. 45
Lowell, Mark C. 218
Marchand, Gary H. 182
Moran, Steven J. 87
Pickett, Marina L. 47
Rose, Brandy J.   2
Smith, Timothy J.   60
Thompson, Sandra   37
Tierney, Sean R.   108
Timmins, Nancy K.   61
Waugh, Lillian J.   62

Mount Wachusett Community College
Batchelder, Emily A.   172
Roche, Jessica A.   174
Sanden, Cynthia L.   253

North Shore Community College
Colby, Catherine E.   118
Fairley, Alexander V.   95
Wilkins, Janet P.   162

Northern Essex Community College
McManus, Renay.   176
Puello, Keila.   173
St. Pierre, Bridget M.   254

Salem State College
Abdow, Kristen M.   177
Benoit, Jennifer L.   208
Burnham, Erin E.   81
Deed, Natalie P.   226
Demoree, Casey J.   150
Dussourd, Stephanie K.   151
Finch, Fiona H.   74
Gass, Thomas J.   16
Giarratani, Nicholas   54
Hawes, Joan M.   215
Jefgood, Jaclyn M.   152
Latham, Andrew H.   18
LeClerc, Katelyn M.   248
Levesque, Amanda N.   192
Li, Yanyu.   193
Lownie, Scott M.   35
Mattson, Gina M.   36
Muturi, James M.   168
Peterson, Valerie A.   239
Pikora, Kathryn G.   11
Schleidweiler, Esther.   93
Silveira, Melinda M.   102

Springfield Technical Community College
DeLong, Jonathan B.   15
Schneider, Michael A.   68

UMass Amherst
Andrade, Shannon C.   197
Angie, Amanda D.   221
Aquadro, Robert J.   217
Arsenault, Danielle A.   119
Atlas, Jordan.   13
Bellemere, Andrew C.   120
Bisson, David S.   32
Callahan, Marita J.   26
Campbell, Naomi   178
Carter, Stephanie T.   121
Coy, Caroline M.   122
Demarang, Donna Lynne L.   157
Dubroffsky, Anastasia A.   158
Erickson, Todd J.   40
Farelli, Jeremiah D.   214
Ferrante, Krista S.   66
Forloney, Kristin L.   205
Framan, Joseph B.   96
Gordon, Mary S.   139
Goldsmith, Jamie B.   97
Hansen, Russell P.   22
Harriss, Katharine M.   140
Helgaard, Kristin M.   84
Hickey, Erin E.   75
Hollister, Cindy A.   231
Hubschwerlin, Karla A.   188
Inman, Samantha M.   186
Iqbal, Sidra   17
Iwers, Rebecca H.   27
Judges, Marcie C.   76
Kester, Rachel S.   10
Kivell, Erin M.   234
Klubnik, Cynthia A.   235
Kobs, Elizabeth A.   212
Lavigne, David   167
Lawler, Rose D.   143
Layton, Molly J.   23
Maynard, Rebecca J.   19
Mayo, Josiah A.   5
McCumber, Shannon   237
McGee, Julie A.   72
Miller, Emily S.   125
Nestor, Kathleen M.   112
Nota, Joshua   194
Obolewsky, Nicholas H.   114
Olson, Erik L.   189
Palumbo, Gina M.   7
Parrish, Miriam A.   92
Pierce, Jennifer N.   64
Pomerantz, Sarah R.   6
Powers, William A.   219
Ritter, Carolyn S.   77
Robinson, Carolyn A. 21
Rogers, Allison M. 240
Roth, Stacey L. 160
Rothauser, David I. 216
Ruel, Heather L. 187
Salaycik, Kimberly J. 126
Schneeflock, Fletcher C. 190
Shafie, Shideh 145
Shelat, Shalu M. 185
Sippel, Jenna C. 242
Smith, Elizabeth A. 191
Smock, Robert 129
Squitiero, Patricia 130
Stanish, Lee F. 12
Steiger, Betina 117
Sugal, Rachel M. 132
Sullivan, Ryan 195
Tessier, Amy L. 161
Velis, Edwin 34
Verbitsky, Elizabeth M. 103
Walek, Gregory M. 206
Walsh, Marietta E. 133
Weis, Jennifer N. 246
Wilkins, Jennifer E. 134
Wintner, Rachel E. 196
Youngwirth, Sara D. 247
Yukna, Nicole 70

UMass Boston
Armstrong, Janine M. 222
Cipolla, Craig N. 3
Djuretic, Ivana 123
Dong, Jing 28
Ehli, Lisa 65
Fox, Barbara W. 67
Garnache, Jennifer E. 113
Grant, Suzanne S. 9
Graziano, Rocky 105
Grealey, Michael 29
Guerin, Scott 229
Holleman, Tammy M. 230
Johnson, Marta J. 106
Kellogg, Katrina L. 175
Kelly, Maureen H. 183
Kent, Jeanne Y. 44
Legesse, Henock A. 91
Libby, Justin B. 4
Moroski, Catherine A. 184
Murphy, Patricia M. 159
Ogunbodede, Oluwafunmilayo 238
Quilty, Mary T. 116
Shiman-Hackett, Ruth 30
Shoemaker, Douglas A. 127

Smith, Daniel J. 24
Smith, Esther R. 128
Smith, Jacquelyn N. 99
St. Martin, Jessie L. 131
Stafford, Karyn 243
Sunkara, Sindhura 171
Tawa, John 100
Tomey, Melissa A. 244
Trauceniek, Kim M. 94
Van Vloten, Kurt 147
Waldon, Zachary O. 245
Yu, Shang-Shuan 135

UMass Dartmouth
Beers, Randy S. 207
Chen, Chun-Hsing 136
Cullivan, Jenna L. 82
DeAbreu, Marlene C. 138
Hastings, Kimberly J. 83
Jordan, Clara 141
Kendall, Alicia L. 180
Kondo, Miwako 142
Menard, Chasity A. 104
Siemaszko, Lisa E. 200
Steele, Eric J. 146
Wong, Raymond 78
Wright, Kirsten E. 210

UMass Lowell
Erdosy, Gabriella S. 209
Kenney, Rachael R. 251

Westfield State College
Jennings, Andrew J. 43
LaFond, Elizabeth R. 55
Loiko, Kristin S. 181
Moren, Holly R. 57

Worcester State College
Ball, Jacob J. 53
Donovan, Jaclyn M. 39
Guella, Stacey A. 42
Lavorgna, Amanda M. 56
Linton, James-Ethan 86
Polena, Ilvin 144
Vayo, Amber B. 49
Wilfong, Amy L. 90