



# Symposium XXIV

undergraduate  
college of  
arts & sciences

March 23, 2004

A special section of FOCUS EMU

## Students create diverse projects for Undergraduate Symposium



**THE MYSTERIES OF SCIENCE:** Paula Gutman measures Hexanal, a molecule that is produced in the breakdown process of a cell membrane (lipid oxidation). This has been linked to heart disease and kidney failure. Gutman will present "Measurement of Hexanal Production in the Oxidation of Biological Systems" at the Undergraduate Symposium.

By Carol Anderson

Eastern Michigan University students will be out in full force for the Undergraduate Symposium, Friday, March 26, at McKenny Union.

This is an opportunity for students to present the results of their academic projects, with topics ranging from genetic modification and radiation to philanthropy and U.S./Canadian relations. A snapshot of a few of the students and their projects are as follows:

■ The mysteries of heart disease and kidney failure may someday be more clearly understood thanks in part to Paula Gutman's research.

The 21-year-old senior from Sylvania, Ohio, is looking into measuring Hexanal, a molecule that is produced when the breakdown process of a cell membrane

(lipid oxidation) occurs. The presidential scholar will present, "Measurement of Hexanal Production in the Oxidation of Biological Systems" at the symposium.

"This breakdown has been linked with many health problems such as heart disease and kidney failure," Gutman said. "And very little is known about the process."

Over the last three semesters, Gutman, fellow students and sponsor Heather Holmes, associate professor of chemistry, have developed an instrument that will help them determine how quickly Hexanal is produced, the quantities produced and the identity of other products. In time, an exact link may be found between lipid oxidation and associated diseases, Gutman said.

Gutman, a chemistry major who plans to graduate in April, will get married this August and pursue her master's degree at the University of Michigan.

■ NASA's rover, Spirit, is looking for evidence that water existed on Mars, but Jason Coliadis is more concerned with water on Earth.

The 21-year-old biology major from Grand Blanc is looking to create new strategies in agricultural engineering. He's set on designing improved water-efficient plants – those that can tough it out during a drought or in an arid climate.

"Recent research shows that increasing the amount of a metabolic protein in a valve-like structure, known as the stomata, results in a much more water ef-

SEE STUDENTS, page 4

## Muncy serves as emcee at Undergraduate Symposium

**MASTER OF CEREMONIES:** Adrienne Muncy not only has two presentations to give at the Undergraduate Symposium; she's serving as the event's emcee.



By Summer Wilhelm

Adrienne Muncy is going on her third and final year in the Undergraduate Symposium, but she's not settling for an average send-off. Muncy is not only tackling the task of two Symposium presentations, but she is handling emcee duties as well.

"I'm excited and nervous about being an emcee," said Muncy, a graduating senior majoring in linguistics. "But I'm really grateful I was asked. It'll be a lot of fun."

As for her presentations, Muncy has spent the last year working hard on their preparation. One of her projects, "An Investigation of the Phonetics of English Dialects of Northern Idaho," explores the vowel system in that region. Muncy, who has voice samples of people from Idaho, will use auditory equipment to analyze the ways in which their dialect is different from standard American English.

Muncy's faculty sponsor for the presentation, Beverley Goodman, has been particularly helpful in the endeavor, recording the speech of two family members from Idaho.

"It's a great project," Goodman said. "We go to such great lengths to work on exotic languages and dialects when there are so many of interest right here in Idaho."

Muncy's other undertaking, "Postmodern Mythology: Globalization, Environmental Degradation and Sorbian Folklore in the Works of Jurij Brezan," involves the study of the Sorbian language, spoken

in East Germany. Muncy is analyzing two books — "Krabat oder Die Bewahrung der Welt" and "Die schwarze Muhle," — written in German by Brezan. The author uses folklores of the Sorbian ethnic group to explore the destruction of the environment and oppression of minority groups. Muncy will study how Brezan uses myth to delve into his themes.

"She's spent a lot of time on the project," said Carla Damiano, assistant professor of German and Muncy's sponsor. "She's a very hard working, efficient person and has been fostering her interest in German and linguistics for quite a while."

As for post-graduation plans, Muncy has applied to numerous graduate schools, including the University of California at Berkeley and the University of Oregon. She plans on becoming a linguistics professor. However, Muncy has also applied to be a Fulbright Scholar and, if accepted, graduate school will take a back seat for a year.

When Muncy isn't working on her Symposium presentations or other academic projects, she spends her time practicing Aikido, sewing, volunteering for Damiano and now preparing for her upcoming emcee responsibilities.

"For people going into all areas, the Symposium is a great way to develop the presentation skills that will get you through life," Muncy said. "It's given me the confidence and speaking skills I didn't know I had."

## SCHEDULE OF EVENTS

**Undergraduate Symposium Schedule, Friday, March 26**

- 8:30 a.m.-12:45 p.m. - Student presentations, McKenny Union
- 9 a.m.-12:30 p.m. - Poster presentations, Guild Hall, McKenny Union.
- 1-2:30 p.m. - Luncheon, McKenny Union Ballroom

## INSIDE

- Listing of student presentations, PAGES 2-3
- Listing of poster presentations, PAGE 4.
- More student projects, PAGE 4.

Event Webcast at [www.emich.edu/symposium](http://www.emich.edu/symposium)

# STUDENT ORAL PRESENTATIONS

## Session A

### Alumni Room

8:30 a.m.

#### Victor L. Walker

Professor Zenia C. Bahorski  
Color Deficiencies and Web Design  
Computer Science

8:45 a.m.

#### Melissa Spuehler

Professor Tim Carroll  
Check Digits and Why They are Important  
Mathematics

9 a.m.

#### Daryl Posnett

Professor Tim Carroll  
Looking for a Needle in a Number Theory Haystack  
Mathematics

9:15 a.m.

#### Paula Gutman

Professor Heather Holmes  
Measurement of Hexanal  
Production in the Oxidation of Biological Systems  
Chemistry

9:30 a.m.

#### Kristyn A. Spangler

Professor Maria C. Milletti  
Matching Theoretical Modeling with Experimental Findings for the Isopropylum Cation  
Chemistry

### Tower Room

8:30 a.m.

#### Krista McNeil

Professor Kerry Graves  
Creating Costumes: Clothing from India  
Communication and Theatre Arts

8:45 a.m.

#### Michelle Williamson

Professor Rick Rogers  
The Trials of Religious Liberty Under the Scrutiny of the Supreme Court  
History and Philosophy

9 a.m.

#### April Hall

Professor Margaret Crouch  
A Defense for the Academic Study of Fantasy Films  
History and Philosophy

9:15 a.m.

#### Brock Peters

Professor Margaret Crouch  
Bread and Circuses: Philosophy and Science Fiction  
History and Philosophy

9:30 a.m.

#### Roy F. MacKenzie, III

Professor Margaret Crouch  
Violence in Cinema: Social Criticism in *"Man Bites Dog"*  
History and Philosophy

### Faculty Lounge

8:30 a.m.

#### Lindsay L. Boik

Professor Shel Levine  
The Four New Risk Factors for Heart Disease  
Health, Physical Education, Recreation and Dance

8:45 a.m.

#### Allison M. Nichol

Professor Shel Levine  
Exercise and Diabetes Management: Research: Implications from the Past  
100 Years

Health, Physical Education, Recreation and Dance

9 a.m.

#### Angela Filecchia

Professor W. Jeffrey Armstrong  
Rheumatoid Arthritis and the Role of Exercise  
Health, Physical Education, Recreation and Dance

9:15 a.m.

#### Linda Acus

Professor Jeffrey Bernstein  
Lifespan and Race as Combined Contributing Factors in Voter Turnout Rates  
Political Science

9:30 a.m.

#### Stacy R. Renouf

Professor Alice Jo Rainville  
Mad Cow Disease: What Is It and Are We Safe From It?  
Human, Environmental and Consumer Resources

### Reception Room

8:30 a.m.

#### Jason Austgen

Professor Kenneth Shiskowski  
The Life and Contributions of Bertrand Russell  
Mathematics

8:45 a.m.

#### Charles Kuderik

Professor Richard Rubinfeld  
Analysis of Casper David Friedrich's *"Two Men on the Seashore"*  
Art

9 a.m.

#### David J. Sitar

Professor C. Nicholas Raphael  
Relationships Between Huron River Bridge Crossings and Landforms in Ypsilanti, Mich.

Geography and Geology

9:15 a.m.

#### Patrick Carl Lord

Professor Donald W. Pearson  
The Labor Theory of Value and the Wages Fund Concept  
Economics

9:30 a.m.

#### Angel C. Coleman

Professor James D. Ivers  
Non-Competitive Cities  
Political Science

### Intermedia Gallery

8:30 a.m.

#### Thomas Boulton

Professor Carter Eggers  
*"Intrada"* by Arthur Honegger  
Music

8:45 a.m.

#### Katherine Webster

Professor Kristy Meretta  
*"Fantaisie Pastorale"* by Eugene Bozza  
Music

9 a.m.

#### Angela Dunning

Professor Daniel Foster  
*"Hungarian Dance No. 1 in G minor"* by Johannes Brahms, arranged by Joseph Joachim  
Music

9:15 a.m.

#### Monet Dumas

Professor Pedro P. Sanchez  
The SVD as a Data Mining Tool for Marketing  
Computer Information Systems

9:30 a.m.

#### Aaron J. Deakins

Professor Jay Weinstein  
Newspeak: A Critical Look at Thought Degradation Through Technology in Relation to Orwell's *"1984"*  
Sociology, Anthropology and Criminology

### Main Lounge

8:30 a.m.

#### Bethany Townsend

Professor Daryl Hafter  
Hands or Steel?  
History and Philosophy

8:45 a.m.

#### Beth Doane

Professor Chris Wood Foreman  
A Center for Holistic Health  
Communication and Theatre Arts

9 a.m.

#### Shandra McGuire

Professor Barbara Bilgé  
Bronislaw Malinowski: The Anthropologist's Anthropologist  
Sociology, Anthropology and Criminology

9:15 a.m.

#### Heather Mooney

Professor Denise Reiling  
Recently Incarcerated Homeless Men's Opinions of Rehabilitation Programs  
Sociology, Anthropology and Criminology

9:30 a.m.

#### Sarah Gruner

Professor Alida Westman  
Relationships Between Purpose in Life, Approach or Avoidance of Problems, Level and Orientation to Religion, and Drug Use  
Psychology

### Gallery II

8:30 a.m.

#### Freedom-Kai Phillips

Professor James P. Holoka  
A General's Self-Depiction: The Political Strategies of Gaius Julius Caesar as Seen in the *"Commentarii De Bello Gallico"*  
History and Philosophy

8:45 a.m.

#### Bettina Bell

Professor Richard Douglass  
Examining Different Aspects of Racial and Ethnic Disparities in Site of Usual Source of Care  
Associated Health Professions

9 a.m.

#### Phyllis Dragun

Professor Margaret Moore-Hart  
Integrating Multicultural Literature and the Arts Across the Curriculum  
Teacher Education

9:15 a.m.

#### Tammara Schober

Professor Margaret Moore-Hart  
Literacy Education and the English Language Learner/  
English Second Language Learner  
Teacher Education

9:30 a.m.

#### Melissa Wood

Professor Margaret Moore-Hart  
Importance of Writing with Younger Children  
Teacher Education

### Student Organization Center

8:30 a.m.

#### Paul H. Doran

Professor Barry Pyle  
An Assessment of Social Darwinism and Its Impact on the Supreme Court's Constitutional Interpretations from the 1870s to the 1950s  
Political Science

8:45 a.m.

#### Rory P. Garnice

Professors Bernard O'Connor and Rhonda Kinney Longworth  
Direct and Indirect American Influence on 20th Century Canadian Military and Defense Policy  
Political Science

9 a.m.

#### Jacob Walters

Professor Norman Tyler  
The Fundamental Impermanence of Japanese Urban Space:  
Metropolitan Tokyo  
Geography and Geology

9:15 a.m.

#### Brian Eichstadt

Professor Janice Terry  
Black September: Causes and Impacts of the Jordanian Civil War  
History and Philosophy

9:30 a.m.

#### Miriam Abouzahr

Professor Janice Terry  
Cyprus: Two Nations or One?  
History and Philosophy

### Salon

8:30 a.m.

#### Kristen R. Bretti

Professor Mary Zdrojkowski  
Using Humor to Facilitate Learning in the Classroom  
English Language and Literature

8:45 a.m.

#### David Collins

Professor Barbara Leopard  
A Geometry Theorem Teaching Method  
Mathematics

9 a.m.

#### Acacia Williams

Professors Marilyn Bonem and Ellen Koch  
Peer Advising Program: Design and Evaluation  
Psychology

9:15 a.m.

#### Amanda Melzak

Professor Sherry Jerome  
*"Just Me"*  
Health, Physical Education, Recreation and Dance

9:30 a.m.

#### Beth Canfield and

#### Erin Quellhorst

Professor Julianne O'Brien Pedersen  
*"Finding My Other Half"*  
Health, Physical Education, Recreation and Dance

## Session B

### Alumni Room

10 a.m.

#### Rolando René Girón

Professor Michael Zeiger  
Web Interface for Searching Airports and Flights  
Computer Science

10:15 a.m.

#### Maria Jones

Professor Richard Rubinfeld  
An Exploration of Jade Art

10:30 a.m.

#### Jennifer Stephens

Professor Deborah Heyl-Clegg  
Minimal Sequence Analogues of the Alpha-Amylase Inhibiting Protein, Tendamistat  
Chemistry

10:45 a.m.

#### Dean Zdravkovski

Professor Maria C. Milletti  
Theoretica; Analysis of Two Possible Pathways in the Formation of Deuterated Methane through  $\sigma$ -bond Methathesis  
Chemistry

11 a.m.

#### Robert D. Anderson

Professor Maria C. Milletti  
Theoretical Study of Structural and Electronic Characteristics of a Series of Glycosidase Inhibitors  
Chemistry

### Tower Room

10 a.m.

#### Nicole Samuel and

#### Mesha Terrell

Professor Shel Levine  
Advances in Stress Testing  
Health, Physical Education, Recreation and Dance

10:15 a.m.

#### Candace Graham and

#### Sara Delaney

Professor Martha Baiyee  
Teacher-Made Test for Young Children  
Teacher Education

10:30 a.m.

#### Chivaun K. Bartley

Professor Barbara Wilson Foster  
How to Increase Attendance at Eastern Michigan University's Track and Field Meets  
Marketing

10:45 a.m.

#### Stephanie Lynn Davis

Professor Barbara Wilson Foster  
Increasing Freshman Resident Retention with Campus Programs and Activities  
Marketing

11 a.m.

#### Kayla Hartford

Professor Barbara Foster  
Promotional Aspects of Curves: A Research Project  
Marketing

### Faculty Lounge

10 a.m.

#### Thomas McGraw Lewis

Professor Karen Schaumann-Beltrán  
Curiouser and Curiouser: Social Constructs in the Carrollian Tradition and its Filmic Interpretations  
Sociology, Anthropology and Criminology

10:15 a.m.

**Jerrell McCowin, Mialana Dominguez, Ryan Griffin, LaToya Robinson, Alex Simpson, Alexis Simpson, Tristan Taylor, LaKeyia Wells, David Khilji, Antanya Gause and Marcel Wilson**

Professor Karen Schaumann-Beltrán and Professor Charles Simmons

The Impact of Malcolm X on Detroit Community Activists: An Oral History

Sociology, Anthropology and Criminology and English Language and Literature

10:30 a.m.

#### Katherine Rae McFadden

Professor Barbara Bilgé  
Jewish Women's Radicalism at the Turn of the 20th Century: Cultural Contributors to a Societal Phenomenon  
Sociology, Anthropology and Criminology

10:45 a.m.

#### Laura Rosewig

Professor Barbara Bilgé  
Alfred Louis Kroeber: Dean of American Anthropology  
Sociology, Anthropology and Criminology

11 a.m.

#### Janine Van Gemert

Professor Barbara Bilgé  
Marvin Harris' Contributions to American Anthropology  
Sociology, Anthropology and Criminology

### Reception Room

10 a.m.

#### Daniel T. Rhoades

Professor Mark Higbee  
The Development of American Slavery: Racism from Slavery History and Philosophy

# STUDENT ORAL PRESENTATIONS Continued

10:15 a.m.  
**Timothy Weber**  
 Professor JoEllen Vinyard  
 Ku Klux Klan Recruitment and Activities in Jackson County, Mich.  
 History and Philosophy

10:30 a.m.  
**Marcus K. Adams**  
 Professor Mary Koral  
 "...and justice for all."  
 English Language and Literature

10:45 a.m.  
**Hermione Miles Gorney**  
 Professor Gary Evans  
 Diversity Studies are a Necessary Component of Higher Education  
 Communication and Theatre Arts

11 a.m.  
**Juan Lucero**  
 Professor Doris Fields  
 The Mass Media and Its Effects on Racial Awareness  
 Communication and Theatre Arts

**Intermedia Gallery**

10 a.m.  
**Juan Gabriel Arauco**  
 Professor Garik Pedersen  
*"Sonata in E Major, Op. 109"* by Ludwig van Beethoven  
 I. Vivace, ma non troppo-Adagio espresso  
 II. Prestissimo  
 Music

10:15 a.m.  
**Allison Hawkins**  
 Professor Joel Schoenhals  
*"Sonata in E Major, Op. 109"* by Ludwig van Beethoven  
 I. Vivace, ma non troppo-Adagio espresso  
 II. Prestissimo  
 Music

10:30 a.m.  
**John Patrick**  
 Professor C. Nelson Amos  
*"Round"* by Lou Harrison and *"The Flight of the Lovers Through the Valley of Echoes"* by Leo Brouwer  
 Music

10:45 a.m.  
**April Hall**  
 Professor Michael Jones  
 Reconciling Jerusalem and Athens  
 History and Philosophy

11 a.m.  
**Molly Harris**  
 Professor Jiu-Hwa Lo Upshur  
 The 'Living Buddha': John Rabe and the Rape of Nanking, 1937-38  
 History and Philosophy

**Main Lounge**

10 a.m.  
**Erik Abbott-Main**  
 Professor Pirooz Aghssa  
 Performance/Theatre as a Venue for Socio-Political Commentary: *"BENT"*  
 Communication and Theatre Arts

10:15 a.m.  
**Phil Park, Erik Abbott-Main, Delaine Andrzejewski, Rob McFadyen and Rachel Michel**  
 Professor Pirooz Aghssa  
*"The Exorcism"*  
 Communication and Theatre Arts

10:30 a.m.  
**Julie S. Brehmer**  
 Professor Shelia Most  
 Celebrating the Colors of Diversity Through Author/Illustrator Faith Ringgold  
 English Language and Literature

10:45 a.m.  
**Nicole D. Smith**  
 Professor Harry Eiss  
 Children Need *"The Hobbit"*  
 English Language and Literature

11 a.m.  
**Mary Kathleen Walsh**  
 Professor Harry Eiss  
*"The Hobbit"*: Postmodernism Meets Freud, Jung and Campbell  
 English Language and Literature

**Gallery II**

10 a.m.  
**Alexis J. O'Neill**  
 Professor Verónica Grondona  
 Linguistic and Language Revival in Tlingit  
 English Language and Literature

10:15 a.m.  
**Natalie Jean Keiser**  
 Professor Verónica Grondona  
 The Culture and Language Renaissance of the New Zealand Maori  
 English Language and Literature

10:30 a.m.  
**Adrienne E. Muncy**  
 Professor Beverly Goodman  
 An Investigation of the Phonetics of English Dialects of Northern Idaho  
 English Language and Literature

10:45 a.m.  
**Andrew Armbruster**  
 Professor Lori Burlingame  
 Auster's *"Ghosts"*: the Role of the Other, the Act of Writing and the Crisis of Consciousness  
 English Language and Literature

11 a.m.  
**Karen Tabb**  
 Professor Daryl Hafter  
 Mulatto Women and Their Hidden

Transgressions of the 18th and 19th Centuries  
 Women's Studies

**Student Organization Center**

10 a.m.  
**Bethany Lynn**  
 Professor Jeffrey Bernstein  
 Why Do Jewish Americans Remain Overwhelmingly Democrat?  
 Political Science

10:15 a.m.  
**Karin Armour**  
 Professor Joseph Ohren  
 The Increasing Difficulties Facing American Elections and Possible Solutions  
 Political Science

10:30 a.m.  
**Zachary Newton**  
 Professor Carl Ojala  
 Lightning Risk in Michigan  
 Geography and Geology

10:45 a.m.  
**Jaspar von Buelow**  
 Professor Patricia Lloyd  
 Much Ado About Global Warming  
 English Language and Literature

11 a.m.  
**Carl von Buelow**  
 Professor Patricia Lloyd  
 Over-Population is not a Threat  
 English Language and Literature

**Session C**

**Alumni Room**

11:30 a.m.  
**Rocco Gogliotti**  
 Professor Cara Shillington  
 Dominance Hierarchies and Metabolism in Madagascar  
 Hissing Cockroaches (*Gromphadorhina portentosa*)  
 Biology

11:45 a.m.  
**Adam W. Smith**  
 Professor John Preston  
 Automating DNS with Scripting  
 Interdisciplinary Technology

Noon  
**Mary Lema**  
 Professor Chris Wood Foreman  
 The Effects of Strong Philanthropic Efforts in the Corporate World  
 Communication and Theatre Arts

12:15 p.m.  
**Stephane Strasburg**  
 Professor Gary Evans  
 Cultural Relativism vs. Women's Rights: The Struggle to Stop Global Violence and Discrimination Against Women  
 Communication and Theatre Arts

Noon  
**Thomas W. Coran, Lisa Hanitz and Adam Winland**  
 Professor Zafar Khan  
 Design and Implementation of Online Expense Reports  
 Accounting and Finance

**Tower Room**

11:30 a.m.  
**Elizabeth Rudolph**  
 Professor Mary Zdrojkowski  
 High Sensation Seekers' Tendency to Perceive Situations as More Humorous and More Often to Express Humor Than Low Sensation Seekers  
 English Language and Literature

11:45 a.m.  
**Deborah Williams**  
 Professor Mary Zdrojkowski  
 Lawyers Aren't That Bad, Are They?: What Lawyer Jokes Say about the Attorney Public Relations Crisis  
 English Language and Literature

Noon  
**Hermione Miles Gorney**  
 Professor Charles Simmons  
 Art Exhibit as Muse – Discovering the Mystery of Wise Women  
 English Language and Literature

12:15 p.m.  
**Fallon Lee Miller**  
 Professor Gretchen Otto  
 Master Artist and Jeweler René Lalique  
 Art

12:30 p.m.  
**Anais Hicks**  
 Professor Wendy Wang  
 Learning a Third Language  
 Foreign Languages and Bilingual Studies

**Faculty Lounge**

11:30 a.m.  
**Justin Cowen, Christopher Ake and Justin Thamaris**  
 Professor Alexandria Oakes  
 Stereo Lithography and its Uses in Rapid Prototyping  
 Physics and Astronomy

11:45 a.m.  
**Matthew Kardel**  
 Professor James Carroll  
 Argon Plasma Produced with a Radio-Frequency Antenna  
 Physics and Astronomy

Noon  
**Sandra M. Wilson**  
 Professor Dan Trochet  
 An Afternoon of Physics and Fun  
 Physics and Astronomy

12:15 p.m.  
**Dale Covert**  
 Professor Pamela Becker  
 Henry Ford and the Assembly Line  
 Interdisciplinary Technology

12:30 p.m.  
**Cristopher Lewandowski**  
 Professor Richard Nation  
 A Local Legend: Portrayal of the Little Bighorn in Custer's Hometown  
 History and Philosophy

**Reception Room**

11:30 a.m.  
**Molly Harris**  
 Professor Janice J. Terry  
 Human Rights in Egypt, 1952-2003  
 History and Philosophy

11:45 a.m.  
**Jennifer Lynn-Franks Stajdl**  
 Professor Jo Ellen Vinyard  
 The Croatian Immigrant's Experience in the Keweenaw at the Turn of the Century  
 History and Philosophy

Noon  
**Hava Levitt**  
 Professor Ronald Delph  
 Who Built Boudica?  
 History and Philosophy

12:15 p.m.  
**Brittany Ford**  
 Professor Ronald Delph  
 Crusading by Means of Propaganda  
 History and Philosophy

12:30 p.m.  
**Paul H. Doran**  
 Professor Richard Stahler-Sholk  
 Humanitarianism versus Humanitarian Intervention: Kosovo, Rwanda and the Dilemmas of Humanitarian Intervention in the Post Cold War Era  
 Political Science

**Intermedia Gallery**

11:30 a.m.  
**James P. Reece**  
 Professor John Dorsey  
*"November Evening"* by Christopher Norton  
 Music

11:45 a.m.  
**Kristine Marie Reaume**  
 Professor Julie Stone  
*"Sonata for Flute and Piano, Op. 23"* by Lowell Liebermann  
 I. Lento  
 II. Presto energico  
 Music

Noon  
**Leslie Anne Douglass**  
 Professor Glenda Kirkland  
*"Ho sparse tante lagrime"* by Francesco Morlacchi  
 Music

12:15 p.m.  
**Cindi Seal**  
 Professor Weidian Shen  
 Statistical Analysis of Different Coating Damages to Develop a Scratch Behavior Index  
 Physics and Astronomy

Noon  
**Steven Lewis**  
 Professor Denise Pilato  
 High Hopes: Aviation Mindsets  
 Interdisciplinary Technology

**Main Lounge**

11:30 a.m.  
**Timothy Patrick Oleksiak**  
 Professor Anita L. Rich  
 Theater as Persuasion: The Burden of Suffering and Euthanasia in A. M. Holmes' *"Esther in the Night"*  
 Communication and Theatre Arts

11:45 a.m.  
**Afton Williamson and Rashon A. Massey**  
 Professor Wallace Bridges  
*"In the Blood Scene"*  
 Communication and Theatre Arts

Noon  
**Sarah Demmon**  
 Professor Richard Fairfield  
 Etching: Resolving Square Print Compositions  
 Art

12:15 p.m.  
**Stephanie Kruthaupt**  
 Professor Nina Nabors  
 Movies are Going 'Psycho' ogical  
 Psychology

12:30 p.m.  
**Todd M. Vondrasek**  
 Professor Verónica Grondona  
 The History and Syntactic Structure of American Sign Language  
 English Language and Literature

**Gallery II**

11:30 a.m.  
**Jerrell McCowin**  
 Professor Barbara Bilgé  
 Durkheim on Individualism Sociology, Anthropology and Criminology

11:45 a.m.  
**Emily Zehnder**  
 Professor James Egge  
 The Story of a Journey, the Journey of a Story: A Comparison of Three 'Ramayanas'  
 History and Philosophy

Noon  
**Adrienne E. Muncy**  
 Professor Carla Damiano  
 Postmodern Mythology: Globalization, Environmental Degradation and Sorbian Folklore in the Works of Jurij Brezan  
 Foreign Languages and Bilingual Studies

12:15 p.m.  
**Krista McNeil**  
 Professor Sheila Most  
 Dionysus and Jesus: Similarities of Salvation Between a Greek Savior and a Christian Savior  
 English Language and Literature

12:30 p.m.  
**Natalie Tomlin**  
 Professor William Tucker  
 Diverse Students, Diverse Methods: Discovering Shakespeare in the Contemporary Classroom  
 English Language and Literature

**Student Organization Center**

11:30 a.m.  
**Marcus K. Adams**  
 Professor Clovis E. Semmes  
 The Racialization of Jimi Hendrix  
 African American Studies

11:45 a.m.  
**Candace Giles**  
 Professor Ronald C Woods  
 Selected Literature on African American Academic Achievement  
 African American Studies

Noon  
**Teodor Kostadinov Penov**  
 Professor Ronald Cere  
 Conducting the Professional Job Search for the 21st Century and Beyond: International Business Model  
 Foreign Languages and Bilingual Studies

12:15 p.m.  
**Michelle McGahey**  
 Professor W. Douglas Baker  
 A Unit Employing Genres as a Medium for Expressing Original Thought with Decorum of Writing  
 English Language and Literature

12:30 p.m.  
**Tom Cudney**  
 Professor Thomas Franks  
 Schopenhauer's Phenomenological Standpoint  
 History and Philosophy

## STUDENTS, from page 1

ficient organism,” said the presidential scholar. “The only problem is that no one is quite sure how it works.”

His research involves mutating this protein and reinserting it into plant stomata before measuring the activity and determining the actual function of the enzyme in water conservation.

After graduating in April, Coliadis plans to attend dental school at Ohio State University and conduct research in molecular biology. The title of his presentation is “*Site-Directed Mutagenesis of NADP Malic Enzyme.*”

■ When referring to a “win/win situation,” a speaker is usually describing a desirable situation for both parties. **Mary Lema** is studying whether that holds true for a corporation when it donates to charity and profits from that activity.

Lema, a 22-year-old senior from Toronto, will delve into how people feel about companies “buying” advertising or marketing its product through charity donations.

“If the return on investment is greater than the money donated, is that okay? Is it still defined as charitable giving?” Lema asked.

With a goal of working in a non-profit company after graduation in December, Lema, who is in EMU’s American Humanics program, is looking into how companies of all sizes determine their philanthropic donations. Lema said her findings may help companies determine how the public views its charitable activity and what actions will improve their public image. Her project title is “*Philanthropic Efforts in the Corporate World.*”

Lema is majoring in French, marketing and communications for community relations.

■ The United States heavily influenced Canada to become involved in both

World Wars and the Korean Conflict, and almost ran Canadian policy during the 20th century, said **Rory Garnice**. The 23-year-old senior from Reisterstown, Md.,



**GREEN THUMB:** EMU senior Jason Coliadis conducts research to design plants, such as this corn plant, that can better survive drought or arid climates. He will present his work at the Undergraduate Symposium March 26.

to know how much the United States influences Canada,” he said. “Not many people think about that relationship.”

“I became interested in history from my dad,” said the political science major. “We used to talk about history and what’s

w i l l present “*Direct and Indirect American Influence on Twentieth Century Canadian Military and Defense Policy*” at the Undergraduate Symposium.

“It’s

important

going on that day. So, I also got interested in political science.”

Following graduation in December, the history and political science major wants to get involved with international relations, diplomacy or international peacekeeping, possibly in Washington, D.C., where he interned.

■ When matter is bombarded with radiation, the matter changes, said Walter Parry, professor of mathematics, and **Carrie Beck**’s symposium project sponsor.

Beck, a 25-year-old math major from Knoxville, Tenn., will present “*A Model for Radiation Interaction with Matter.*”

Radiation interactions with matter constitute a large number of important scientific, industrial and medical applications, Beck said. More than 1 million new cancer cases occur every year and about half of those patients undergo radiation therapy.

“The models that are employed in radiation therapy are not much more complicated than the mathematical model that will be derived in this project,” said Beck.

Beck, who graduates in December, said she plans to pursue nuclear engineering and radiological science in graduate school.

## POSTER PRESENTATIONS

## College of Arts and Sciences

## Department of Art

## Catherine E. Montgomery

Professor Maria Ruggiero  
Focus on Light: Using Watercolor to Communicate the Quality of Light in Nature

## Department of Biology

## Andrea Benedict

Professor Gary Hannan  
Inter-population Differences in Sex Allocation Patterns in *Platystemon Californicus*

## Jennifer Brown, Rocco Gogliotti, Matthew

Metropoulos, Jennifer Muñiz, Sangita Baxi, Steve

Fernandes, Shawna Shafer and Madhavi Vaka  
Professors Daniel Clemans and Kevin Kuehn  
Analysis of Lignin-degrading Genes from Two New Isolates of White Rot Fungi

## Jason Coliadis and Jennifer Muñiz

Professor Marianne Laporte  
The Role of NADP Malic Enzyme in Stomatal Conductance

## Justn Hohn and Nora Curiel

Professors Gary Hannan and

## Chris Mayda

Mapping Pittsfield Preserve’s Forest Communities: GIS Applications for Comprehensive Resource Management

## Jonathan Kittel

Professor Margaret Coffman  
Genomic Analysis of Growth Hormone (GH)-Transgenic Coho Salmon Using Representational Differential Analysis (RDA)

## Matthew Laffey

Professors Margaret Coffman and Peggy Liggit  
Improving Instruction through Assessment of Student Performance in BIOL 303: Life Science for Elementary Teachers

## Jamie McAdam and David Swoish

Professor Ulrich Reinhardt  
Simple Classroom Experiments to Explore the Effect of Fungicides on Soil and Water Invertebrates

## Tamara Meier, Meghna Waghray and Jennifer Brown

Professor Daniel L. Clemans  
Variation in IL-8 Cytokine Production by Cystic Fibrosis Respiratory Epithelial Cells in Response to AU1051 and HI2711 Strains of *Burkholderia cepacia*

## Matthew Metropoulos, Antwon Morton, Jeff Perry and Gitanjali

## Kundu

Professor Daniel Clemans  
Induction of Interleukin (IL)-8 from Respiratory Epithelial Cells after Stimulation by *Haemophilus Influenzae Proteins*

## Lindsay Richards

Professor Cara Shillington  
The Effects of Prey Consumption on the Metabolic Rates of Spiderlings (Tarantula: *Avicularia avicularia*)

## Christopher Tolliver

Professor Peter Bednekoff  
Commuting to and From Roosts by Crows

## Leann Zielinski and Eillen Tacle

Professor David Kass  
Recent Evolution of *hmg1* Retroseudogenes

## Department of Chemistry

## Harprit Bagga, Matthew Bidlack and Michael Gabor

Professor Steven Pernecky  
DNA Sequencing and Site-Directed Mutagenesis of a Drug-Metabolizing Enzyme

## Starr Burke

Professor Michael J. Brabec  
Toxicity of Dinitroaromatic Compounds in Mammalian Cell Culture

## Rochelle R. Ferrett

Professor Timothy L. Friebe  
Microwave-induced Synthesis of  $\alpha$ -substituted Dioxolan-4-ones

## Carrissia Holloway

Professor Harriet Lindsay  
Selectivity Issues in the Addition of Carbon Nucleophiles to an Amino Acid Derivative

## Powen Hsueh

Professor Maria C. Milletti  
Conformational Stability of Substituted Iminium Cations

## Anita Janiszewska, Kathryn Lawrence, Janice Lima and Courtney Petrok

Professor Steven Pernecky  
Biomarkers of Oxidative Damage to Cell Membranes Caused by a Muscle Protein

## Horacia Opong-Owusu

Professor Deborah Heyl-Clegg  
A Minimal Sequence Analogue of the  $\alpha$ -Amylase Inhibiting Protein, Tendamistat

## Christina Varzoaba

Professor Timothy L. Friebe  
Synthesis of a New, Novel Class of Cyclen Analogues

## Barbara Webb

Professor Larry Kolopajlo  
Inorganic Pollutants in the Stony Creek Watershed

## Department of Communi-

## cation and Theatre Arts

## Dawn Hechinger

Professor Chris Wood Foreman  
The C.O.A.C.H.’s Guidebook to Building a Career Portfolio

## Department of Computer Science

## Mo Kakwan

Professor Michael Zeiger  
Mechanical Spirit: A Computer Game

## Department of English Language and Literature

## Marne Smiley

Professor James Pinson  
The Native American and the History of Journalism

## Department of Geography and Geology

## Christina Wineski and William Spinks

Professor Carl Ojala  
An Analysis of Major Precipitation Events at EMU

## Department of Mathematics

## Carrie Beck

Professor Walter Parry  
A Model for Radiation Interaction with Matter

## Teresa Hudson

## Professor Ken Shiskowski

High School Mathematics – The Left and Right of It

## Department of Psychology

## Matt Nedin

Professor John McManus  
Detoxification, Alternative Therapies and Modern Medicine

## Melissa Shue

Professor Dennis J. Delprato  
Is Incidental Learning Susceptible to Retroactive Interference?

## Laurie Weatherup

Professor Kenneth Rusiniak  
Unveiling the Biological Aspects of Autism

## College of Business

## Department of Accounting and Finance

## Ru Knoedler and Michele M. Haroon

Professor Zafar Khan  
Lessons Learned from Service-Learning Projects in an AIS Capstone Course

## College of Health and Human Services

Department of Human, Environmental and Consumer Resources  
Jennifer Adams, Monique

## Johnson and David Kuhlman

Professor Christine P. Saint George  
Wayfinding Porter College of Education Building

Theresa Brouhard, Paul Glineski, Jessica Lacey and Jacquelyn Platt  
Professor Christine P. Saint George

## Wayfinding Sill Hall

Maureen Donnelly, Guillermina Fulgencio, Michelle Meier, Stephanie Parker, Jenny Trumbull, Vicki White and Kaxzhua Xiong  
Professor Christine P. Saint George

## Wayfinding Quirk Dramatic Arts Building/Theatre

## Marilyn Lee

Professor Judi Brooks  
Nutrition Education to Prevent Obesity in School-Aged Children in Southeast Michigan

## College of Technology

## Department of Industrial Technology

Thomas E. Needham, IV and Donald N. Hudson, III

Professors Pamela K. Speelman and Dave Gore  
Animation of a 3-D Guitar using “Auto Desk” CAD Software