

The Ninth Annual

Undergraduate
Research
Symposium

8 a.m. - 6 p.m.
 Friday, March 29, 1996
 Student Union

A comprehensive insert with presenters, their research and mentors and the times and locations of their sessions is included in this issue of *Northeast Today*. If you do not receive a copy of the insert or you would like extra copies, contact the Public Relations Office, McClain Hall 202.

Executive-In-Residence to Visit April 1-2



Bradley J. Muth, vice president and senior acquisitions officer of the investment bank for ING Barings Bank, will visit campus April 1-2 as the Executive-In-Residence in the Division of Business and Accountancy.

Muth is a graduate of the Master of Accountancy program at Northeast. His career began as a certified public accountant with Arthur Andersen and Company. He has also worked as an assistant vice president with Metropolitan Life Insurance Company and as a portfolio manager with JMB Realty Corporation of Chicago. Currently he works for ING Barings Bank and has been responsible for several strategic acquisitions for the Group's real estate operation. Currently he is in the process of opening a Chicago office and operation for the Group scheduled for June 1996.

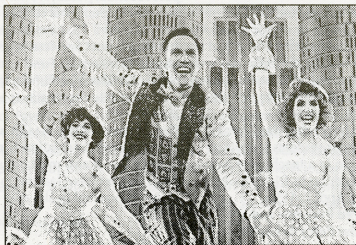
ING Barings is a wholly owned subsidiary of Internationale Nederlanded Groep, NV, headquartered in Amsterdam, The Netherlands. ING is one of the largest and most diverse financial concerns in the world with operations in more than 60

countries and trading activity in more than 90. Barings Bank was acquired by ING in March 1995 and is now fully integrated into ING's operations.

Muth will deliver a series of presentations to classes in the Division of Business and Accountancy, as well as division-wide and campus-wide presentations. The division-wide presentation titled "Northeast: A Foundation to the Future" will be held on April 1 at 4 p.m. in the SUB Activities Room. This presentation will highlight Muth's career achievements with Northeast as a primary building block for his education. The campus-wide presentation titled "Facing the Challenge of Change" will be held on April 2 at 4 p.m. in the SUB Tangerine Room. It will focus on how students can successfully adapt to the changing work environment in their future.

The Executive-In-Residence program was made possible in 1994 by a \$110,000 endowment from the IMCERA group in honor of 1960 Northeast graduate Raymond F. Bentele, former president and CEO of Mallinckrodt Inc. The program allows Northeast to select one outstanding individual from business and industry to visit campus each year.

Lyceum Ends Year With Classic Musical



"Come and meet those dancin' feet..."
 Only the Tony Award-winning musical *42nd Street* could deliver such a spectacular song and dance extravaganza. Hailed as "Broadway's brassiest hit...", *42nd Street* will come to the Baldwin Auditorium stage on Monday, April 1, at 7:30 p.m.

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Sigma Xi Lecture to Focus on Evolution

On April 2, at 7:30 p.m. in the SUB Activities Room, Dr. Martin K. Nickels will present a lecture titled "The Case for Evolution: The Evidence from Humans."

The lecture, which is free and open to the public, is sponsored by the Kirksville Chapter of Sigma Xi, the Scientific Research Society. The goals of the Society are to honor scientific accomplishments, to encourage and enhance worldwide appreciation and support of scientific research and to foster a creative and dynamic interaction among science, technology and society. The Nickels lecture will be the eighth annual National Lecture presented by Sigma Xi.

Nickels is a professor of physical anthropology at Illinois State University. He is a member of the American Association of Physical Anthropology, as well as a member of several science and biology teaching associations. Nickels has conducted numerous workshops on teaching human evolution since 1985 and has been awarded several National Science Foundation Teacher Enhancement Program

grants. He has published *The Study of Physical Anthropology and Archaeology*, and articles in journals such as *The Sciences*, *The American Biology Teacher* and *Creation/Evolution*.

Several articles of background material provided by Nickels may be found on reserve under "Sigma Xi National Lecture" at both Pickler Memorial Library and A.T. Still Memorial Library (KCOM).



Scholarship Opportunities

For more information or an application, contact the Financial Aid Office, McClain Hall 103.

The Alpha Delta Kappa Iowa Sigma Chapter is offering a scholarship of \$300 annually to graduates of Des Moines County high schools who are already committed to becoming educators. College freshmen through seniors may apply. Deadline is April 30, 1996.

The Emerald City Charter Chapter of the American Business Women's Association in Kirksville is accepting applications for scholarships. Scholarships are offered to women attending a post-high school, college or university in the state of Missouri as a full-time students for the 1996-97 academic year. This year two scholarships, in the amount of \$250 each, will be awarded. Each applicant must submit a complete form, three letters of recommendation, transcripts of grades, ACT scores, class rank and percentile. Deadline is April 5, 1996.

The Missouri Chapter of Women In Energy, Inc. offers a scholarship to full-time students of junior or senior standing attending a Missouri college or university for \$1,000. The recipients must be enrolled in a field leading to a career in the energy industry or a field connected with the study or use of various energy sources and must demonstrate professional potential. The deadline is April 19, 1996.

The First United Methodist Church is offering the Chester and Lola Bell Memorial Scholarship for students pursuing post-secondary degrees or certification in a teaching or helping profession. This scholarship is worth up to \$1,250, with possible yearly renewals. Deadline is April 1, 1996.

The Kansas City Society of Chartered Property and Casualty Underwriters is offering the Percy S. Lorie

ITC Workshop Schedule

All of the following workshops will be held in the Library New Media Center. To register for a workshop, call the Instructional Technology Center at 785-4545.

- March 26- **Video Editing Equipment**, 3:30-5 p.m.
- March 27- **Infini-D - Part 1 of 2**, 3:30-5 p.m.
- March 28- **Adobe Premiere**, noon-2 p.m.
- April 3- **Illustrator - Part 1 of 3**, 3:30-5 p.m.
- April 3- **Infini-D - Part 2 of 2**, 6-8 p.m.
- April 4- **Intro to Photoshop**, 9-11 a.m.
- April 1- **Illustrator - Part 2 of 3**, 3:30-5 p.m.
- April 15- **Scanning and Image Editing**, 3:30-5 p.m.
- April 17- **Illustrator - Part 3 of 3**, 3:30-5 p.m.

Scholarships for the 1996-97 school year. Students must be seniors majoring in an insurance-related field. Deadline is August 1, 1996.

The American Institute of Certified Public Accounts is offering 1996-97 scholarships up to \$5,000 for minority accounting students who intend to be certified public accountants. Deadline is July 1, 1996.

The American Institute of Certified Public Accountants is offering the 1996-97 John L. Carey Scholarships of \$5,000 per year for liberal arts undergraduates pursuing graduate studies in accounting. Applicants must express the intention to pursue a CPA certificate. Deadline is April 1, 1996.

The John Gyles Education Fund is offering financial assistance to Canadian or American students in all areas of post-secondary study. A minimum GPA of 2.7 is required. Selected students will receive up to \$2,500. Deadlines for 1996 are April 15, June 15 and Nov. 15.

Family Support Services is issuing applications for the Mark M. Fitz Scholarship Fund and the Mary Cobb Special Needs Scholarships Fund to juniors and seniors pursuing undergraduate degrees in special education. Deadline is April 30, 1996.

The Campus Safety, Health and Environmental Management Association is offering three \$500 scholarship awards. Applicants must be undergraduate or graduate students in a program leading to a degree in occupational safety, environmental health or a related field. Deadline is April 1, 1996.

Northeast Notables

Nate Alexander, a German/finance major; Rick Bachman, a business administration/marketing major; Katie Meierotto, a German major; and Matt Schmidt, a German major, were selected to participate in the competitive Webster University 1996 German-American Business Internship Exchange.

Michael Bryson, graduate student in English, has been awarded a Woodburn Fellowship for doctorate study at State University of New York-Buffalo. Fellowships provide a stipend without required service for four years. He has also been awarded fellowships at Loyola University, Northwestern University and University of Notre Dame.

David Cicotello, Academic Planning Services counselor, presented a program in October on study skills for students in Beverly Wait's notetaking class at the Kirksville Area Technical Center. He was also a local judge for the 1995-96 Optimist International Essay Contest, "Freedom: A Right or a Privilege," held in December. In February he was a guest lecturer on Shakespeare's "Twelfth Night" in college preparatory English classes taught by Karen Mulford at Kirksville Area High School. His multi-media presentation "Equal or Better? Reminiscences of the Negro Leagues" has been accepted for the second Indiana State University Conference on Baseball in Literature and Culture on April 5 in Terre Haute. His paper, "Baseball's Service to America in WWII," is one of 27 proposals recently selected by jury competition for the eighth Cooperstown Symposium on Baseball and American Culture, June 12-14.

Thomas Hueber, associate professor of music, was recently selected as the Missouri District Governor for the National Association of Teachers of Singing.

Dee Lesseig, assistant professor of nursing, received notice that her article, "Anti-depressant Pharmacotherapy Update," will be published in *Perspectives in Psychiatric Care*, a referred journal for psychiatric / mental health issues.

Sara Orel, assistant professor of art history, has had two articles published recently. One is in Volume 81 of *The Journal of Egyptian Archaeology* (1995), titled *Two Unpublished Stelae from Beni Hasan*. The other she co-authored about the monuments currently on display in the region of Lake Nasser in southern Egypt, for the current issue of *KMT*. Dr. Orel will be attending the annual meeting of

the American Research Center in Egypt in April, where she will be presenting a paper titled, *Documentation for the Changing Nature of Early Christianity in Egypt: The Case of the Gebel el-Haridi*.

The Student Senate vision document, Challenges for a New Era, was selected to be cited in the February 1996 issue of *Resources in Education*, a publication of the United States Department of Education. The document is available to professors, administrators, research specialists and the general public through the U.S. Department of Education.

Dwyane Smith, assistant dean for multicultural affairs, has published an article in *Black Issues in Higher Education* titled, "Preparing Students for a Multicultural World."

Richard Weerts, professor of fine arts, has been editor of the *National Association of College Wind & Percussion Instructors Journal* since 1968. Chadwyck-Healey, Inc. has identified the journal for inclusion in its premier edition, *International Index to Music Periodicals*. Chadwyck-Healey, Inc. is a leading international publisher of microform and CD-ROM product, publishing in electronic formats for the humanities and social sciences. The NACWI Journal is presently in its 44th year of continuous publication.

Adam Fisher, Ken Crumpler, Rob Prichard and Chad Stockel, members of the Northeast's College Bowl team, coached by **Randy Hagerty, associate professor of social science,** traveled to the Regional College Bowl Tournament at Kansas State in Manhattan, Kan., on Feb. 23-24. **Chris Wambi, Blue Key campus College Bowl tournament coordinator,** assisted with the regional tournament.

Orin Worden and Patricia Emmerich participated in the Association of College Unions-International Regional Recreation Tournament at Kansas State in Manhattan, Kan. They represented Northeast in the 8-Ball Pool Tournament.

Congratulations to the 1996 Campus Activities Leaders: Amy DeHart, Karin Stoltenber, Sarah Woods, Christine Carlson, Erin Taylor, Timothy Cople, Andy Hansen, Liz Vermedahl, Lisa Cummings, Kiersten Wickham, Pat Cross, Lisa Brokaw, Mini Tandon, Angela Pierce and Andy Gensler. The CAL Coordinator is **Chris Wiedmeyer.** They assist with Freshman Week evening activities and Transfer Student Orientation.

Lyceum...Classic Musical
cont. from page 1.



The musical is sponsored by the Lyceum Series. Free tickets for students, faculty and staff are available in the SAB Office, Student Union.

The musical is based on the 1933 Warner Brothers film that starred Ruby Keeler, Dick Powell and Ginger Rogers. The musical opened in 1980 and ran for 6,137 performances on Broadway until its closing night 10 years later.

42nd Street offers a behind-the-scenes look at the musical *Pretty Lady*, where a chorus girl from Allentown, Pa., gets the chance to become an overnight star when the leading lady can't go on. Featuring sensational tap dancing and such well-known songs as, "We're in the Money," "Lullaby of Broadway" and "42nd Street," the musical offers a look at an era gone-by. When tap dancing was at its height in the early 1930s, such tap dancing legends as Shirley Temple, Bill "Bojangles" Robinson and Gene Kelly exemplified the Hollywood dream of making it big on Broadway.

42nd Street recalls this Broadway dream and makes it come true for the chorus girl. Flashy and fun, the show is sure to thrill audiences with its timeless tunes and sensational dancing, as it assures that sometimes dreams do come true.

This Week

25 Monday

1:30 & 2:30 p.m.—“Deciding About Graduate and Professional Schools,” SUB Alumni Room; see Notes.

7 p.m.—**Juried Student Exhibit opening reception**, University Art Gallery

26 Tuesday

6:30 p.m.—**Service Recognition Banquet**, SUB Georgian Room

7 p.m.—**Beatrice Kerr, AIDS survivor and educator**, Ryle Hall main lounge

8 p.m.—“**Standing on My Knees**,” Actors’ Studio, Baldwin Hall 180; through April 30.

9:30 p.m.—**Pre-Law Club presents Mike Killabuhl**, Northeast alumnus and Washburn Law School stu-

dent, SUB Conference Room
27 Wednesday
noon-2 p.m.—**Sexual Harassment 1996: Scholarly Definitions and Everyday Realities**, a live/interactive teleconference produced by *Black Issues in Higher Education*, SUB Activities Room

8 p.m.—**New Mexico Brass Quintet**, First Presbyterian Church

28 Thursday
7:30 p.m.—**Ms. All That Pageant**, Ryle Hall main lounge

29 Friday
8 a.m.-6 p.m.—**Undergraduate Research Symposium**, SUB

12:40 p.m.—“**The Archaeology of a Crime Scene**” by Tal Simmons, assistant professor of anthro-

pology at Western Michigan University, SUB Georgian Room.

30 Saturday

The Chess Club and Take 5 Gamesroom chess tournament, SUB 2 and 3. The entry fee is \$3; also March 31.

10 a.m.—**University League March meeting**, SUB Spanish Room. Susan Jackson will demonstrate the art of quilting. Brunch will be served for \$2.95. Child care will be provided for \$1 per child (\$2 maximum). All Northeast faculty wives, women faculty and staff are invited to attend. For reservations, call Colleen Gooch at 627-0215 or Debbie Hemmeyer at 665-8605.

31 Sunday

7:30 p.m.—“**Regression Night: Children’s Literature**

for Stressed-Out Grown-Ups!!”, sponsored by Readers Roundtable, Wooden Nickel. For more information, call Aimee Bahr at 665-6535.

1 Monday

4:50 p.m.—“**Northeast: A Foundation to the Future**,” featuring Brad Muth, vice president for real estate structured finance for ING Capital Corporation and the 1996 Executive-in-Residence, SUB Activities Room; see story, p. 1.

6-11 p.m.—**Take 5 Gamesroom April Fool’s Day Air Hockey Tournament**, the tournament is open to University students and costs \$2.

7:30 p.m.—**42nd Street**, a Lyceum Series presentation, Baldwin Auditorium

Northeast Notes

Remember to VOTE. City elections are Tuesday, April 2.

The Women’s Resource Center is accepting applications for staff positions for next year. Applications are due April 4 and are available at the Center in Ryle Hall foyer.

“**Nirvana in the Liberal Arts: My Way and the High Way**” by Lloyd Plueger, assistant professor of philosophy and religion, will present the fifth annual Phi Beta Kappa Lecture, co-sponsored by the Office of Faculty Development, on April 3 at 12:30 p.m. in the SUB Tangerine Room.

Students enrolled in French 221 or above may participate in the Fourth Annual French Immersion Weekend

at **Camp Thunderbird.** One credit hour is offered and \$25 is needed for food and lodging. Contact Timothy Farley at 785-4059 or Baldwin Hall 288C for a yellow card.

Kirk Gym reservations for fall semester will start at 9 a.m., April 3 in the CAOC office. Reservation forms may be picked up in advance at the CAOC.

Tutors are needed to help an exchange student with English and a teenage girl with preparation for her GED. Volunteers are also needed to read aloud to individuals around Kirksville for 3 hours a week. Contact the Center for Service-Learning at 785-4265 for more information.

The one credit hour second block course, POL554: Model United Nations, has been moved to 7:30 p.m., Thursdays, in Ophelia

Parrish 210. The course is designed to prepare students for a fall MUN Conference. For information, contact Dr. Vorkink at 785-4661 or Kevin Bauer at 785-5629.

Applications are available for Writing Center writing consultants for the fall 1996 semester. Applicants may be from any major and should have superb interpersonal skills as well as superior writing skills. For more information stop by the Writing Center, McClain Hall 303 or call Terri Norero at 785-4484. Deadline is April 10.

Order of Omega will present a Golden Apple Award to an outstanding educator from each division at 5 p.m., April 10 in the SUB Tangerine Room. For more information, contact Melissa Pomictar at 627-4027.

The Division of Social Science will conduct a workshop called “Deciding

about Graduate and Professional Schools” for sophomore and junior social science majors. The workshop will outline the early steps students must take to keep their graduate school options open. The workshop will be held March 25 at 1:30 and 2:30 p.m. in the SUB Alumni Room. Students may attend either session.

Take 5 Gamesroom is hiring desk attendants for summer and the 1996-97 academic year. Applications are available in the CAOC and are due April 4.

“**Meeting America’s Health Care Challenges with Information Technology**” will be sponsored by the Nursing Program on April 25. This live, interactive videoconference will be held from noon to 2:30 p.m. in the SUB Activities Room.

Undergraduate Research Symposium

Northeast's Ninth Annual Undergraduate Research Symposium will be March 29 in the Student Union from 8 a.m. to 6 p.m. A total of 164 presentations will be made during six concurrent sessions representing the work of more than 200 student authors and 100 faculty mentors. Papers presented include oral and poster presentations and demonstrations. The Phi Alpha Theta History Symposium will take place in the Conference Room from 3 to 5:30 p.m. The Speech Communication Symposium will take place from 11 a.m. to noon and from 1:30 to 2:45 p.m. in SUB 6. Poster sessions and demonstrations will occur throughout the day in the Activities Room.

The Symposium luncheon speaker will be Tal Simmons, forensic scientist and archaeologist at Western Michigan University. Her presentation titled, "The Archaeology of a Crime Scene" will be presented in the Georgian Room at 12:40 p.m. Her presentation is open to the public.

The URS continues to showcase the increasing involvement and diversity of research by students on our campus. It is truly an active learning interdisciplinary educational forum.

All students, faculty and staff are cordially invited and encouraged to attend.

SESSION A

TANGERINE ROOM

8 a.m.-a-Effects in Methyl Transfers from Aryldimethyl Sulfonium Salts Correlate with Single Electron Transfer Characteristics

Ken Patel

K. R. Fountain, mentor

8:15 a.m.-Metalloporphyrins and DNA

Amy Hurd

Dawood Afzal, mentor

8:30 a.m.-The Synthesis and Applications of the Water Soluble Porphyrin: tetra-meso-Pyridial-Porphyrin, H₂-TMPyP

Patrick L. Kirchhoefer

Dawood Afzal, mentor

8:45 a.m.-Synthesis Directed Towards a Porphyrin Based Molecular Wire

Ben Martin

Dawood Afzal, mentor

9 a.m.-The Synthesis and Analysis of Metalloporphyrins

Ron Patel

Dawood Afzal, mentor

9:30 a.m.-Evaluation of Bacillus Spores as Surrogate Organisms for the Detection of Giardia Cysts and Cryptosporidium Oocysts in Drinking Water

Michael Rothermich

Gary Sells, mentor

9:45 a.m.-Characterizing Proline Oxidase from Plant Mitochondria

Brandon Hamm* and Eric Chatt

Gary Sells, mentor

10 a.m.-Treating Mental Diseases by Manipulative Means: Psychiatry Within Early Osteopathic Medicine

Sarah Zapf

Philip Wilson, mentor

10:15 a.m.-The Synthesis and Characterization of Bis(N-methyl-benzohydroxamate-O,O') copper (II) Salts

Dan Brink

Pamela R. New, mentor

10:30 a.m.-Defining Operating Parameter Values of the Weimer and Smith Oscillating Reaction

Amy Jo Kruger

Kenneth N. Carter, mentor

11 a.m.-Investigation of Lead and Cadmium Levels in Road-side Rhododendron Leaves in Bergen, Norway, Utilizing Multivariate Analysis

Julia M. Hurst*, Adam R.

Yeager*, Paul Johan Hol,

Andrew J. Gawron, and Rolf Isrenn

Dean Van Galen, mentor

11:15 a.m.-Continued (**Hurst, Yeager, Hol, Gawron, and Isrenn**)

11:30 a.m.-Preparation of Colloidal Particles Containing Au and Cu

Allison Boney* and Ben Cutak*

Griff Freeman, mentor

11:45 a.m.-Continued (**Boney and Cutak**)

1:30 a.m.-Physiological and Psychological Effects of Hand-Held Weights on a Step Aerobics Routine

Jill M. Mathys

James Heimdal, mentor

1:45 a.m.-Repetitions to Predict Muscular Strength in Different Exercises

Kristin McGuire

Larry W. Boleach and Jerry L.

Mayhew, mentors

2 p.m.-Relationship Between Agility and Power Tests in College Students

Lisa Prather

Larry W. Boleach and Jerry L.

Mayhew, mentors

2:15 p.m.-The Development of a Physical Activity Acceptance Scale to Determine Gender Views on Female Participation in Traditionally Masculine Exercise and Sport Participation

Jayne M. Scanlan and Katie L. Ballman

Christopher D. Lantz and Jerry L.

Mayhew, mentors

2:30 p.m.-Examination of Athletic Identity and Gender-Role Orientation in University Varsity Student-Athletes and Non-Athlete Students

Peter J. Schroeder

Christopher D. Lantz, mentor

3 p.m.-Comparison of Hand Timing and Automatic Timing for the Margaria-Kalamen Test

Kristin Sucher and Sally Skelton

Larry Boleach and Jerry L.

Mayhew, mentors

3:15 p.m.-Effect of Visual Stimulus on Energy Expenditure, Heart Rate, and Perceived Exertion During Stationary Cycling Performance

Craig Utterback and Carrienne Prybylski

Jerry L. Mayhew and

Christopher D. Lantz, mentors

3:30 p.m.-Comparison of Laboratory Techniques and Field Evaluation for the Assessment of Performance of Women Rugby Players

Danielle M. Wright*, Jason E. Glover, Robert J. Standing, and Michael E. Longdon

James E. Heimdal, mentor

3:45 p.m.-Rural Adolescent Injuries in Adair County

Saskia Farber

Stephen Hohman, mentor

4 p.m.-The Spectrophotometric Determination of Zinc Levels in Human Serum by Using Br-PADAP

Jessica Arnold

Yinfu Ma, mentor

4:30 p.m.-Determination of Serum Iron by Kinetic Techniques

Amy Spain

Yinfu Ma, mentor

4:45 p.m.-Neither Dumb nor Different: The Myth of the "Second Tier"

Matthew S. Lomax and David T. Woods*

Roger R. Festa, mentor

5 p.m.-1,3-Dinitrobenzene Analysis in the Tissues of *Cryptosporidium Parva*

David S. Skibbe

Yinfu Ma, mentor

5:15 p.m.-Investigation of Ultrasonic Effects on the Separation of DNA Fragments in Agarose Gel Electrophoresis

Aaron Cassely

Yinfu Ma, mentor

5:30 p.m.-Development of a Rapid Assay Technique for Detecting Urinary Pteridine Levels for Monitoring Cancer

Tim Busenhardt

Yinfu Ma, mentor

SESSION B

ALUMNI ROOM

8 a.m.-Use of the World Wide Web in Science Education

Carolyn A. Turner

Brent Buckner, mentor

8:15 a.m.-Identification of a Mobile Genetic Element in Maize

Kirsten Andrews, Tammy Benson, Catherine Clamp*, Tracey Dowey*, Andy Dykens, Jeremy Grojean*, Karen Kemper, Janet O'Neal, Walter Roensch, David Skibbe, Kathy Smock, Mindy Steinger, Andy Walkup and Mark Wissel

Brent Buckner, mentor

8:30 a.m.—Continued (**Andrews, Benson, Clamp, Dowey, Dykens, Grojean, Kemper, O'Neal, Roensch, Skibbe, Smock, Steiniger, Walkup, and Wissel**)

8:45 a.m.—Effect of Varying Sucrose Concentration in the Reaction Chamber on Respiration of Mitochondria Isolated from Maize Shoots during Oxidation of Proline, Succinate and Exogenous NADH
Swati S. Baxi and Christine Healey
Gary Sells, mentor

9 a.m.—Effect of Water-Stress on Activity of Selected Enzymes of Mitochondria Isolated from Maize Shoots
René Robinson and Adam Whaley-Connell*
Gary Sells, mentor

9:30 a.m.—X-Ray Imaging Through Computed Tomography
Morgan Dawdy
Eduardo Velasco, mentor

9:45 a.m.—Boundary Conditions for the Skyrme Model when Cylindrical Symmetry is Assumed
Gerald J. Good
Peter Rolnick, mentor

10 a.m.—Vibrational Modes of Cantilevered Beams and Wedges
Jason Gower

Ian M. Lindevald, mentor
10:15 a.m.—Eddy Current Damping of a Driven Oscillating Magnet

Erik M. Johnson* and Allen P. Brokken*

Kenneth D. Hahn, mentor

10:30 a.m.—Continued (**Johnson and Brokken**)

11 a.m.—Can Colleges Accurately Predict Incoming Students' Ability to Achieve?

Kristin Adank

James Guffey, mentor

11:15 a.m.—The Foucault Pendulum

Jonathan W. Mallard

Mohammed Samiullah, mentor

11:30 a.m.—The Twin Paradox as a Method of Traveling Through Time

J. Andrew Upchurch

Peter Rolnick, mentor

11:45 a.m.—Cost Analysis of Home Heating

Matt Phoenix

Peter Rolnick, mentor

1:30 p.m.—Comparative Pollen Morphology of the Callitrichaceae: Implications for the Evolution of Underwater Pollination
Ranessa L. Cooper
Jeffrey M. Osborn, mentor

1:45 p.m.—Pollen Wall Morphology in *Cabomba caroliniana* (Cabombaceae): An Ontogenetic Study

Benjamin L. Gutman

Jeffrey M. Osborn, mentor

2 p.m.—Reproductive allocation patterns of *Lobelia spicata* across a Savanna/Forest Ecotone

Kelly McConnell

Steven Carroll, mentor

2:15 p.m.—An Analysis of Blue Color Variation in the Birdfoot Violet (*Viola pedata*)

Kevin F. Tulipana

Steven Carroll, mentor

2:30 p.m.—Prey Capture and Swimming Behavior of the Arrowworm Parasagitta elagans (Phylum Chaetognatha)

Laura E. Foster and Angela M. Lohse

George L. Shinn, mentor

3 p.m.—DNA Fingerprinting of Southern Flying Squirrels, *Glaucomys volans*

Sarah M. Tofari

Cynthia L. Cooper and L. Scott Ellis, mentors

3:15 p.m.—Mitochondrial Oxygen Consumption in *Peromyscus leucopus* and White Laboratory Mouse

Kathy K. Smock

Michael Tannenbaum, mentor

3:30 p.m.—Effects of MCBG and DFMO on Mitochondrial Respiration in Digitonin Permeabilized PC12 Cells

Sara E. Brokaw

Cynthia L. Cooper, mentor

3:45 p.m.—The Effects of a Forest Corridor with Respect to Lateral Stream Channel Migration

Jason C. Burckhardt

Brian L. Todd, Missouri Department of Conservation, mentor

4 p.m.—Recovery of Aquatic Invertebrate Communities in Small Drainages on Strip-Mined Land

Christian Hutson and Scott Showers

Donald Kangas, mentor

4:30 p.m.—The Effect of Group Membership on Morality Ratings

Katherine Milewski*, Nicole Siener, and Jason Marquart

Teresa Heckert, mentor

4:45 p.m.—New Insights on Couples Living Together Before Marriage

Juanita Myles

Teresa Heckert, mentor

5 p.m.—Media Effects on Perceptions of Rape Victims

Rebekah S. Oehring and Jennifer R. Wheelchon

Amy L. Otto, mentor

5:15 p.m.—HIV Status and Dating: A Content Analysis of Gay Male Personal Advertisements

Ryan T. Parmenter*, Daniel W. Baack, Todd Sievert, Meagan K. Bonnell, and Katherine A. Milewski

Mark N. Hatala, mentor

5:30 p.m.—Self-reported Ageism and Perceptions of Elder Abuse: A Study of Young Adults

Kathleen Reinagal* and Renee Byers

Sherri Palmer, mentor

SESSION C

ROOMS 2/3

8 a.m.—President Harry Truman and the United States Supreme Court

Jennifer Lunsford

Paul Parker, mentor

8:15 a.m.—Political Participation as a Function of Sexual Identification

Jay David Terwilliger II

Candy Young and John Ishiyama, mentors

8:30 a.m.—Centralization and Standardization of Computing Resources in City Government

Ryan McCune

Candy Young, mentor

8:45 a.m.—Political Chaos: What Political Scientists Can Learn from Jurassic Park

Paul Mortensen

Keith Doubt, mentor

9 a.m.—Assessing Prehistoric Political Development and Evolution Through Art

Christina M. Phillips*

Ralph M. Rowlett, mentor

9:30 a.m.—Pedestrian Safety Behavior of College-Aged Students

Kirk Baker*, Katie Kraus*, and Saskia Farber

Ranjita Misra and Stephen Hohman, mentors

9:45 a.m.—Contribution of

Strength and Power to Throwing Speed

Calanet Balas and Lori Cox

Jerry L. Mayhew, mentor

10 a.m.—Effect of Exercise Intensity During Downhill Running on Active Female's Maximal Eccentric Strength and Delayed Onset of Muscle Soreness

Darren Burns

James Heimdal, mentor

10:15 a.m.—Effect of Step Height on the Oxygen Cost and Energy Expenditure of Step Aerobics

Melissa Coffey*, Sara Hill, Tina Troy*, and Erin Willey*

Jerry L. Mayhew, mentor

10:30 a.m.—Acoustic Analysis of Spanish Vowel Productions

Amy Kraft

Cornelis Koutstaal, mentor

11 a.m.—Psychophysiological Assessment of Overtraining in Division II Collegiate Swimmers

Jennifer D. Frankenberg

Christopher D. Lantz and Jerry L. Mayhew, mentors

11:15 a.m.—Effect of Carbonated Beverage Intake on VO2max on College-Age Women

Chris Jones and Lisa Prather

Jerry Mayhew, mentor

11:30 a.m.—Comparison of Cardio Glide to Treadmill Exercise at Equivalent Intensities

Sandra Kalsow

Jerry L. Mayhew, mentor

11:45 a.m.—Evaluation of the YMCA Bench Press Test for Predicting 1-RM Using Free Weights and Machine Weights

Katie Kraus

Jerry L. Mayhew and Beverly Tremain, mentors

1:30 p.m.—A Study of Business Communications and Theories

Kuan-Hua Julia Lin, Beth Turner, and Louis Williams

Jason Lin, mentor

1:45 p.m.—Ergonomics: Ever Increasing Importance in the Workplace

Anita Beltz*, Danielle King*, Cynthia Parker*, and Kenneth Baxter

Nabil Alghalith, mentor

2 p.m.—Recruitment Activities to Attract Undergraduate Business Majors

Lisa Kralina and Connie Sherwood

Jeff Romine and John Perrachione, mentors

2:15 p.m.—*Italian Culture and Management Style*
Alessandra Gentili
Pyung Han, mentor

2:30 p.m.—*The Inverse Relationship Between Interest Rates and the S&P 500 Index*
Andrew Bakota* and Tom Cella
Andrew Mun, mentor

2:45 p.m.—Continued (**Bakota and Cella**)

3 p.m.—*The Cause and Effect of the Rising Yen: The March of 1995*

Mike Rejniak* and Yen-ling Chen
Andrew Mun, mentor

3:15 p.m.—Continued (**Rejniak and Chen**)

3:45 p.m.—*Lives of Professional Accountants*
Jared Rogers
Jeff Romine, mentor

4 p.m.—*The Human Resource Manager's Role in Conflict Resolution in Cases of Sexual Harassment*

Jill Thurau
Michael Blum, mentor

4:30 p.m.—*Pelement Mutation and mRNA Analysis of Sterile *Drosophila melanogaster**
Walter L. Roensch
Janna McLean, mentor

4:45 p.m.—*Distribution of Arginine Vasotocin, Neuropeptide Y, and Serotonin Immunoreactivity in the Suprachiasmatic Region of the Green Anole, *Anolis carolinensis**
Jason McCoy
Daniel Janik, mentor

5 p.m.—*Natural Product Analysis of the *Ganoderma tsugae* Mushroom with Comparison to the *Ganoderma lucidum* Mushroom*
Adam Yeager
Anne Moody, mentor

5:15 p.m.—*Allosteric Characterization of Nonsteroidal Anti-Inflammatory Drugs (NSAID's)*
Peter Basta
Robert Libby, mentor

SESSION D

CONFERENCE ROOM

8 a.m.—*Nature Mysticism in the Three Art Forms*
Jill Goodheart
Robert Mielke, mentor

8:15 a.m.—*Existential Themes in Simone de Beauvoir's *Life**
Elizabeth A. Kemery
Betty McLane-Iles, mentor

8:30 a.m.—*An Interview with Jeffrey Eugenides, Author of *The Virgin Suicides**

Ron Klier
Adam Davis, mentor

8:45 a.m.—*On the Rails, The Backside of America*
Brian Twenter
Adam Davis, mentor

9 a.m.—*Proposal for a Minor in Gender Studies*
Clinton W. McCracken
Linda Seidel, mentor

9:30 a.m.—*Do You Come Here Often? Gender Based Responses to Direct and Indirect Discourse in Heterosexual Barroom Interaction*

Rob Neal and Stacy Rummel
Adam Davis, mentor

9:45 a.m.—*Intertextuality vs. Allusion in Three Art Forms: The Work of Roger Brown*
Melanie A. Redman
Robert Mielke, mentor

10 a.m.—*Channel Surfing in Art Forms*
Amy Ronkek
Robert Mielke, mentor

10:15 a.m.—*Analyzing Cultural Differences in French Film and the American Remake*
Paul B. Ribbing
Timothy Farley, mentor

10:30 a.m.—Continued (**Ribbing**)

11 a.m.—*The Effect of Male Flower Age on Pollen Viability and Progeny Performance in *Silene latifolia**
Jean Ly
Steven Carroll, mentor

11:15 a.m.—*Differences in Aphid Resistance Between Males and Females of *Silene latifolia*, a Common Weed*
Mary Blandford
Steven Carroll, mentor

11:30 a.m.—*Effects of Selfing and Outcrossing on Seed Characteristics in a Weedy *Hibiscus**
Joie Scott
Steven Carroll, mentor

11:45 a.m.—*The Effect of Pollen Competition on Seedling Emergence at Different Temperatures*
Tiffani K. Truitt
Steven Carroll, mentor

1:30 p.m.—*The Effect of Conception Rate of Mating Ewes to Vasectomized Males After Vaginal Insemination with Frozen Ram Semen*

Tammy J. Benson

Thomas E. Marshall, mentor
1:45 p.m.—*The Value of Five Prairie Legumes for Interseeding in Standing Switchgrass*

Lisa Brokaw
Duane Merlin Ford, mentor

2 p.m.—*The Financial Conditions and Growth Potential of Northeast Missouri Farms*

Elisa Martin
Paul Armah, mentor

2:15 p.m.—*Effects of Wind on Seed Distributions*

Travis Austin
Michael Kelrick and Steve J. Smith, mentors

2:30 a.m.—*An Individual-Based Computer Simulation Model of an Herbicide-Resistant Weed Population Model*

Thomas Kent
Nicholas Jordan and Steve J. Smith, mentors

Phi Alpha Theta History

Symposium

MODERATOR: J. J. OREY

3 p.m.—*Ethnic Dignity in the Melting Pot: Italian-American Misconceptions and Manipulations of fascism*

Angela DiConstanzo
Mark Hanley, mentor

3:15 p.m.—*Women, Wheels, and Pop Culture: Disability and its Effects on Self-Image*
Courtney Gillenwaters
Martha Edwards, mentor

3:30 p.m.—*Executive Order 9981: The Success of A. Phillip Randolph*
Jason Marquart
Mark Dalhousie, mentor

3:45 p.m.—*The Crusades: Not Just a Holy War*
Ryan Totten
Martha Edwards, mentor

4 p.m.—*Faith: Kirksville Women of the 1920s*
Brenda Seale
John Ramsbottom, mentor

MODERATOR: BRENDA SEALE
4:30 p.m.—*The Superpowers in Angola: Foreign Influence in the Angolan Civil War*
Chris Norton
David Hartsfield, mentor

4:45 p.m.—*A Memory Up in Smoke: A Look at the Coal Mining Industry in the Kirksville Area*
Brant Donis
Robert Cummings, mentor

5 p.m.—*The Fate of the Fortune-Tellers*

Dawn Vogel
David Robinson, mentor

5:15 p.m.—*The American Church Goes Abroad: Mormon Missionary Work 1832-1900*

James Thomas Nugent
Mark Y. Hanley, mentor

Session E

Room 6

8 a.m.—*The Effects of Ethnic Makeup on Cooperation and Competition in the Prisoner's Dilemma Game*

Shirley S. Artega
Terry Palmer, mentor

8:15 a.m.—*The Interaction Between Odors and Memory*
Daniel Baack
Mark Hatala, mentor

8:30 a.m.—*Attributes, Memory, and Choice Behavior: A Test of the Unique-Features Model with Consumer Product Preferences*
Meagan K. Bonnell*, Daniel W. Baack, Ryan T. Parmenter, and Katherine A. Milewski
Mark N. Hatala, mentor

8:45 a.m.—*Aggression in Relationships: Who's Doing What?*
Susan Bucher
Judi Misale, mentor

9 a.m.—*Attitudes Toward Disability Issues Based on Disabled Status of Survey Administrator*
Brett Deacon
Michele Breault, mentor

9:30 a.m.—*An Examination of Conditions Affecting Student Helping Behavior*
Debra J. Drenth and Audra R. Polen
Judi M. Misale, mentor

9:45 a.m.—*Integrating Sources of Information When Appraising Performance*
G. Farrow*, S. Castro*, D. Drenth*, A. Hannah, D. Porter, and J. Curtner
Teresa Heckert, mentor

10 a.m.—*Creation of a New Needs Assessment Questionnaire*
Aaron Hannah, Jennifer Curtner, and Danielle Porter
Teresa M. Heckert, mentor

10:15 a.m.—*Mother-Child Interactions: An Assessment of Attitudes Toward Differing Teaching Styles*
Catherine Hougham, Andrew Revell, Stephen Walkup, and

Kimberly Kerlin

David Conner, mentor

10:30 a.m.—Perceptions of Racism as a Function of Ethnic Groups

James H. Meyer III

Judi Misale, Faculty Mentor

SPEECH COMMUNICATION SYMPOSIUM

11 a.m.—How to Speak

*Effectively to Bloodthirsty**Groups of People: Grimke Weld and Phillips' Extremoparaneous Reactions to Pro-Slavery Mobs***Matthew Herndon**

Barry Poyner, mentor

11:15 a.m.—Aspects of Self-talk

Jason Mathers

Barry Poyner, mentor

11:30 a.m.—Usage of Native-Americans and Their Culture as Sport Mascots

Kwameko Miller

David Williams, mentor

11:45 a.m.—Slogans

Lori Zoll

Barry Poyner, mentor

1:30 p.m.—"Song of Myself"

Erin Cerny

June Sullivan and Kirsten

Olesen, mentors

1:45 p.m.—Dramatic Performance on Bars

Stephanie Hay

Kirsten Olesen, mentor

2 p.m.—Mythic Analysis of It's a

Wonderful Life

Jason McKnight

Jack Hart and David Williams,

mentors

2:15 p.m.—Symbolic Analysis of

the film *Silence of the Lambs***Cari Patton**

Jack Hart and David Williams,

mentors

2:30 p.m.—Subliminal Messages

in Disney Films

Meghan Alexander

Barry Poyner, mentor

3 p.m.—Foreign Exchange:

*Determinants of Exchange Rates***Christina Lee and Yu-San Lee**

Jane Sung, mentor

3:15 p.m.—Analysis of IMF

*Adjustment Programs in Zambia***David Kunau**

Emmanuel Nnadozie, mentor

3:30 p.m.—Ayn Rand, Objectivism,

and Modern Economics

Justin Lovenduski

David Gillette, mentor

3:45 p.m.—Decisionmaking in the Workplace

Julie A. Lindstrom

Amy L. Otto, mentor

4 p.m.—Sounds Like a Line Such

as *Izzy Ben Might Write: The**Gershwins and the Botkins***Jason Clampet**

Jerrold Hirsch, mentor

4:30 p.m.—Andrew Wyeth: The

*Artist and His Role in American**Art History***Kathy Duda**

Sara Orel, Garry Gordon,

James Harmon, and Julia

DeLancey, mentors

4:45 p.m.—Artemisia Gentileschi:

*Female Baroque Artist***Elizabeth M. Duffy**

Sara Orel, Garry Gordon,

James Harmon, and Julia

DeLancey, mentors

5 p.m.—Russian Art Rediscovered

Leigh Lammert

Sara Orel, Garry Gordon,

James Harmon, and Julia

DeLancey, mentors

5:15 p.m.—Images of Women in

*the Paintings of Raphael and**Titian***Yoori Shin**

Garry Gordon, Sara Orel, James

Harmon, and Julia DeLancey,

mentors

5:30 p.m.—Creative Dramatics in

*a Special Education Classroom***Kristin Lee**

Joan Mather, mentor

5:45 p.m.—Multicultural Music

Education

Sarah Woody

Richard Weerts, mentor

**SESSION F
ACTIVITIES ROOM**

Poster Sessions and Demonstra-

tions (Scheduled throughout the

day)

*Historical Review of Electricity**and Magnetism***Allen Brokken**

David Chyba, mentor

*Mathematica: A Physics**Student's Handbook***Allen Brokken**

Maria DiStefano, mentor

*On the Trail of an Elusive**Chameleon Enzyme***Eric Calhoun**

Guy Thompson Jr., mentor

*Isolation of DNA Repair Mutants**in the Slime Mold, Dictyostelium**discoideum*

Kevin Cook, Kathie Kunz,

Christopher Meyer, and

Tamberly Stoneking

Michael L. Lockhart, mentor*Understanding Botanical**Structure Through Illustration***Bradford L. Day**

Jeffrey M. Osborn, mentor

*Effects of Gamma-Interferon and**Retinoic Acid on MHC**Glucoprotein Expression***S. M. Degler* and K. M.****Eubanks-Meng**

D. Janick-Buckner, mentor

Audiological Services in Belize,

C. A.

Donna Donaldson

J. Paul Hunt, mentor

*Validation of a Two-Session Dia-**phragmatic Breathing Protocol***Eric Greve and Ryan Parmenter**

Fred Shaffer and Jerry Mayhew,

mentors

*Predictors of Inhalation Volume***Eric Greve and Katie Reinagle**

Fred Shaffer, mentor

*In-Situ DOXS Process***Jay Hendren**

Dana Delaware, mentor

*Let's Give Them Something to**Talk About: Using Technology**Creatively***Carrie Kamp and Susan****Mittelstadt**

Paula Cochran, mentor

*Locus of Control and Belief in**Paranormal Phenomena***William Keller**

Terry Palmer, mentor

*Autocorrelation Discriminates**Between Diaphragmatic and**Thoracic Breathing***David Knight and Eric Greve**

Fred Shaffer, mentor

*The Autonomic Effects of**Diaphragmatic and Thoracic**Breathing***David Knight and Jacqie Tesky**

Fred Shaffer, mentor

*Sperm Development in**Drosophila melanogaster: A**Comparative Study***Gretchen M. Krueger**

Janna R. McLean, mentor

*A Video Presentation of Speech**and Hearing Disorders in Belize,*

Central America

Joshua Lindsay

Thomas A. Linares, mentor

*"The Return To The Middle**West": A Mural by William**Unger***Luke Mangan, Patrice Pupillo,****and Sally Winger**

David Partenheimer, mentor

Psychological Well-Being*Correlates With the Motivation**Underlying An Individual's**Religiosity***Michelle Metzger**

Terry Palmer, mentor

*Physical and Verbal Initiation**Among College Men and**Women***Juanita Myles**

Teresa Heckert, mentor

*Comparison of Equine Body**Weights Obtained By An Array**of Methods***Arlene Nohilly**

Glenn R. Wehner, mentor

*Improving the Public's Aware-**ness of Organ Donation: A**National Campaign***Christy O'Laughlin and Patty****Rogers**

Kimberly Fatheree, mentor

*Preparation, Characterization**and Applications of Alkanethiol-**coated Au Nanoparticles***Ken Patel**

Griff Freeman, mentor

*A Summary of Five Patients**Presenting with Cleft Lip and**Palate Examined in Belize,*

Central America

Michelle Roberts

Janet Quinzer, mentor

*Cement Kilns' Effective Inciner-**ation of Hazardous Wastes***Charlene Schambach**

Dana Delaware, mentor

*The Effect of Impatiens sp.**extracts on the Delayed-Type**Hypersensitivity Reaction caused**by the Poison Ivy Antigen,**Urushiol***Mindy M. Steinger* and Tom****C. Leeper**

Anne E. Moody and Diane

Janick-Buckner, mentors

*Use of the World Wide Web in**Science Education***Carolyn A. Turner**

Brent Buckner, mentor

*Comparison of Nonparametric**Confidence Intervals for**Endpoints of Conductometric**Titrimations***James M. Young**

Kenneth N. Carter Jr., mentor

* Denotes member(s) of the group making the presentation.