THIRD ANNUAL
BEAR DAY
APRIL 11, 2013
BEAR DAY SCHEDULE
Thursday, April 11, 2013

9:00-10:30 CLA & SSBE Poster Presentations, Heritage Hall, University Center

9:00-5:00 Art Show, Hardman Hall Gallery
(Also open 9am-5pm on Friday, April 12)

11:00-11:50 Keynote Address, Willingham Auditorium

*Recent Discoveries Propelling the Search for Present-Day Life on Mars*
Dr. Lisa Pratt
Provost Professor
and Chair of the Department of Geological Sciences at Indiana University

11:00-2:00 Lunch on the Quad (Bear Card/meal plan accepted)

12:00-1:00 Music on the Quad, performed by Megan Delong

1:00-5:00 Paper Presentations, Knight and Stetson Halls

2:00 Art Show Awards, Hardman Hall Gallery

ENGINEERING EXPO

9:00-10:45 Oral Presentations, Science and Engineering Building

11:00-11:50 Keynote Address, Science and Engineering Building, Rm. 110

1:00-3:00 Freshman Design Competition, Hawkins Arena

3:00-4:30 Poster Presentations, Hawkins Arena
Welcome to BEAR Day 2013 at Mercer University!

Breakthroughs in Engagement, the Arts and Research (BEAR) Day and Engineering Expo Day showcase outstanding undergraduate student research and special projects from the College of Liberal Arts, Stetson School of Business and Economics, and the School of Engineering. BEAR Day features a keynote address by Dr. Lisa Pratt, Provost Professor and Chair of the Department of Geological Sciences at Indiana University. The keynote session will be held in Willingham. The CLA and SSBE poster presentations will be in Heritage Hall at the University Center with oral presentations of research papers in Knight and Stetson Halls. An art show reception featuring student work will be held in Hardman Hall Gallery. Engineering Expo Day events feature oral and poster presentations on research and design projects and the annual Freshman Design Competition in the University Center arena. Engineering Expo 2013 also features a guest speaker seminar by Dr. Gilda Barabino, Professor and Associate Chair of Biomedical Engineering, Georgia Institute of Technology and Emory University.

BEAR Day demonstrates and honors the achievements of students and highlights the depth and breadth of the academic experiences at Mercer. This year’s events have over 250 students presenting in the programs. I know you will enjoy the presentations and trust that BEAR Day will spark intellectual curiosity and inspire further scholarly pursuits.

Sincerely,

Wayne C. Glasgow, Ph.D.
Senior Vice Provost for Research
Dean of Graduate Studies
KEYNOTE ADDRESS

Recent Discoveries Propelling the Search for Present-Day Life on Mars
Dr. Lisa Pratt

Lisa Pratt is Provost Professor and Chair of the Department of Geological Sciences at Indiana University. She studies microbial cycling of carbon and sulfur in lakes underlain by permafrost on Earth as an analogue for habitable paleo-environments on Mars. She served as Chair of the NASA Science Advisory Group in 2008 that proposed a mission entitled Mars Astrobiology Explorer-Cacher (MAX-C) as the first step in bringing rock samples from Mars back to Earth for laboratory study. Lisa was a member of the Mars Panel in 2009 for the National Research Council’s Decadal Survey of Planetary Science and she is currently the Chair of the Mars Program Analysis Group (MEPAG) for NASA. She has published more than 100 peer-reviewed journal papers and she has been a Visiting Scholar for Phi Beta Kappa. She is currently directing a multi-institution field campaign in western Greenland to measure seasonal methane release from wetlands and lakes on the margin of the ice sheet.

Special Thanks to Keynote Address Greeters/Helpers

Beth Hammond
Lori Johnson
Hope McIlwain
Jay Pendleton
CLA & SSBE POSTER PRESENTATIONS
Heritage Hall, University Center
9-10:30AM

1. Parth Patel, Maaz Sheikh, Brittany Onyeji, Daniel Pascal, “Gene Sequencing of the alu codon in human cheek cells to analyze possible mutation”; Faculty Mentor: Linda Hensel

2. Jessica Armstrong, Katherine Miller, “Characterization of biosurfactants for use in marine environments”; Faculty Mentor: Kathryn Kloepper


4. Ariel Grady, Brittany Chandler, Annika Sinha, “Rocky Mountain Spotted Fever (Rickettsia rickettsii) in field-collected Dermacentor variabilis from the Great Smoky Mountain National Park, NC”; Faculty Mentor: Al Smith

5. Alexandria Oliver, Meghyn Welch, “Cell Adhesion Assemblies and the Origins of Multicellularity”; Faculty Mentor: Richard McCann, Angela Lowrey

6. Samantha Criswell, “The Effects of Personal Stress, Demand and Control on Task Performance”; Faculty Mentor: Ami Spears

7. Melissa Lynch, Shanese Shell, “Comparison of Anterior and Posterior Regeneration in Platyhelminthes Turbellaria”; Faculty Mentor: Linda Hensel

8. Ethan Stinchcomb, “Screening Biosurfactant Activity using a 96-well plate”; Faculty Mentor: Garland Crawford


10. Stephanie Dunn, Annie Kaye, “Epizooic Cyanobacteria Associated with Neotropical Harvestman (Opiliones, Sclerosomatidae) from Tobago”; Faculty Mentor: Virginia Young

11. Belsy Garcia, Nidhi Patel, Brandon Reagan, “Competition Assay between Escherichia coli and Serratia marcescens Developed for Mathematical Biology Classroom Use”; Faculty Mentors: Amy Wiles, Jeffrey Denny

12. Chantal Gunn, “The Effect of Virtual Environments and Motivation on Foreign Language Performance”; Faculty Mentor: Ami Spears


14. Jaynisha Patel, Dustin Bowen, “Characterization of Active Site Mutants of the O-GlcNAcase Enzyme”; Faculty Mentor: Garland Crawford
15. Javon Denson, “How Does Israel/Palestine relations affect US national security/in terms of selective engagement? ”; Faculty Mentor: Bryan Williams

16. Nicholas Lyle, Briana Weaver, “Varying Temperature for Early Embryonic Chick Development”; Faculty Mentor: Linda Hensel

17. Cory White, “Identifying, cloning, and characterizing glucan phosphatases from economically viable plants”; Faculty Mentor: Matthew Gentry, Bridget Trogden

18. Kelsie Romaine, “Smartphone, Smart Stress-Reduction Techniques: Effects of Diaphragmatic Breathing on Stress, Self-Esteem, Mood, Coping Styles, and Sleep”; Faculty Mentor: Miranda Pratt

19. Chinedu Egwu, “The role of histone deacetylase complex Sum1C in tryptophan metabolism”; Faculty Mentor: Mark Swanson

20. Philip Coryell, Sonia Matthew, David Cobb, “Identification and Ontology of Saccharomyces cerevisiae Genes Required for Growth in Sulfur-deficient Medium”; Faculty Mentor: Amy Wiles

21. Lizzie Knapper, “Predicting Tournament Outcomes in the Atlantic Sun Women’s Volleyball Tournament”; Faculty Mentor: Hope McIlwain

22. Kimberly Le, Tin Nguyen, “Morphological Plasticity in the Mouse Hallucal Metatarsal”; Faculty Mentor: Craig Byron

23. Peyton Fanning, “Growth Optimization of Biosurfactant Producing Bacteria”; Faculty Mentor: Garland Crawford

24. Jessica Lyles, “Acumen Neuropsychology: Validation as a Screen for Cognitive Impairment”; Faculty Mentor: Lee Hyer

25. Kirsten Brown, “Affinity Purification of a Polyclonal O-GlcNAcase Antibody from Rabbit Sera”; Faculty Mentor: Garland Crawford


27. Samantha Mattern, “An Alternative Approach to Sexual Assault Prevention Programs”; Faculty Mentor: Miranda Pratt

28. Jennifer Nguyen, “Activity of Dopaminergic Cells During Juvenile Rat Play Behavior”; Faculty Mentor: Katharine Northcutt

29. Kassandra Knapper, Cody Quattlebaum, Matthew Bowen, “Environmental Conditions Affect Metal Release from Georgia Clay”; Faculty Mentor: Kathryn Kloeppe
30. Clarissa Price, “The Role of Disgust in Eating Disorder Symptomatology and Psychophysiological Correlates in a Non-Clinical Population”; Faculty Mentor: Miranda Pratt

31. Brooke McDonald, Caitlyn Paine, Lauren Hartley, Codi Schepp, “The effects of UV radiation on fertilization and cleavage of Arbacia punctulata”; Faculty Mentor: Linda Hensel

32. Christine Conroy, “Optimizing Soil Processing for Trace Metal Analysis”; Faculty Mentor: Jennifer Look

Special Thanks to Faculty/Staff Evaluators and Helpers in the Heritage Hall Poster Session

Heather Bowman-Cutway
Craig Byron
Craig Coleman
Garland Crawford
Chamaree de Silva
Kim Freeman
Linda Hensel
Tom Huber
Kathy Kloepper

John Lee
Jennifer Look
Katie Northcutt
Stephanie Morris
Tanya Sharon
Al Smith
Barry Stephenson
Amy Wiles
NOTE: Each presentation should last approximately 20-25 minutes, including Q&A. The second talk in each session will begin 25 minutes after the hour.

1:00-1:50

1. Development in Sub-Saharan Africa
   KNT 100
   Moderator: Geoffrey Ngene
   Edmund Z. Cooper, “Security and Development in Sub-Saharan Africa: Redefining Security and Confronting the Complex Threat”; Faculty Mentor: Eimad Houry
   Tess Frawley, “Effects of Global Economic Integration in Food Markets on Malnutrition”; Faculty Mentor: Eimad Houry

2. Governance in Theory and Action
   KNT 104
   Moderator: Will Jordan
   Ethan Trice, “The Republican in Plato’s Republic: Condolezza Rice as the Philosopher King”; Faculty Mentor: Charlie Thomas
   Andrew Chase Williams, “Humanitarian Crises: Examining Determinants of Intergovernmental Disaster Relief”; Faculty Mentor: Eimad Houry

3. Market Matters
   KNT 203
   Moderator: Linda Brennan
   Victor Dias, “The Effects of Thin Trading, Structural Shift, and Nonlinearities on Stock Market Efficiency: Evidence from Emerging Markets”; Faculty Mentor: Geoffrey Ngene
   Peter Tauchner, “Nonlinear Price Dynamics and Time-varying Volatility in Commodity Spot and Futures Markets: Evidence from Petroleum Markets”; Faculty Mentor: Geoffrey Ngene

4. Literary Legacies and Connections
   KNT 207
   Moderator: David Davis
   Deborah Harris, “Don Juanism in The Country Wife”; Faculty Mentor: Gary Richardson
   Utkash Parwal, “The Manipulation of History for the Sake of Morals in Livy’s Ab Urbe Condita”; Faculty Mentor: Achim Kopp
5. Leadership in Academia: Past and Present

Moderator: Yosalida Rivero-Zaritsky

Ryan Dickinson, “The Southern Association of Schools and Colleges: Transformation into and Accreditation Agency”; Faculty Mentor: Jamie Cockfield

Chase Grizzle, “The Effect of Institutional Characteristics on University Presidents’ Compensation”; Faculty Mentor: Courtney Collins

6. D-Day: Operations and Tactics

Moderator: Robert Good

Aaron Lloyd, “A Tactical Analysis of D-Day”; Faculty Mentor: Cynthia Warren

George Raileanu, “Operation Neptune”; Faculty Mentor: Cynthia Warren

2:00-2:50

1. American Happiness

Moderator: Leona Kanter

Joey Goodwin, “The Effect of Academic Performance on Job Satisfaction”; Faculty Mentor: Courtney Collins

Justin Griffis, “Suicide and Religion: A Study of American Happiness”; Faculty Mentor: Courtney Collins

2. Examining Literary Theories

Moderator: Keegan Greenier

Caleb Maier, “Which Art?: A Critical Analysis of Bell’s and Tolstoy’s Prescriptive and Descriptive Definitions of Aesthetics”; Faculty Mentor: Rosalind Simson

Cameron Smith, “Digital Ink: Hypertextual Theory”; Faculty Mentor: Yosalida Rivero-Zaritsky

3. Male Relationships in Literature

Moderator: Scott Nash

C.J. Triplett, “Inheritance of the Past: Absalom, Absalom! and Father-Son Relationships”; Faculty Mentor: David Davis

Zachry Lauersdorf, “Brotherhood, Birthright, and Babylon: Biblical Tales Of Brotherhood as Allegories for Israelite History”; Faculty Mentor: Janell Johnson

4. Effects of Educational Policies and Practices

Moderator: Carolyn Yackel

Hannah Carley, “The Effect of Schooling on Female Birth Expectations and Outcomes”; Faculty Mentor: Courtney Collins

Connor Cosenza, “The Effect of No Child Left Behind on the Enrollment of Students in Individualized Education Programs”; Faculty Mentor: Courtney Collins
5. **D-Day: Beaches and Bridges**

   Moderator: Anna Weaver
   
   *Ted Price*, “Operation Overlord”; Faculty Mentor: Cynthia Warren
   *Syrena Scipio*, “Operation Deadstick”; Faculty Mentor: Cynthia Warren

6. **Health Issues in Southeast Asia**

   Moderator: Craig McMahan
   
   *Kevin Jiles* and *Kelly Redlinger*, “2013 Mercer on Mission—Cambodia”; Faculty Mentor: Gayle Bina
   *Tori Surber, Alisha Arora, and Jenna Giperich*, “Outbreak of Crimean-Congo Hemorrhagic Fever in Gujarat, India, and Its Repercussions”; Faculty Mentor: Bria Dunham

7. **Mineral Matters**

   Moderator: Kathryn Kloepper
   
   *Kim Lammers* and *Maggie Ward*, “Development and Production of a Simple Test to Determine Cyanide Concentration in the Urine of Artisanal Gold Miners”; Faculty Mentor: Adam Kiefer
   *Katherine L. Miller* and *Jessica L. Armstrong*, “Biosurfactants: A Biological Approach to Oil Recovery”; Faculty Mentor: Kathryn Kloepper

8. **Mercer Student Perceptions of National Social Issues**

   Moderator: Fletcher Winston
   
   *Michelle Moran*, “Student Attitudes towards Homosexuality”; Faculty Mentor: Fletcher Winston
   *Lorin Sullivan*, “The Social Construction of Knowledge of Child Abuse”; Faculty Mentor: Fletcher Winston

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**3:00-3:50**

1. **Online Experiences**

   Moderator: Bob Allen
   
   *Stephen Finney*, “Code for America Builds Civic-Minded Lives”; Faculty Mentors: Bob Allen and Laurie White
   *Charlie Farr*, “The Impact of Product Ratings on Online Sales”; Faculty Mentor: Courtney Collins

2. **The Powerful and the Powerless in Life and Literature**

   Moderator: John Dunaway
   
   *Samuel Johnson*, “Experience of a Refugee”; Faculty Mentor: Bryan Williams
   *Alex Mooring*, “The Architecture of Power in Absalom, Absalom!”; Faculty Mentor: David Davis
3. Poetry in Academia
   
   Moderator: Mary Raschko
   
   Michael Kshatri, “Introspective Intuition”; Faculty Mentor: Gordon Johnston
   Sean Rayburn, “Southern Weather and Dreaming Spires: A Collection of Verses”; Faculty Mentor: Judson Mitcham

4. Women in History
   
   Moderator: Miranda Pratt
   
   Jordan Morris, “Elizabeth and Mary: Until Death Parts Us”; Faculty Mentor: John Thomas Scott
   Rebecca Webb, “1960: The Media’s Portrayal of Jackie Kennedy and Her Campaign”; Faculty Mentor: James Hunt

5. Issues in Secondary Education
   
   Moderator: Courtney Collins
   
   Joey Heavner, “Improving Urban Education to Close the Racial Gap in Graduation Rates”; Faculty Mentor: Courtney Collins
   Sophia Rivera, “Returns to Private Versus Public Education”; Faculty Mentor: Courtney Collins

6. D-Day: Context and Conflict
   
   Moderator: Julia Huskey
   
   Nellie Daley, “Omaha Beach, Normandy”; Faculty Mentor: Cynthia Warren
   Brittney Graham, “Devastation by Fire and the Impact of Operation Overload”; Faculty Mentor: Cynthia Warren

7. London in Literature
   
   Moderator: Deneen Senasi
   
   Brittani Howell, “‘The Tough Subject’: Jo’s Dual Nature in Bleak House”; Faculty Mentor: Jonathan Glance
   Allison Kim, “V for Vendetta: The Clash of Extremes and Who They Create”; Faculty Mentor: Andrew Silver

8. Brominated Marine Natural Products
   
   Moderator: Dale Moore
   
   Aaron Featherston, “Synthesis of Bromotyrosine Natural Products as Potential Novel Antibiotics against Gram-Negative Bacteria”; Faculty Mentor: David Goode
   Kaitlyn Logan, “Synthesis of Brominated Marine Natural Products”; Faculty Mentor: Adam Kiefer
4:00-4:50/5:15

1. Politics in Latin America  KNT 104
   Moderator: Bryan Whitfield
   
   Liza Dye, “Belize and Its Barriers to Full Democratization”; Faculty Mentor: Bryan Williams
   
   Charles J. Lankford, “Panama’s Theology of Liberation: How Religious Pluralism has Shaped Panamanian Politics”; Faculty Mentor: Bryan Williams
   
   Drew Wildes, “Turning the Tide on Political Corruption: The Effectiveness of Grassroots Activism in Brazil”; Faculty Mentor: Eimad Houry

2. Women, Scandal, and Honor in Literature  KNT 108
   Moderator: Darlene Flaming
   
   Heather Foreman, “Tamar: A History of Interpreting Scandal in Genesis 38”; Faculty Mentor: Janell Johnson
   
   Beth Manley, “Faulkner’s Females and Deconstruction of Honor”; Faculty Mentor: David Davis
   
   Emily Traylor, “Recreating the Ideal Arthurian Female: Meg Cabot’s Avalon High”; Faculty Mentor: Mary Raschko

3. Academia and Economics  KNT 203
   Moderator: Creighton Rosental
   
   Allison Harrison, “The Return of University Endowments”; Faculty Mentor: Courtney Collins
   
   Melissa Lam, “The Impact of Collegiate Athletics Programs on Local Economies”; Faculty Mentor: Courtney Collins
   
   Alex Lockwood, “Relative Returns to Bachelor’s and Associate Programs: Exploring Heterogeneity in Education and Employment Outcomes Across Student Ability Groups”; Faculty Mentor: Courtney Collins

4. Law in a Global Context  KNT 210
   Moderator: Lydia Masanet
   
   Janae Davis, “To What Degree has the ICC’s Case Selection been Politicized”; Faculty Mentor: Eimad Houry
   
   Kristen Hulie, “Post-Materialism and Law: Does Quality of Life Matter in Times of Turmoil?”; Faculty Mentor: Bryan Williams

5. Spectacular War and Literature  KNT 303
   Moderator: Anya Silver
   
   Brandon Brock, “‘Better than Ben Hur’: Sutpen’s Design and Violent Spectacle In William Faulkner’s Absalom, Absalom!”; Faculty Mentor: David Davis
   
   Valencia Scott, “A War Changing Battle: Pointe du Hoc”; Faculty Mentor: Cynthia Warren
6. Natural Science  

STN 251  

Moderator: Linda Hensel  

Holly Burrell, “The Dark at the Center of the Dot: Determination of an Electronic Structure Model for Mixed Metal Sulfide”; Faculty Mentor: Dale Moore  

Philip Coryell, “Analysis of Ontology and Protein-Protein Interactions of Drosophila melanogaster Genes”; Faculty Mentor: Amy Wiles  

Andrew Weems, “The Investigation of Stability in Ag Nanoparticle Solutions Using Zeta-Sizer Measurements”; Faculty Mentor: Caryn Seney

7. German Defense and Diplomacy in the Early 20th Century  KNT 308  

Moderator: Theresa Rhodes  

Rajan Dulamal, “The Gears of War: A Look at German War Engineering”; Faculty Mentor: Cynthia Warren  

David Ellis, “Russo-German Relations in the Weimar Era”; Faculty Mentor: John Thomas Scott

Special Thanks to Faculty/Staff Guides in Knight and Stetson

Bob Allen   David Nelson  
Susan Broome  Brian Rood  
Jeremy Brown  Andrew Shuping  
Jeff Denny  Rosalind Simson  
Randy Harshbarger  Amy Tureen  
Curtis Herink  Ed Weintraut  
Keith Howard  Laurie White  
Lake Lambert
THANK YOU TO ALL THE STUDENTS, FACULTY, AND STAFF THAT MAKE THIS CELEBRATION OF ENGAGED LEARNING POSSIBLE.

THE ENGAGED LEARNING COMMITTEE:

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