Fourth Annual

BEAR DAY

April 10-11, 2014
Schedule at a Glance
(full schedule available at: http://bearday.mercer.edu)

**BEAR DAY**

**Thursday, 10 April:**
6:00 pm  Keynote Address  Medical School Auditorium
“Protecting the Future from Ourselves: International Climate Negotiations at a Crossroads”
Andrew Light  
Senior Adviser on Climate Change, U.S. Department of State  
Professor and Director, Institute for Philosophy & Public Policy  
George Mason University

**Friday, 11 April:**
8:30-9:50  Poster Sessions  Heritage Hall (UC)
10:00-10:50  Concurrent Paper Session I  KNT and STN Halls
11:00-11:50  Concurrent Paper Session II  KNT and STN Halls
Noon-2:00  Lunch  Fresh Food Company
1:00-1:50  Concurrent Paper Session III  KNT and STN Halls
2:00-2:50  Concurrent Paper Session IV  KNT and STN Halls
Art Show Awards  Hardman Hall Gallery

**Engineering Expo:**

**Friday, 11 April:**
9:30-11:30  Freshman Design Competition  UC Arena Floor
9:30-11:30  Poster Session  Arena Mezzanine
11:30-1:00  Lunch  Fresh Food Company
1:00-1:50  Concurrent Paper Session I  EGC and SEB
2:00-2:50  Concurrent Paper Session II  EGC and SEB

**Honors Convocation**

**Friday 11 April:**
4:00  Willingham Auditorium
Welcome to BEAR Day 2014 at Mercer University!

Breakthroughs in Engagement, the Arts and Research (BEAR) Day and Engineering Expo Day showcase outstanding undergraduate student research and special projects. BEAR Day includes oral presentations, poster sessions, and art show exhibits. The program this year has over 100 presentations with contributions from over 150 students.

At the same time, 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. This year’s program contains 60 presentations of team projects involving over 200 students.

The keynote speaker for BEAR Day 2014 is Dr. Andrew Light. His presentation, entitled, “Protecting the Future from Ourselves: International Climate Negotiations at a Crossroads,” will kick off the event on Thursday evening. Dr. Light is an internationally recognized expert on the intersection of the scientific and moral dimensions of environmental policy. He currently serves in the Obama Administration as Senior Advisor to the Special Envoy on Climate Change in the U.S. Department of State. During this time with the State Department, he is on leave from George Mason University, where he is Professor of Philosophy and Public Policy and Director of the Institute for Philosophy and Public Policy. Dr. Light is a 1989 honor graduate of Mercer (BA Philosophy, CLA).

BEAR Day demonstrates and honors the achievements of students and highlights the depth and breadth of the academic experiences at Mercer. I know you will enjoy the presentations and I trust that BEAR Day will spark your own intellectual curiosity and inspire further scholarly pursuits.

Sincerely,

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

“Protecting the Future from Ourselves: International Climate Negotiations at a Crossroads”

Andrew Light
Professor and Director, Institute for Philosophy & Public Policy George Mason University
Senior Adviser on Climate Change, U.S. Department of State

Dr. Andrew Light (BA Hons., CLA 1989) is currently serving in the Obama Administration as Senior Adviser to the Special Envoy on Climate Change in the U.S. Department of State, the lead office for the country's bilateral and multilateral agreements and foreign assistance on climate change. In this capacity, among other duties, he works on the senior strategy team for the on-going United Nations climate change negotiations, directs the U.S.-India bilateral Climate Change Working Group, and chairs the U.S. Interagency Working Group on Climate Change for the Post-2015 United Nations Development Agenda. He is on leave from George Mason University, where he is Professor of Philosophy and Public Policy, and Director of the Institute for Philosophy and Public Policy, the oldest applied ethics institution in North America.

In his academic work, Light is an internationally recognized expert on the intersection of the scientific and moral dimensions of environmental policy, with a focus on terrestrial restoration ecology and urban ecology. He is the author of over 85 scholarly articles and book chapters, and has authored, co-authored, and edited 17 books including Environmental Values (Routledge, 2008), Aesthetics of Everyday Life (Columbia University Press, 2005), Moral and Political Reasoning in Environmental Practice (MIT Press, 2003), Technology and the Good Life? (University of Chicago Press, 2000), and Environmental Pragmatism (Routledge, 1996). He is also co-editor and co-founder of the journal Ethics, Policy, and Environment (Routledge), now in its 17th volume.

Prior to joining the State Department, Light was also a Senior Fellow and Director of International Climate and Energy Policy at the Center for American Progress in Washington, D.C. At the center he directed a team for five years working primarily on climate finance, climate adaptation, and the U.S. bilateral relationships with China and India. In that capacity he also advised the State Department, the Department of Energy, and the White House’s National Security Council, as well as many other governments on UN climate negotiations. Before moving to Washington in 2008, Light held a variety of joint and interdisciplinary positions, most recently in the School of Public Affairs and the Department of Philosophy at the University of Washington in Seattle, and as Director of the graduate program in Environmental Conservation at New York University.
CLA POSTER PRESENTATIONS

Heritage Hall, University Center
8:30-9:50 am

Odd-numbered posters will be presented from 8:30-9:10 and even-numbered from 9:10-9:50.

All project authors are listed; presenter’s name(s) are in italics


6. Rhodes Courtois, “Personality Tests and Retention Rate.” Faculty Mentor: Linda Brennan.


16. Gina John, Robert McKallip, Olga Uchakina, “Treatment with the hyaluronic acid synthase inhibitor 4-MU sensitizes chronic myelogenous leukemia to treatment with doxorubicin.” Faculty Mentors: Robert McKallip and Olga Uchakina.


20. Morgan Smith, Kevin Zhang, Alan Smith, “Determination of Fish Species Richness in a Middle Georgia Stream.” Faculty Mentor: Alan Smith.


22. Jessica Lyles, Ami Spears, “The Relationship Between Texting and Literacy.” Faculty Mentor: Ami Spears.

23. Alison Lambright, Kevin Bucholtz, “Foundational and Educational Approaches to Succeeding in Organic Chemistry.” Faculty Mentor: Kevin Bucholtz.


30. Erin Oliver, Joshua Funderburke, Kaydren Orcutt, Cody Quattlebaum, Kathryn Kloepper, “An Analytical Analysis of Metal Desorption from Georgia Industrial Clay.” Faculty Mentor: Kathryn Kloepper.


34. Charnelle Rogers, Brooke Fenn, Jessica Armstrong, Kathryn Kloepper, “How Sweet Tea Improves Quantitative Lab Skills.” Faculty Mentor: Kathryn Kloepper.

35. Thomas Harbin, Kevin Drace, “Determining Yeast Viability in Fermented Beer.” Faculty Mentor: Kevin Drace.


ACKNOWLEDGMENTS:

Technical Support
Bob Allen and Laurie White

Poster Judges:

Jose Balduz
Heather Bowman Cutway
Linda Brennan
Kevin Bucholtz
Garland Crawford
Kimberly Freeman
David Goode
Jarred Jenkins
Adam Kiefer
Kathryn Kloepper

Lake Lambert
Lydia Masanet
Stephen Michael
Katharine Northcutt
Miranda Pratt
Yosálida Rivero-Zaritzky
Jennifer Royal
Andrew Shuping
Alan Smith
Margaret Symington

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ORAL PRESENTATIONS

Each presentation should last approximately 20-25 minutes, including Q & A. The second presentation will begin at approximately 25 minutes after the hour. Sessions with three presenters will run 75 minutes with the third presentation beginning approximately 50 minutes after the hour.

All project authors are listed; presenter’s name(s) are in italics

Concurrent Session I
10:00 - 10:50

1. Playing in the City

   Moderator: Jonathan Glance
   Michael Kshatri, “Sounds of the City.” Faculty Mentor: Gordon Johnston

2. Addressing International Problems

   Moderator: Fernando Palacios
   Jazmine Wilcox, “Bad Traffick.” Faculty Mentor: Eimad Houry

3. Children in an International Context

   Moderator: Chris Grant
   Rainea Cumberbatch, “Transnational Adoption.” Faculty Mentors: Eimad Houry, Vasile Stanescu and Natalie Bourdon.
   Min Hyun Oh, “The Good Childhood: Danish Education System and its Implications on the Field of Education.” Faculty Mentor: Sharon Augustine.

4. Economic Predictions

   Moderator: Bob Easter
   Matthew Bone, “Determining Whether or Not Per Capita GDP has an Effect on a Person’s Longevity.” Faculty Mentor: Muhammad Rahman.
   Roger Green, Jeff Ngene, “Can Fama and French 3 Factors Explain Sector Returns? Evidence from US.” Faculty Mentor: Jeff Ngene.
5. Snow White  
KNT 207
Moderator: Mary Raschko
Anna Johnson, “A Pen and a Paintbrush: Illustration in Jarrell’s *Snow White and the Seven Dwarfs.*” Faculty Mentor: Anya Silver.
Sarah Rousseau, “Frost and Flame: A Revisioning of *Snow White and Rose Red.*” Faculty Mentor: Anya Silver.

6. Describing D-Day  
KNT 210
Moderator: Robert Good
Brandon Woodard, “Invasion of Normandy.” Faculty Mentor: Cynthia Warren.

7. Christianity and Society  
KNT 303
Moderator: Scott Nash

8. Gold Research  
STN 251
Moderator: Dale Moore
David Michaeli, Taylor Campbell, Adam Kiefer, “Quantification of Human Cyanide Exposure in Artisanal Gold Mining.” Faculty Mentor: Adam Kiefer.
Concurrent Session II  
11:00 - 11:50 (12:15)

1. International Economics  
   Moderator: Bob Easter  
   Austin Thompson, Muhammad Rahman, “Impact of Credit Ratings on Foreign Direct Investment.” Faculty Mentor: Muhammad Rahman.  
   Sophia Rivera, Hope McIlwain, “Understanding Intracontinental Trade in Europe Using Rankings.” Faculty Mentor: Hope McIlwain.

2. Responding to Human and Natural Disasters  
   Moderator: Randy Harshbarger  
   Matthew Ault, “Haiti: Obstacles for Post-Natural Disaster Relief.” Faculty Mentor: Eimad Houry.  
   Emily Bless, Eimad Houry, “Sendai: The Disaster that Reshaped Japan.” Faculty Mentor: Eimad Houry.  

3. Middle Georgia Research Connections  
   Moderator: Jim Hunt  
   Steven Hussung, Bryan Danley, Patrick Hobbs, “Does Macon Have a Cousin? Searching for Similar Cities.”

4. The Gallic Wars  
   Moderator: Ed Weintraut  
5. Conceptualizing Women  
Moderator: Janell Johnson  
*Sarah Wibell,* “Breaking Body Barriers: Women in Physique Competitions.” Faculty Mentor: Natalie Bourdon.  
*Jennifer Champagne,* “Framed Fatale: Women as Art and Object in Robert Browning’s ‘My Last Duchess’ and ‘Porphyria’s Lover.’” Faculty Mentor: Anya Silver.

6. Consumers and the Economy  
Moderator: Tanya Sharon  
*Rachel Buffalo, Chris Shaw, Parker Benefield,* “Content Analysis of Nike’s “Just Do It” Campaign.” Faculty Mentor: Ania Izabela Rynarzewska  
*Natalia Aponte,* “The Effect that Yogurt Properties Have in Consumer Perception.” Faculty Mentor: Ania Rynarzewska.  
*Tin Nguyen,* “Effect of Video Games on the Economy.” Faculty Mentor: Muhammad Rahman.

7. The Normandy Invasion  
Moderator: David Nelson  
*Randy Zahnd,* “Operation Overlord: An Introduction and Analysis of the Normandy Invasion.” Faculty Mentor: Cynthia Warren.  
*Michael Feagin,* “Battle Analysis of Omaha Beach.” Faculty Mentor: Cynthia Warren.

8. New Perspectives in Philosophy  
Moderator: Creighton Rosental  
*Anshu Patre,* “An Integral Education.” Faculty Mentor: Charlie Thomas.  
*Caleb Maier,* “Zen Metaphysics.” Faculty Mentor: Rosalind Simson.

9. Chemistry Research  
Moderator: Jennifer Look  
*Kevin Jiles, Susan Cline, Kristen Ashley Horner,* “Malondialdehyde-Induced Inhibition of Aldehyde Dehydrogenase 2 Activity in the Mechanism of METH Neurotoxicity.” Faculty Mentors: Susan Cline and Kristen Ashley Horner.  
*Peyton Fanning, Kelsy Cotto,* Garland Crawford, “Investigating Oligomerization as a Potential Regulator of the Enzyme OGA.” Faculty Mentor: Garland Crawford.
Concurrent Session III
1:00 - 1:50

1. Language and Literature  
   Moderator: Darlene Flaming  
   Elise Riggins, “Satan: The Original Slave to Sin.” Faculty Mentor: Mary Raschko.

2. Narrating Trauma  
   Moderator: Deneen Senasi  
   Audrey Hyde, “Sophie’s Choice as a Cathartic Novel: An Analysis Using the Theories of Paul Ricoeur.” Faculty Mentor: David Davis.  
   Allison Kim, “Retrospective Views on Slavery in Octavia Butler’s Kindred.” Faculty Mentor: David Davis.

3. Tensions Between Philosophy and Art  
   Moderator: Creighton Rosental  
   Patrick Jolley, “Nietzsche, Wagner, and Freedom.” Faculty Mentor: Charlie Thomas  
   Bailee Kitchens, “Sing, Plato’s Muse: The Use of Myth in the Allegory of the Cave.” Faculty Mentor: Peter Brown.

4. Debt and Politics  
   Moderator: Jeff Ngene  

5. Deception and D-Day  
   Moderator: Robert Good  
   Liam Vendeville, “Espionage and Inflatable Tanks: How Intelligence and Deception Paved the Way for D-Day.” Faculty Mentor: Cynthia Warren.
6. Service Learning Theory and Practice  
   **Moderator:** Craig McMahan  
   **Ashley Coleman,** “The Effects of Service Learning on Intellectual Development.” Faculty Mentor: Tanya Sharon.  
   **Caroline Payne, Alexandra Himes, Madelyn Byron,** “Mercer on Mission Peru: Discovery and Difference.” Faculty Mentors: Chris Grant and Mary-Ann Drake.

7. Writing about Slavery  
   **Moderator:** Beth Hammond  
   **Alex Mooring,** “Writings of Oppression: Antebellum White Women's Portrayals of Race and Gender.” Faculty Mentor: John Thomas Scott.  
   **Colleen Closson,** “The Transformative Power of Literacy: American Slaves and Education.” Faculty Mentor: David Davis.

8. Better Living Through Chemistry  
   **Moderator:** David Nelson  
   **Louis Reisman,** Aaron Featherston, Katie Logan, Adam Kiefer, “Synthesis of Brominated Natural Products.” Faculty Mentor: Adam Kiefer.  
   **Cody Quattlebaum,** Kathryn Kloepper, “From Mineral Mines to Ceiling Tiles: Building Connections Between Undergraduate Research and Industry.” Faculty Mentor: Kathryn Kloepper.

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**Concurrent Session IV**  
**2:00 - 2:50 (3:15)**

Art Show Awards  
Hardman Hall Gallery

1. Market Volatility  
   **Moderator:** Amy Gratz  
   **Hannah Carley,** Geoffrey Ngene, “Persistence of Volatility of Sovereign Credit Risk in Presence of Structural Breaks.” Faculty Mentors: Geoffrey Ngene and Linda Brennan.  
2. Issues of Race in Differing Contexts

Moderator: Eimad Houry


3. Rethinking the Received View in Philosophy

Moderator: Creighton Rosental

Ashley Weaver, “Why the Ship of State is Bound to Sink.” Faculty Mentor: Marc Jolley.

Eric Bryson, “Locke and Berkeley: Who was Right About the Source of Knowledge?” Faculty Mentor: Rosalind Simson.


4. Mercer Matters

Moderator: Kevin Cummings

Veronique Vernot, Charlie Farr, Mollie Davis, Tammy Crutchfield, “Mercer University Prosthetics Research with Stetson School of Business.” Faculty Mentor: Tammy Crutchfield.

Elizabeth Knapper, Hope McIlwain, “Predicting Atlantic Sun Volleyball Tournament Outcomes.” Faculty Mentor: Hope McIlwain.


5. Military Leadership Then and Now

Moderator: Lori Johnson

Charles Mann, “How the Crusaders Defeated Saladin During the Siege of Acre 1189-1191.” Faculty Mentor: John Thomas Scott.

Andrew Obelgoner, “Cultural Inconsistency and Leadership Demands Within the Military.” Faculty Mentors: Kevin Cummings and Cynthia Warren.

6. Literature and Society

Moderator: Anna Weaver


7. Mathematical Research

Moderator: Jeff Denny

Ashleigh Hightower, “Mapping a SET.” Faculty Mentor: Carolyn Yackel.
Soowhan Yoon, “Integers and Remainders.” Faculty Mentors: Margaret Symington, Curtis Herink.

8. Research on E. Coli

Moderator: Barry Stephenson


ACKNOWLEDGMENTS

(continued):

Session Moderators
already named in the program and

Presentation judges:

Laura Botts
Kevin Cummings
Jeff Denny
Darlene Flaming
Jonathan Glance
Chris Grant
Amy Gratz
Keegan Greenier
Beth Hammond
Randy Harshbarger
Eimad Houry
Jim Hunt
Julie Huskey
Janell Johnson
Lori Johnson
Jennifer Look

Craig McMahan
Dale Moore
Scott Nash
David Nelson
Jeff Ngene
Fernando Palacios
Mary Raschko
Theresa Rhodes
Deneen Senasi
Tanya Sharon
Anya Silver
Charlie Thomas
Anna Weaver
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David Davis
Paul Lewis, chair
Melina McSwiggen
Tom Scott
Eric Spears
Amy Wiles

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Designed By: Chad Morehead

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