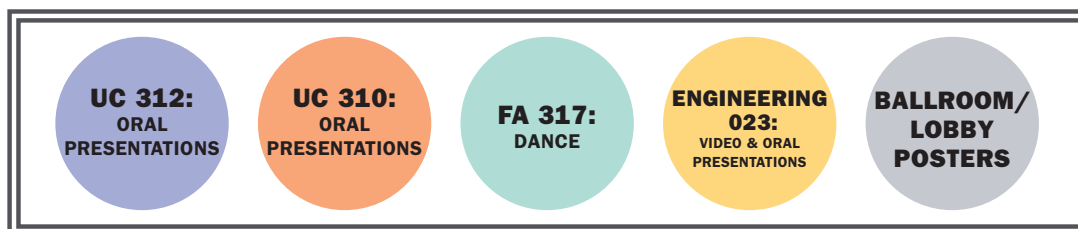


Eighteenth Annual UNDERGRADUATE Research & Creative Achievement Day



April 23, 2014



9:30 – 10 a.m.

OPENING REMARKS (UC312)

10 a.m.

Rajashree Mishra

"Extraction of Interacting Orthologs from Literature"

Professor Maricel Kann, Mentor

Moderator:

Lee Blaney, Chemical, Biochemical, and Environmental Engineering

Poster Session I

For a complete list of poster presenters in the 10 a.m. to 12 p.m. period, go to the printed program page 11.

Stephen Kelley, Marissa Regelin

"Bartleby 2014: Interpretive Artwork, Engaging with Poetry and Prose"

Professor Sally Shivanan, Mentor
Professor Guenet Abraham, Mentor

10:15 a.m.

Nicole De Leon

"Representation of Families in Caldecott Medal Books from the 1990s"

Professor Kathy Bryan, Mentor

Moderator:

Kathy Bryan, American Studies

Sebastian Snowberger

"Identification of Potent Transformation Products of Fluoroquinolone Antibiotics Formed during Water Treatment"

Professor Lee Blaney, Mentor

Moderator:

Lee Blaney, Chemical, Biochemical, and Environmental Engineering

Ke (Coco) Tang

"From the Lion's Mouth: the Syrian Refugee Crisis from a Jordanian Perspective"

Professor Brigid Starkey, Mentor

Moderator:

Brigid Starkey, Global Studies

10:30 a.m.

Hannah Hollamon

"Exploration of ESL Classroom Pedagogies"

Professor Kathy Bryan, Mentor

Moderator:

Kathy Bryan, American Studies

Caleb Williams, Hannah Korangkool

"I'm Here"

Professor Doug Hamby, Mentor

Moderator:

Doug Hamby, Dance

Apurva Shah

"Removal of Moxifloxacin from Wastewater by Adsorption onto Activated Carbon"

Professor Lee Blaney, Mentor

Moderator:

Lee Blaney, Chemical, Biochemical, and Environmental Engineering

10:45 a.m.

Jennie Williams

"A Regular Gig: Understanding the Benefits of Open Mic Performance"

Professor Michelle Stefano, Mentor

Moderator:

Kathy Bryan, American Studies

Dalton Hughes, Madison Bondoc, Hollie Adejumo, Chris Mullen

"Evaluating the Efficacy of Low-tech Processes in Removing Bacterial Contaminants from Drinking Water Supplies"

Professor Lee Blaney, Mentor

Moderator:

Lee Blaney, Chemical, Biochemical, and Environmental Engineering

Deborah Firestone

"Brush and Bone: An Animated Look at the Beauty Beyond Skin Deep"

Professor Neal McDonald, Mentor

Moderator:

Brigid Starkey, Global Studies

10:50 a.m.

Alexis DeVance

"Salt.Rose.Witness."

Professor Doug Hamby, Mentor

Moderator:

Doug Hamby, Dance

11 a.m.

Jonathan Neal

"Empathy Reconceptualized as a Dynamic Skillset"

Professor Diane Alonso, Mentor

Moderator:

Kathy Bryan, American Studies

Juan Alvarez

"A Recombinant Protein as a Cancer Therapeutic to Overcome Tumor-Related Immune Suppression and Enhance Tumor Rejection"

Professor Suzanne Ostrand-Rosenberg, Mentor

Moderator:

Ian Thorpe, Chemistry and Biochemistry

Steven Dakermanji

"The Study of Charged Nanoparticles of Crotamine and Plasmid DNA"

Professor Richard Karpel, Mentor

Moderator:

Brigid Starkey, Global Studies

11:15 a.m.

Devin Taylor

"The Effect of Microgravity on the Intestinal Tight Junction Proteins"

Professor Ron Marchelletta, Mentor

Moderator:

Kathy Bryan, American Studies

Mashhood Wani

"The Role of Adiponectin in High-Fat Mediated Cardioprotective Programs"

Professor W. Keith Jones, Mentor

Moderator:

Ian Thorpe, Chemistry and Biochemistry

Muhed Rana

"Increase in Efficiency for Noise Cancelling in a Spin-qubit Array"

Professor Jason Kestner, Mentor

Moderator:

Brigid Starkey, Global Studies

11:30 a.m.

Caitlyn Maczka

"Rogue Species Unleashed: Examining Non-Native Invasive Species, A Biological Problem With Socioeconomic Consequences"

Professor Effie Siegel, Mentor

Moderator:

Kathy Bryan, American Studies

Alexander Emmanuelli

"The Interactions Between the 5'UTR and CANC Protein in Late Phase Viral Assembly of the Murine Leukemia Virus"

Professor Michael Summers, Mentor

Moderator:

Ian Thorpe, Chemistry and Biochemistry

Drayton Blanchard

"Characterization of Microfluidic Channels Created Using PDMS and Soft Lithography"

Professor Gymama Slaughter, Mentor

Moderator:

Brigid Starkey, Global Studies

11:45 a.m.

May Li

"Numerical Modeling of Lipid Biosynthesis in Microalgae"

Professor Ian Thorpe, Mentor

Moderator:

Ian Thorpe, Chemistry and Biochemistry

12 – 1 p.m.

GENERAL SESSION (UC312)

9:30 a.m.

Opening Remarks, UC 312

Dr. Freeman Hrabowski, President

Dr. Lasse Lindahl, Program Director, MARC U* STAR and Professor, Biological Sciences

12 p.m.

General Session, UC 312

Guest Speaker:

Mr. Corey Fleischer '05, '08 MS Mechanical Engineering Senior Mechanical Engineer, Lockheed Martin

In 2013 Mr. Fleischer was chosen to be part of Discovery Channel's "The Big Brain Theory: Pure Genius." He participated in several challenges that put his engineering skills to the test. In the final challenge, Mr. Fleischer's team had to build a bridge to span a thirty-four-foot gorge. The bridge had to be mobile; all of the components had to fit in the back of a pick-up truck. The team had to build the bridge and prove that a truck could drive over it. After prevailing over nine other talented engineers, Mr. Fleischer won the competition.

Mr. Fleischer will speak about research, innovation, and his passion for engineering.

Introduction of the 2014-2015

Undergraduate Research Award Scholars

Meet 50 UMBC students funded by UMBC to carry out research, scholarship, or creative work during the upcoming academic year. Look for these students to present their results at URCAD 2015.

Remarks by:

Dr. Philip Rous, Provost



Poster Session II

For a complete list of poster presenters in the 12 to 2 p.m. period, go to the printed program page 18.

**Stephen Kelley,
Marissa Regelin**

"Bartleby 2014: Interpretive Artwork, Engaging with Poetry and Prose"

**Professor Sally Shivnan, Mentor
Professor Guenet Abraham, Mentor**

1 p.m.

**Nicholas Rogers,
Victoria Taylor**

"Production and Characterization of Aspergillus nidulans Mutants for Increased Protein Secretion"

Professor Mark Marten, Mentor

Moderator:

Ivan Erill, Biological Sciences

Matthew Fertig,

"Quantum Computing"

**Professor Richard Wilson,
Mentor**

Moderator:

Ted Foster, College of Engineering and Information Technology

**Joshua Standiford,
Daniel Abid**

"Anticipatory Ethics in Engineering Regarding the Future of Powered Exoskeletons for Social, Explorative, and Military Use"

**Professor Richard Wilson,
Mentor**

Moderator:

Ted Foster, College of Engineering and Information Technology

**Benjamin Cherry,
Oleksandr Aleksandrovych**

"Possibilities: An Anticipatory Look at the Ethical Issues in Stem Cell Research"

**Professor Richard Wilson,
Mentor**

Moderator:

Ted Foster, College of Engineering and Information Technology

1:15 p.m.

William Rice

"The Evolution of Trades and Occupations in Industrial England"

Professor David Mitch, Mentor

Moderator:

Sarah Chard, Sociology and Anthropology

Aymen Alqazzaz

"Structure and Variation of the Warble Song in Grasshopper Sparrows (Ammodramus savannarum)"

Professor Bernard Lohr, Mentor

Moderator:

Ivan Erill, Biological Sciences

1:30 p.m.

Ian Forsythe

"Recording an Experience of Literacy: A Person-Centered Approach"

Professor Bambi Chapin, Mentor

Moderator:

Sarah Chard, Sociology and Anthropology

Caleb Simmons

"Hungry Monsters: A Computational Model for the Evolution of Metabolic Gene Regulation"

**Professor Ivan Erill, Mentor
Professor Muruhan Rathinam,
Mentor**

Moderator:

Ivan Erill, Biological Sciences

1:45 p.m.

Samantha Hawkins

"Baltimore Voices: Creating a Comprehensive Sense of Place and Identity"

Professor Sarah Chard, Mentor

Moderator:

Sarah Chard, Sociology and Anthropology

Behnam Majd

"Fatigue of Dentin after Diamond Abrasive Bur Preparations"

Professor Dwayne Arola, Mentor

Moderator:

Ivan Erill, Biological Sciences

Zoe Gensheimer

"Mirror Images: The US and Its 'Southern Brother'"

Professor Mark Durant, Mentor

Moderator:

Matthias Gobbert, Mathematics and Statistics

2 p.m.

Leslie McNamara

"The Law Won Over Big Money: Tom Watson and the Leo Frank Case"

Professor Anne Rubin, Mentor

Moderator:

Sarah Chard, Sociology and Anthropology

**James Taylor,
Kedar Perkins**

"Characterizing Extractables in Polymers"

**Professor William LaCourse,
Mentor**

Moderator:

Ivan Erill, Biological Sciences

Emily Hinz

"The Kincaid Legacy"

Professor Lisa Cella, Mentor

Moderator:

Matthias Gobbert, Mathematics and Statistics

Poster Session III

For a complete list of poster presenters in the 2 to 4 p.m. period, go to the printed program page 23.

**Stephen Kelley,
Marissa Regelin**

"Bartleby 2014: Interpretive Artwork, Engaging with Poetry and Prose"

**Professor Sally Shivnan, Mentor
Professor Guenet Abraham, Mentor**

2:15 p.m.

Kendra Johnson

"Understanding the Molecular Mechanisms of Synergistic Inhibition of the Hepatitis C Virus (HCV) Polymerase"

Professor Ian Thorpe, Mentor

Moderator:

Ivan Erill, Biological Sciences

Matthew Brewster

"The Influence of Stochastic Parameters on Calcium Waves in a Heart Cell"

**Professor Matthias Gobbert,
Mentor**

**Professor Bradford Peercy,
Mentor**

**Professor Padmanabhan
Seshaiyer, Mentor**

Mr. Xuan Huang, Mentor

Moderator:

Matthias Gobbert, Mathematics and Statistics

2:30 p.m.

Lacey Wilson

"The Addy Walker Stories: Studies of Enslaved Black Girlhood"

Professor Michelle Scott, Mentor

Moderator:

Esther Doyle Read, Ancient Studies

Larry Morton

"Gold-Tip Nanoprobe Array Fabrication for Brain Characterization"

**Professor Gymama Slaughter,
Mentor**

Moderator:

Ivan Erill, Biological Sciences

**Tenji Tembo,
Michael Bishoff,
Nicholay Topin**

"Creating Extended Temporal Actions through State Abstraction Techniques"

**Professor Marie DesJardins,
Mentor**

Dr. James MacGlashan, Mentor

Moderator:

Matthias Gobbert, Mathematics and Statistics

2:45 p.m.

2:45 p.m.

Kaitlyn Golden

"Resource-sharing and Psychological Sense of Community among First-generation Latin American Immigrants"

Professor Anne Brodsky, Mentor

Moderator:

Esther Doyle Read, Ancient Studies

Joyce Ohiri

"Characterizing the AC1-Exemestane Resistant Cell Line in Estrogen-Dependent Breast Cancer"

Professor Angela Brodie, Mentor

Moderator:

Phyllis Robinson, Biological Sciences

Dustin Roddy

"A Perspective of BMX Culture in Baltimore"

Professor Kathy Bryan, Mentor

Moderator:

Frederic Worden, Visual Arts

3 p.m.

Erin Edwards

"From Dracula to Ditches: Exploration of Roman Mithraism in Dacia"

**Professor Esther Doyle Read,
Mentor**

Professor Timothy Phin, Mentor

Moderator:

Esther Doyle Read, Ancient Studies

Ifeolu Akinola

"The Cloning and Expression of Whooping Crane Photopigments"

**Professor Phyllis Robinson,
Mentor**

Moderator:

Phyllis Robinson, Biological Sciences

3:15 p.m.

Sierra Benson-Brown

"Equality in Diaspora: Jews in Ptolemaic Alexandria"

Professor Timothy Phin, Mentor

**Professor Esther Doyle Read,
Mentor**

Moderator:

Esther Doyle Read, Ancient Studies

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URCAD Schedule

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