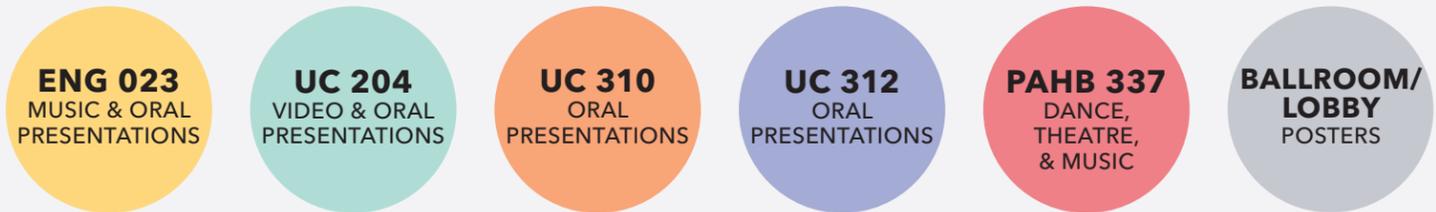




# UNDERGRADUATE RESEARCH AND CREATIVE ACHIEVEMENT DAY

APRIL 27, 2016 • URCAD.UMBC.EDU



**9:15 - 10 a.m.**  
**OPENING REMARKS**  
**UC 312**

**10 a.m.**

**Julian Tash**  
 "Burnt Bridges over Troubled Waters: A History of Territorial Disputes in the South China Sea"  
**Mentor: Meredith Oyen**  
**Moderator: Anne Sarah Rubin, History**

**Karena Ingram**  
 "CK Barlow and her Influence in Electronic Music"  
**Mentor: Anna Rubin**  
**Moderator: Doug Hamby, Dance**

**Lilian Anosike**  
 "Effects of a Chromatin Remodeler on Migratory Cell Fate Determination"  
**Mentor: Michelle Starz-Gaiano**  
**Moderator: Rachel Brewster, Biological Sciences**

**Vicki Goutzoulis**  
 "Transcultural Studies in Televisual Language"  
**Mentor: Edward Larkey**  
**Moderator: Felipe Filomeno, Global Studies**

**Poster Session I**  
 10 a.m. - 12 p.m.

**Brian McMullen**  
 "The Cultural Connection of Antiquity and Modernity: A Photographic Examination"  
**Mentor: Timothy Phin**  
**Moderator: Felipe Filomeno, Third-floor Lobby**

**Kelly Wright**  
 "Seven by Seven"  
**Mentor: Doug Hamby**  
**Moderator: Doug Hamby, Dance**  
 \*NOTE: Starts at 10:10 a.m.

**10:15 a.m.**

**Tyler Duckett**  
 "The Textbook Factor: Assessing Civil War Memory in Post-War Education, 1865-1915"  
**Mentor: Anne Sarah Rubin**  
**Moderator: Anne Sarah Rubin, History**

**Austin Gabel**  
 "Understanding Induction of Suspended Animation in Zebrafish"  
**Mentors: Rachel Brewster, Young-Sam Lee**  
**Moderator: Rachel Brewster, Biological Sciences**

**Melina Latona, Isabel Geisler**  
 "Grassroots Alternatives to the Global Corporate Food Regime in Baltimore"  
**Mentor: Felipe Filomeno**  
**Moderator: Felipe Filomeno, Global Studies**

**10:30 a.m.**

**Daniel Sullivan**  
 "Southern Fried Identity: Southern Rock and the Rebirth of White Male Masculinity in the 1970s"  
**Mentor: Anne Sarah Rubin**  
**Moderator: Anne Sarah Rubin, History**

**Brielle Levenberg, Chaz Atkinson**  
 "A Scene and Monologue Rehearsed for the Irene Ryan Scholarship Auditions"  
**Mentor: Colette Searls**  
**Moderator: Doug Hamby, Dance**

**Daniela Mujica-Martorell**  
 "Between the Lines"  
**Mentors: Preminda Jacob, Dominique Zeltzman**  
**Moderator: Corrie Parks, Visual Arts**

**Jordyn Schroeder**  
 "Regulation of Radioresistance of Breast Cancer Cells by Tissue Composition and Mechanics"  
**Mentors: Ovijit Chaudhuri, Katrina Wisdom**  
**Moderator: Rachel Brewster, Biological Sciences**

**Christina Hong**  
 "Parental Stress Impacts Children's Effortful Control through Maternal Psychological Well-Being and Physical Coercion"  
**Mentor: Charissa Cheah**  
**Moderator: Felipe Filomeno, Global Studies**

**A.J. Loayza**  
 "The Cliff"  
**Mentor: Corrie Parks**  
**Moderator: Corrie Parks, Visual Arts**  
 \*NOTE: Starts at 10:40 a.m.

**10:45 a.m.**

**Michael Adamovich**  
 "Memory's Middle Ground: Union and Confederate Memory of Antietam"  
**Mentor: Anne Sarah Rubin**  
**Moderator: Anne Sarah Rubin, History**

**Caleb Williams**  
 "Temple"  
**Mentor: Doug Hamby**  
**Moderator: Doug Hamby, Dance**

**James Loy**  
 "Charge Transfer from Single Semiconductor Nanocrystals to Single Molecules"  
**Mentor: Matthew Pelton**  
**Moderator: Rachel Brewster, Biological Sciences**

**Katlyne Meade**  
 "Corporal Punishment in Schools: Exploring Competing Discourses on Physical Violence"  
**Mentor: F. Chris Curran**  
**Moderator: Felipe Filomeno, Global Studies**

**Emma Ayala**  
 "Headspace"  
**Mentor: Corrie Parks**  
**Moderator: Corrie Parks, Visual Arts**  
 \*NOTE: Starts at 10:50 a.m.

**11 a.m.**

**Daniel Brezina**  
 "A Reb in Rockville: The History of the Confederate Memorial in Rockville, Maryland"  
**Mentor: Anne Sarah Rubin**  
**Moderator: Anne Sarah Rubin, History**

**Ben Shaffer**  
 "Roadblock"  
**Mentor: Corrie Parks**  
**Moderator: Corrie Parks, Visual Arts**

**Austin Maduka**  
 "Assessing the Stress-Dependent Role of AMPK on OGT and OGA Activity and Localization"  
**Mentors: Natasha Zachara, Kamau Fahie, Jennifer Groves**  
**Moderator: Rachel Brewster, Biological Sciences**

**Queenie Tran**  
 "Parental Warmth Moderates the Association between Parenting Practices and Chinese-American Children's Academic Outcomes"  
**Mentor: Charissa Cheah**  
**Moderator: Felipe Filomeno, Global Studies**

**Hannah Sunday**  
 "The Ears of Consciousness"  
**Mentor: Anna Rubin**  
**Moderator: Doug Hamby, Dance**  
 \*NOTE: Starts at 11:05 a.m.

**Tory Van Dine**  
 "Sandwich Algorithm"  
**Mentor: Corrie Parks**  
**Moderator: Corrie Parks, Visual Arts**  
 \*NOTE: Starts at 11:10 a.m.

**11:15 a.m.**

**Madison Meyer**  
 "Armor from the Armoire: Gone with the Wind and American Fashion"  
**Mentor: Anne Sarah Rubin**  
**Moderator: Anne Sarah Rubin, History**

**Nerissa Vasconcells**  
 "Limitless"  
**Mentor: Doug Hamby**  
**Moderator: Doug Hamby, Dance**

**Da'Kuawn Johnson**  
 "Characterization of the Bacteriophage CR30 Homolog (gp140) of HarP"  
**Mentors: Christine Jacobs-Wagner, Rodrigo Arias Cartin**  
**Moderator: Rachel Brewster, Biological Sciences**

**Taylor Sheldon**  
 "Enculturation, Identity, and Cultural Maintenance in Second-Generation Latino/a and Hispanic Immigrants"  
**Mentor: Anne Brodsky**  
**Moderator: Felipe Filomeno, Global Studies**

**Caitlyn McCaulley**  
 "Torn: An Animation"  
**Mentor: Corrie Parks**  
**Moderator: Corrie Parks, Visual Arts**  
 \*NOTE: Starts at 11:20 a.m.

**11:30 a.m.**

**Jennifer Montooth**  
 "Remembering Randolph: Race and the Fight Against World War II Segregation in the Civil Service"  
**Mentor: Michelle Scott**  
**Moderator: Anne Sarah Rubin, History**

**Briana Bradley**  
 "Myriam Bleau: A Voice in Electronic Music"  
**Mentor: Anna Rubin**  
**Moderator: Doug Hamby, Dance**

**9:15 a.m.**  
**OPENING REMARKS, UC 312**

Dr. Philip Rous, Provost  
 Dr. Lasse Lindahl, Program Director, MARC U\* STAR and Professor, Biological Sciences

**12 p.m.**  
**GENERAL SESSION, UC 312**

**Guest Speaker:**

Alumnus Dr. Mark Reynolds '78, M.A. '82, psychology Dean, School of Dentistry University of Maryland

As a UMBC undergraduate in psychology, Mark Reynolds conducted research with Dr. Aron Siegman, then the chair of the psychology department, on factors influencing communication in the initial interview. As a graduate student in the community-clinical psychology program, he continued to work on studies examining the influence of factors, such as topical intimacy and deception, on the temporal patterning of speech, and person perception in the interview.

Dr. Reynolds, DDS, PhD became dean of the University of Maryland, School of Dentistry in 2014, after serving the school in other capacities for 18 years. A distinguished academic dentist, Reynolds has published more than 120 peer-reviewed articles and sits on the editorial boards of several academic journals. He began his continuous record of NIH and extramural funding in 1992 when he earned a competitive five-year NIH Individual Dentist Scientist Award to support his residency in periodontics and his PhD studies in oral and experimental pathology. His research focuses on bone and periodontal regeneration. His research has often been multi-institutional, including collaborators at the NIH and other universities.

**Introduction of the 2016-2017 Undergraduate Research Award Scholars**

Meet 58 undergraduates 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 2017.

**Reflections on the 20<sup>th</sup> URCAD**

Diane M. Lee, Dean and Vice Provost of Undergraduate Education Division of Undergraduate Academic Affairs



# UNDERGRADUATE RESEARCH AND CREATIVE ACHIEVEMENT DAY

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**ENG 023**  
MUSIC & ORAL  
PRESENTATIONS

**UC 204**  
VIDEO & ORAL  
PRESENTATIONS

**UC 310**  
ORAL  
PRESENTATIONS

**UC 312**  
ORAL  
PRESENTATIONS

**PAHB 337**  
DANCE,  
THEATRE,  
& MUSIC

**BALLROOM/  
LOBBY**  
POSTERS

Attendees, Send Your Feedback

[www.surveymonkey.com/r/URCADattendee2016](http://www.surveymonkey.com/r/URCADattendee2016)



**Jason Hughes**  
"Changes in Thin Film Metallic Glass Microstructures Upon Annealing in the Supercooled Liquid Region"  
Mentor: Yanhui Liu  
Moderator: Rachel Brewster, Biological Sciences

**Natalie Macasa**  
"The Commodification of Women's Bodies: An Exploration of Transnational Surrogacy in India"  
Mentor: Sarah Chard  
Moderator: Felipe Filomeno, Global Studies

**Ryan Bailey**  
"October"  
Mentor: Doug Hamby  
Moderator: Doug Hamby, Dance  
\*NOTE: Starts at 11:40 a.m.

**11:45 p.m.**

**Benjamin Zimmer**  
"Rationality and the North Korean Nuclear Program: How the International Status-Quo Affects Pyongyang's Nuclear Pursuit"  
Mentors: Constatine Vaporis, Julie Oaks  
Moderator: Anne Sarah Rubin, History

**Elise Adamson**  
"Recognition of Bacterial Ligands by the NAIP Immune Receptor"  
Mentor: Russell Vance  
Moderator: Rachel Brewster, Biological Sciences

**12 p.m.**

**GENERAL SESSION**  
UC 312

Poster Session II  
12 - 2 p.m.

**Sarah Schmitz**  
"Dense Subtle Forms"  
Mentor: Doug Hamby  
Moderator: Doug Hamby, Dance

**1 p.m.**

**Matthew Davis**  
"Everybody's Great Emancipator? African American Attitudes toward Lincoln"  
Mentor: Anne Sarah Rubin  
Moderator: Molly Jones-Lewis, Ancient Studies

**Caitlyn Maczka**  
"Characterization of an Embryonic Skin Enhancer Element from the *C. elegans pax-3* gene"  
Mentor: David Eisenmann  
Moderator: Joshua Brown, Chemistry and Biochemistry

**1:15 p.m.**

**Sumner Weiss**  
"A Place in Infamy? Baltimore's Memory and Monuments of the Confederacy"  
Mentor: Anne Sarah Rubin  
Moderator: Molly Jones-Lewis, Ancient Studies

**Andreas Seas**  
"Effects of Demographics and Risk Factors on the Elastic Strain Energy of Human Superficial Femoral Arteries"  
Mentors: Alexey Kamenskiy, Jason MacTarggart  
Moderator: Joshua Brown, Chemistry and Biochemistry

**Sarah Spicer**  
"Cracked Messiah: Parody and Parable in Kurt Vonnegut's Troutean Novels"  
Mentor: Piotr Gwiazda  
Moderator: Lindsay DiCuirci, English

**1:30 p.m.**

**Graham Johnson**  
"Irony and the Historia Ecclesiastica: The Sarcastic Bede"  
Mentor: Molly Jones-Lewis  
Moderator: Molly Jones-Lewis, Ancient Studies

**DeVenna Dixon**  
"Real Negus: Exploring Perceptions of Blackness"  
Mentor: Maleda Beligne  
Moderator: Christian Valiente, Visual Arts

**Jack Slettebak**  
"Using the HPCG Benchmark to Analyze Performance of the Intel Xeon Phi"  
Mentor: Matthias Gobbert  
Moderator: Joshua Brown, Chemistry and Biochemistry

**Brittney Kramer, Elizabeth Chen, Alexa Abee**  
"Mill Girls in Nineteenth-Century Print"  
Mentor: Lindsay DiCuirci  
Moderator: Lindsay DiCuirci, English

**1:45 p.m.**

**Margaret Marzolf**  
"The Little Ice Age and the Contact Period"  
Mentor: Esther Doyle Read  
Moderator: Molly Jones-Lewis, Ancient Studies

**Emily Eaglin**  
"Marylandia: The Web Series"  
Mentor: Vin Grabill  
Moderator: Christian Valiente, Visual Arts

**Imani Spence**  
"Nurture their Growth: Non-Traditional Women Students at UMBC"  
Mentor: Deborah Rudacille  
Moderator: Lindsay DiCuirci, English

**2 p.m.**

Poster Session III  
2 - 4 p.m.

**Abigail Worgul**  
"The Temple of Vesta in the Roman Forum"  
Mentors: David Rosenbloom, Melissa Bailey  
Moderator: Molly Jones-Lewis, Ancient Studies

**Rachel Wolven**  
"Light Inhibits Light"  
Mentor: Steven Silberg  
Moderator: Christian Valiente, Visual Arts

**Shelbi Tippett**  
"Remote Sensing Monitoring of Canadian Wildfire Smoke and its Impact on Baltimore Air Quality"  
Mentor: Ruben Delgado  
Moderator: Joshua Brown, Chemistry and Biochemistry

**Archie Slade**  
"Negative Modernism: Djuna Barnes, Theodor Adorno, and the Problem of Nightwork"  
Mentor: Jessica Berman  
Moderator: Lindsay DiCuirci, English

**2:15 p.m.**

**Flora Kirk**  
"I Was Here: Roman Coins in the Third Century AD and their Role in Immortalizing Emperors"  
Mentor: Melissa Bailey  
Moderator: Molly Jones-Lewis, Ancient Studies

**Paul Oh, Humza Ghani, Vishnu Yogendran, Allie Meadows, Sahrish Rukhsar, Stefan Wroblewski, Dozie Oguike, Saad Javed**  
"Monster"  
Mentor: Christian Valiente  
Moderator: Christian Valiente, Visual Arts

**Seung Ho Choi, Hannah Carter**  
"Probing the Structure of the HIV-1 5'-L Monomeric Conformation and Start Site Heterogeneity by NMR Spectroscopy"  
Mentors: Michael F. Summers, Joshua Brown  
Moderator: Joshua Brown, Chemistry and Biochemistry

**Emily Grace**  
"By Ear: Hearing Poems into Being"  
Mentor: Lia Purpura  
Moderator: Lindsay DiCuirci, English

**2:30 p.m.**

**Cara Dekelbaum**  
"DJ Rekha: Ambassador of Bhangra"  
Mentor: Anna Rubin  
Moderator: Anna Rubin, Music

**Simon Lee**  
"Sponge"  
Mentor: Corrie Parks  
Moderator: Christian Valiente, Visual Arts

**Yinka Bode-George**  
"Wasted Neighborhoods: Narratives and Political Ecologies of Persistent Trash in West Baltimore"  
Mentor: Dawn Biehler  
Moderator: Lindsay DiCuirci, English

**Kristina Soetje**  
"An Ideal World"  
Mentor: Corrie Parks  
Moderator: Christian Valiente, Visual Arts  
\*NOTE: Starts at 2:40 p.m.

**2:45 p.m.**

**Adam Freitag**  
"Evaluating Educational Games for Validity and Student-Player Engagement"  
Mentor: Steven McAlpine  
Moderator: Lindsay DiCuirci, English

**3 p.m.**

**Mashhood Wani, Natalie Steenrod, Poornima Patel**  
"Sustain-O-Scope: Simple Compound Light Microscope"  
Mentor: Minjoung Kyoung  
Moderator: Jason Kestner, Physics

**Jackie Airhart**  
"Seamus Heaney's *Strange Fruit*, Billie Holiday, and the Bog People"  
Mentor: Michael Fallon  
Moderator: Lindsay DiCuirci, English

**3:15 p.m.**

**Michael Wolfe**  
"Simulating Entanglement Dynamics of Singlet-Triplet Qubits Coupled to a Classical Transmission Line Resonator"  
Mentor: Jason Kestner  
Moderator: Jason Kestner, Physics

**Akinlolu Afolabi**  
"Perceptions of Police: African Immigrants vs. African American Citizens"  
Mentor: Nancy Kusmaul  
Moderator: Lindsay DiCuirci, English

**3:30 p.m.**

**Samuel Winnie, Chanel Whitehead**  
"Romani Lachrymose Performance"  
Mentor: Linda Dusman  
Moderator: Anna Rubin, Music

**Justine Lottermoser**  
"The First Electrochemical, Aptamer-Based Sensor on a Carbon Surface"  
Mentor: Ryan White  
Moderator: Jason Kestner, Physics

**3:45 p.m.**

**Zachariah Thomas**  
"Pure Harmony, for a Modern Pianist"  
Mentor: Joseph Morin  
Moderator: Anna Rubin, Music



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