

39TH ANNUAL

 **GRADUATE RESEARCH
CONFERENCE**

“Diversity Across Disciplines”

9:00am - 10:00am Check-In and Late Registration

9:15am - 9:45am **“Dynamics Presenter” Breakfast** - University Center Ballroom
Keynote Speaker: **Dr. Scott E. Casper**, Dean of the College of Arts, Humanities, and Social Science

10:00am - 10:45am **Panel Session I: Media Manipulations** - University Center Ballroom Lounge

Name of Presenter, Program

Shaokang Wang, *Electrical Engineering*
Genevieve Hugenbruch, *Intercultural Communication*
Chrissie Reilly, *Language, Literacy, and Language*

Title

Untitled
Untitled
Leave the Sword, Take the Sashimi: Eating and Organized Crime in Hollywood
Movies about Japan
Untitled
Untitled

Shawntay Stocks, *Language, Literacy, and Language*
Ruken Isik, *Language, Literacy, and Culture*

Microtalk Session I - University Center 310

Name of Presenter, Program

Katherine Ralston, *Geography and Environmental Systems*
Sushant Athley, *Electrical and Electronics Engineering*
Rachael Knoblauch, *Chemistry*
Josh Moskowitz, *Chemistry*
Mahdad Talebpour, *Environmental Engineering*

Name of Presenter, Program

Laura King, *Gerontology*
Becca Sharf, *Emergency Health Services*
Trevor Needham, *Environmental Engineering*
John Winder, *Computer Science*
Justin Velez-Hagan, *Public Policy*

11:00am - 11:45am Panel Session II: Changing Climates - University Center Ballroom Lounge

<u>Name of Presenter, Program</u>	<u>Title</u>
Marshall Washick , <i>Emergency Health Services</i>	A New Model for Climate Change and Health: Will Tuberculosis Rise Again?
Michael Battaglia Jr. , <i>Chemical, Biochemical, and Environmental Engineering</i>	Effects of the Urban Heat Island on Aerosol pH
Marwa El-Sayed , <i>Chemical Engineering</i>	Effects of Liquid Water Evaporation on Organic Aerosols in the Eastern United States
Brent McBride , <i>Atmospheric Physics</i>	Preparing to Launch UMBC's First Full-Feature Earth Sciences Satellite: The Hyper-Angular Rainbow Polarimeter (HARP)
Alexandra St. Pé , <i>Geography and Environmental Systems</i>	Atmospheric Physics and Policy Uncertainties Reinforcing Offshore Wind Turbine Underperformance

Poster/Art Session I - University Center 312

<u>Poster #</u>	<u>Name of Presenter, Program</u>	<u>Title</u>
3	Mary Keenan , <i>Physics</i>	AGN Unification through Radio Spectral Analysis
4	Mirelis Santos Cancel , <i>Chemistry</i>	Collagen Membranes with Ribonuclease Inhibitors for Long-Term Stability of Electrochemical, Aptamer-Based Sensors Employing RNA
5	Adam Meares , <i>Organic Chemistry</i>	BODIPY-Bacteriochlorine Energy transfer Arrays with Tunable Absorption and Near-Infrared Emission
6	Michael Zhang , <i>Chemical Engineering</i>	Untitled
8	Muhammad Mahbubur Rahman , <i>Computer Engineering</i>	Understanding the Logical and Semantic Structure of Large Documents
9	Kiranmayi Prakash Mangalgi , <i>Environmental Engineering</i>	Poultry Litter Dissolved Organic Matter: PARAFAC Analysis and Role in Photolysis of Antibiotics
10	Mamatha Hopanna , <i>Environmental Engineering</i>	Photochemical Behavior of Organo-selenium and -tin Compounds and Their Carbon Analogs Under Simulated Solar Irradiance
11	Nopondo N. Esemoto , <i>Chemistry</i>	Peripherally Metalated Hydroporphyrins: Synthesis and Photophysical Properties
12	Utsav Shashvatt , <i>Environmental Engineering</i>	Development of a Phosphorus Extraction and Recovery System (PEARS) to Recover Phosphorus from Poultry Litter
13	Erica Dasi , <i>Biological Sciences</i>	Optimizing Chlamydomonas reinhardtii to Utilize Butyrate for Wastewater Treatment
14	Brian Cawrse , <i>Chemistry</i>	Antiproliferative Activity of N-substituted Pyrrolo[3,2-d]pyrimidines and Their Potential Use as Therapeutic Agents
15	Yangling Zhou , <i>Mechanical Engineering</i>	Development of an Advanced Nonlinear Rotation Free Plate Element
16	Alexander Winton , <i>Chemistry</i>	Artificial Peptides for the Improved Synthesis and Performance of Lithium Ion Battery Electrodes
18	Estela C. Monge , <i>Biological Sciences</i>	Functional Characterization of the Glycoside Hydrolase Family 18 Chitinases in the Saprophytic Bacterium Cellvibrio japonicus
19	Heather Mutchie , <i>Gerontology</i>	Detecting Cognitive Impairment after Hip Fracture to Predict Dementia-Related

20	Maraki Negesse , <i>Biological Sciences</i>	Cause of Death
21	Josey Stevens , <i>Physics</i>	Anoxia-Mediated Regulation of Microtubule Dynamics
22	Saman Nezami , <i>Mechanical Engineering</i>	Quantum Information Processing by a Continuous Maxwell Demon
24	Rickesh Patel , <i>Biological Sciences</i>	Leaf Spring Design for a Maintenance Free Vibration Energy Harvester
		Navigating the Benthos: Landmark Orientation and Path Integration in a Mantis Shrimp
25	Jong S. Park , <i>Neuroscience and Cognitive Sciences</i>	Role of Lactate-NDRG Signaling in Low Oxygen Tolerance
26	Mary Yates , <i>Chemistry</i>	Design, Synthesis, and Biological Evaluation of Flexible Acyclic Nucleoside Analogues Against Human Coronaviruses and Filoviruses
27	Brian Carroll , <i>Atmospheric Physics</i>	Observing Storm Precursors over the Great Plains
29	Ashley Wayne , <i>Mechanical Engineering</i>	Infant Skull Fracture Mechanics in Abusive Head Trauma Versus Accidental Falls
30	Jared Margulies , <i>Geography and Environmental Systems</i>	Employing Collaborative Photography in the Study Multispecies Encounters: Possibilities and Pitfalls

12:00pm - 1:30pm **Lunch** - University Center Ballroom
 Keynote Speaker: **Dr. Jeffrey Halverson** – “Celebrating 50 Years of Grit and Greatness”
Three Minute Thesis (3MT) Competition
 Janae Baptiste Denise Williams
 Evgenia Barannikova BreAsia Deal

1:45pm - 2:30pm **Panel Session III: Mind the Gap** - University Center Ballroom Lounge

Name of Presenter, Program
Aayush Sharma (Alumni), *Engineering Management*
Robert Burton, *Environmental Engineering*
Stephanie Smith, *Historical Studies*

Title
 Untitled
 Analysis of Low Cost Particulate Matter Sensors for Asthma Research
 Tecumseh and The Canadian Bicentennial of the War of 1812

Microtalk Session II - University Center 310

Name of Presenter, Program
Tyrone E. McKoy, Jr., *Public Policy*
Adam P. Dixon, *Geography and Environmental Systems*
Michael Zhang, *Chemical Engineering*
Seyedahmad Mousavi, *Applied Mathematics*
Ke He, *Chemical and Biochemical Engineering*

Name of Presenter, Program
Joshua D. Brown, *Biochemistry*
Canessa Swanson, *Biochemistry and Molecular Biology*
Sai Kumar Popuri, *Statistics*
Nopondo N. Esemoto, *Chemistry*
Maxwell Atkins, *Physics*

<u>Poster #</u>	<u>Name of Presenter, Program</u>	<u>Title</u>
1	Natalie Roberts , <i>Biological Sciences</i>	Validating Video Playback Methods in Darters (Percidae: Etheosomta)
3	Kartikeya Joshi , <i>Biological Sciences</i>	Role of Ctk1 in Regulating Translational Accuracy by Phosphorylation of uS5
4	Richard Brewster , <i>Physics</i>	Schrodinger Cat States and Quasiprobability Distributions
5	Danielle Schmitt , <i>Chemistry</i>	Spatial Regulation of Enzyme Compartmentalization by Small Molecules in Live Cells
6	Julie Nyman , <i>Chemistry and Biochemistry</i>	Screening Small Molecule Inhibitors Against the Core Encapsidation Signal of HIV-1 RNA
8	Mahdad Talebpour , <i>Environmental Engineering</i>	Untitled
9	Josh Moskowitz , <i>Chemistry</i>	Plasmonic Electricity: Fluorophore Induced Plasmonic Current
10	Marwa El-Sayed , <i>Chemical Engineering</i>	An Online Method to Characterize Reversibility of aqSOA
11	Tonya Santaus , <i>Chemistry</i>	Microwave Cellular Lysis and DNA Fragmentation of <i>Listeria Monocytogenes</i> and <i>Vibrio cholera</i> using Metal Triangle Structures
13	Rachael Knoblauch , <i>Chemistry</i>	Functionalizing Carbon Nanodots: An Exploration of Halogenation and Silver Metal Deposition for Photoluminescence Tuning
14	Miji Jeon , <i>Chemistry and Biochemistry</i>	A Regulatory Metabolic Complex for Glucose Metabolism in Living Cells
15	Zheng Zheng , <i>Chemistry</i>	Interaction of SMAMPs Conjugated Gold Nanoparticles with Fluorescently Quenched Liposomes
16	James Carl Kitchin , <i>Public Policy</i>	Untitled
18	Jonathan Graf , <i>Applied Mathematics</i>	Performance Analysis and Numerical Method Tuning for an Elliptic Test Problem on the Intel Xeon Phi — KNL
19	Mary Donohue , <i>Biological Sciences</i>	"Eyes" in the Backs of their Heads: Cerebral Opsin Expression in Mantis Shrimp
20	Christopher Cooper , <i>Chemistry</i>	Temperature Dependence of Electron Transfer in Organic Charge Transfer Complexes
21	Marilyn Allen , <i>Chemical, Biochemical, and Environmental Engineering</i>	Enhancing Immune Cell Function via Membrane Insertion of Lipid-tailed Biomolecules
22	Zhen Qi , <i>Electrical Engineering</i>	Untitled
24	Brent McBride , <i>Atmospheric Physics</i>	Preparing to Launch UMBC's First Full-Feature Earth Sciences Satellite: The Hyper-Angular Rainbow Polarimeter (HARP)
25	Cassie Nelson , <i>Biological Sciences</i>	Functional Characterization of the GH3 Beta-glucosidases in the Saprophytic Bacterium <i>Cellvibrio japonicus</i>
26	Maithilee Joshi , <i>Computer Sciences</i>	Untitled
27	Stacey Sova , <i>Chemistry</i>	Photoaffinity Labeling and Photooxidative Crosslinking with Naphthalene Imide and Diimide Derivatives
29	Scott Riley , <i>Chemistry</i>	Building Better Batteries with Biology
30	Therese Ku , <i>Chemistry</i>	Synthesis of Flexible, Purine Analogue Inhibitors of NCp7
