**Welcome**

**9:00 AM – 9:50 AM**

**UC 312**

**Remarks by Dr. Katharine Cole, Vice Provost & Dean of Undergraduate Academic Affairs**

**and**

**Wisdom Institute Breakfast with Student Speakers**

**David Fialkow, Mia Rickenbach and Scott Sainz**

**and**

**recognition of UMBC Review Faculty and Student Editors**

**General Session**

**12:00 PM - 1:00 PM**

**UC 312**

**Alumni Keynote Speaker Eric Grollman, ’07, Sociology and Psychology**

**and**

**Introduction of the 2018-2019**

**Undergraduate Research Award Scholars**

* [**Ghina Ammar**](http://urcad.umbc.edu/abstracts-2019/#ammar) | Psychology
*Discrimination And Its Relation To Anger Expression In Emerging Adults*
Mentor(s): Danielle Beatty Moody
UC Ballroom | 10 – 11:30 a.m.
* [**Nandini Aravindan**](http://urcad.umbc.edu/abstracts-2019/#aravindan) | Interdisciplinary Studies
*Maternal Diet And Exercise Influences On Peripheral And Placental Inflammatory Markers*
Mentor(s): Kellie Tamashiro
UC Ballroom | 1 – 2:30 p.m.
* [**Julia Arbutus**](http://urcad.umbc.edu/abstracts-2019/#arbutus) | English
*The Baltimore Sun’s Reporting Legacy: Understanding The WhUC 204 Press AndLynching Coverage*
Mentor(s): Lindsay DiCuirci
UC 310 | 11:45 – Noon
* [**Kristina Atanasoff**](http://urcad.umbc.edu/abstracts-2019/#atanasoff) | Biological Sciences
*Assessing The Age-Specific Immune Response In Drosophila Melanogaster Using A Phagocytosis Assay*
Mentor(s): Jeff Leips
UC Ballroom | 10 – 11:30 a.m.
* [**Nicholas Balasus**](http://urcad.umbc.edu/abstracts-2019/#balasus) | Chemical, Biochemical, and Environmental Engineering
*Investigations Of The Acidity And Liquid Water Content Of Chesapeake Bay Aerosols During The OWLETS-2 Campaign*
Mentor(s): Christopher Hennigan
UC 204 | 2:15 – 2:30 p.m.
* [**Karis Barnett**](http://urcad.umbc.edu/abstracts-2019/#barnett) | Chemistry and Biochemistry
*Comparison Of Solvent Delivery Systems For Enhancing Desorption Electrospray Ionization (DESI) Source*
Mentor(s): William LaCourse
UC Ballroom | 10 – 11:30 a.m.
* [**Ghazal Becker**](http://urcad.umbc.edu/abstracts-2019/#becker) | Biological Sciences
*Transcription Start SUC 204 Heterogeneity Of The HIV-1 RNA Genome*
Mentor(s): Michael Summers
UC Ballroom | 1 – 2:30 p.m.
* [**Samar Behdin**](http://urcad.umbc.edu/abstracts-2019/#freeman) | Chemistry and Biochemistry
*Biochemical And Structural Characterization Of Human Immunodeficiency Virus Type-1 Spliced RNA*
Mentor(s): Michael Summers
UC Ballroom | 10 – 11:30 a.m.
* [**Maxwell Breitmeyer**](http://urcad.umbc.edu/abstracts-2019/#breitmeyer) | Computer Science and Electrical Engineering
*Virtual Reality And Photogrammetry For Improved Reproducibility Of Human-Robot Interaction Studies*
Mentor(s): Don Engel
UC Ballroom | 10 – 11:30 a.m.
* [**Reese Burke**](http://urcad.umbc.edu/abstracts-2019/#burke) | English
*Producing UMBC Bartleby 2019*
Mentor(s): Tanya Olson
UC Ballroom | 1 – 2:30 p.m.
* [**Caleb Campbell**](http://urcad.umbc.edu/abstracts-2019/#campbell) | History
*Knights, Villians, And Buffoons: Portrayals Of The Ku Klux Klan In American Film*
Mentor(s): Anne Rubin
UC Ballroom | 10 – 11:30 a.m.
* [**Hannah Cao**](http://urcad.umbc.edu/abstracts-2019/#cao) | Visual Arts
*Diana And Actaeon: Between The Light And Dark*
Mentor(s): Timothy Nohe
UC Ballroom | 1 – 2:30 p.m.
* [**Noah Carver**](http://urcad.umbc.edu/abstracts-2019/#carver) | Computer Science and Electrical Engineering
*Modular Solvers For Partially Continuous Abstract Markov Decision Processes*
Mentor(s): Cynthia Matuszek
UC Ballroom | 1 – 2:30 p.m.
* **Kevin Chen** | Biological Sciences
*Making Mouse Models To Study Cellular And Genetic Differences That Distinguish Indolent From Aggressive Prostate Cancers*
Mentor(s): Charles Bieberich
UC Ballroom | 10 – 11:30 a.m.
* [**Snigdha Chigurupati**](http://urcad.umbc.edu/abstracts-2019/#chigurupati) | Interdisciplinary Studies
*The Effect Of Personally Meaningful Music On Mood And Behavior Of Those With Dementia*
Mentor(s): Bernard Rabin
Fine Arts Recital Hall | 10:45 – 11 a.m.
* [**Lydia Coley**](http://urcad.umbc.edu/abstracts-2019/#coley) | American Studies
*“A Model Negro Village”: How Environmental Racism Affects The Health Of African-Americans In Cherry Hill*
Mentor(s): Nicole King
UC Ballroom | 1 – 2:30 p.m.
* [**Autumn Cook**](http://urcad.umbc.edu/abstracts-2019/#cook) | Chemistry and Biochemistry
*The Rheology And Dynamics Of Active Matter Suspensions*
Mentor(s): Daniel L. Blair
UC Ballroom | 1 – 2:30 p.m.
* [**Ashley Copenhaver**](http://urcad.umbc.edu/abstracts-2019/#copenhaver) | Mathematics and Statistics
*Discovering The Functional Structure Of The Islet Of Langerhans Through Machine Learning And Optimization*
Mentor(s): Bradford Peercy
UC Ballroom | 1 – 2:30 p.m.
* [**David Fialkow**](http://urcad.umbc.edu/abstracts-2019/#fialkow) | Physics
*Characterizing The Mechanical Oscillatory Properties Of Nanostructures*
Mentor(s): Matthew Pelton
UC 204 | 3:15 – 3:45 p.m.
* [**Marissa Gabel**](http://urcad.umbc.edu/abstracts-2019/#gabel) | Mathematics and Statistics
*Constructing Time to Onset of Urea Cycle and Analyzing Growth Trends*
Mentor(s): DoHwan Park
UC Ballroom | 10 – 11:30 a.m.
* [**Frances Grace Ghinger**](http://urcad.umbc.edu/abstracts-2019/#ghinger) | Biochemistry and Molecular Biology
*Determining The Structure Of The HIV-1 5’ Leader Monomeric And Dimeric Confirmations*
Mentor(s): Michael Summers
UC Ballroom | 10 – 11:30 a.m.
* [**Ellen Gulian**](http://urcad.umbc.edu/abstracts-2019/#hipsley) | Physics
*Asynchronous Optical Sampling For Terahertz Time-Domain Spectroscopy*
Mentor(s): Michael Hayden
UC Ballroom | 10 – 11:30 a.m.
* [**Ryan Heslin**](http://urcad.umbc.edu/abstracts-2019/#heslin) | History
*The Beast’s Burden: General Benjamin Butler And Historical Memory*
Mentor(s): Anne Rubin
UC 312 | 2:30 – 2:45 p.m.
* [**Phillip Hilliard**](http://urcad.umbc.edu/abstracts-2019/#hilliard) | Computer Science and Electrical Engineering
*Annotating And Predicting Contextual Sentiment In Text*
Mentor(s): Frank Ferraro
UC Ballroom | 1 – 2:30 p.m.
* [**Mark Horton**](http://urcad.umbc.edu/abstracts-2019/#hanson1) | Computer Science and Electrical Engineering
*Brain Guitar-Pedal Interface*
Mentor(s): E. F. Charles LaBerge
UC Ballroom | 10 – 11:30 a.m.
* [**Mark Horton**](http://urcad.umbc.edu/abstracts-2019/#horton) | Computer Science and Electrical Engineering
*Autoencoder Implementation For Embedded Reinforcement Learning*
Mentor(s): Tinoosh Mohsenin
UC Ballroom | 10 – 11:30 a.m.
* [**Adurshsiva Iyer**](http://urcad.umbc.edu/abstracts-2019/#iyer) | Physics
*Examining The High-Energy Radiative Processes Occurring In Radio-Loud AGN Jets With Fermi-LAT Observations*
Mentor(s): Eileen Meyer
UC Ballroom | 10 – 11:30 a.m.
* [**Cyrus Jenkins**](http://urcad.umbc.edu/abstracts-2019/#sheth) | Biological Sciences
*Effects Of Gene Knockdown On Fecundity In Candidate Genes Within Drosophila Melanogaster*
Mentor(s): Jeff Leips
UC Ballroom | 10 – 11:30 a.m.
* [**Zachary Jones**](http://urcad.umbc.edu/abstracts-2019/#hanson1) | Computer Science and Electrical Engineering
*Brain Guitar-Pedal Interface*
Mentor(s): E. F. Charles LaBerge
UC Ballroom | 10 – 11:30 a.m.
* [**Laiyana Kabir**](http://urcad.umbc.edu/abstracts-2019/#kabir) | Psychology
*A Qualitative Examination Of Black Women’s Barriers To And Motivations For Safer Sex*
Mentor(s): Jasmine Abrams
UC Ballroom | 1 – 2:30 p.m.
* [**Matthew Kane**](http://urcad.umbc.edu/abstracts-2019/#kane) | Biological Sciences
*Nest Predation of the Bahama Oriole (Icterus Northropi) by the Black Rat (Rattus Rattus) on Andros*
Mentor(s): Kevin Omland
UC 310 | 3:30 – 3:45 p.m.
* [**Michael Karanja**](http://urcad.umbc.edu/abstracts-2019/#sheth) | Biological Sciences
*Effects Of Gene Knockdown On Fecundity In Candidate Genes Within Drosophila Melanogaster*
Mentor(s): Jeff Leips
UC Ballroom | 10 – 11:30 a.m.
* [**Jeremy Keaton**](http://urcad.umbc.edu/abstracts-2019/#keaton) | Music
*Pendulum*
Mentor(s): Linda Dusman
UC 310 | 11 – 11:15 a.m.
* [**Gerson Kroiz**](http://urcad.umbc.edu/abstracts-2019/#kroiz) | Mathematics and Statistics
*Study Of Calcium-induced Calcium Release Components In Cardiomyocytes Modeled By Seven Partial Differential Equations*
Mentor(s): Matthias Gobbert
UC Ballroom | 10 – 11:30 a.m.
* [**Jessica Kweon**](http://urcad.umbc.edu/abstracts-2019/#hajos) | Psychology
*How Does Sense Of Community Between Genders Affect Minority Student Achievement?*
Mentor(s): Mario Sto. Domingo
UC Ballroom | 1 – 2:30 p.m.
* [**Caroline Larkin**](http://urcad.umbc.edu/abstracts-2019/#larkin) | Bioinformatics and Computational Biology
*An Evolutionary Algorithm To Reverse-Engineer Tumor Sub-Clonal Dynamics And Predict Optimal Treatment Targets*
Mentor(s): Daniel Lobo
UC 310 | 2:30 – 2:45 p.m.
* [**Sasha Lenus**](http://urcad.umbc.edu/abstracts-2019/#lenus1) | Individualized Studies
*Music Therapy Contributes To A Holistic Model Of Medical Care For Aging Individuals With Neurodegenerative Diseases*
Mentor(s): Tiffany Gierasch
Fine Arts Recital Hall | 11 – 11:15 a.m.
* [**Sasha Lenus**](http://urcad.umbc.edu/abstracts-2019/#lenus2) | Biological Sciences
*ProSAAS Overexpression Decreases Secreted Aβ And Amyloid Precursor Protein in Alzheimer’s Model Neuro2A Cells*
Mentor(s): Iris Lindberg
UC Ballroom | 1 – 2:30 p.m.
* [**Clarisse Lukban**](http://urcad.umbc.edu/abstracts-2019/#lukban) | Dance
*Childhood Sexual Assault And Young Adult Mental Health Outcomes On Risky Sexual Behavior And STIs/HIV*
Mentor(s): Kathryn Van Eck
UC Ballroom | 1 – 2:30 p.m.
* [**Karan Luthria**](http://urcad.umbc.edu/abstracts-2019/#luthria) | Bioinformatics and Computational Biology
*Phenotype Clustering Using Computational Tools To Potentially Reduce Healthcare Costs*
Mentor(s): Maricel Kann
UC Ballroom | 10 – 11:30 a.m.
* [**Samiksha Manjani**](http://urcad.umbc.edu/abstracts-2019/#manjani) | Political Science
*The Injustice Of Inequitable Sentencing Of Sex Offenders*
Mentor(s): Jeffrey Davis
UC Ballroom | 1 – 2:30 p.m.
* [**Dominic Marianelli**](http://urcad.umbc.edu/abstracts-2019/#marianelli) | Global Studies
*The State Of Terror Response Operations In ThePost-9/11 Period: Lessons From A Simulation Exercise*
Mentor(s): Brigid Starkey
UC Ballroom | 1 – 2:30 p.m.
* [**Andrew McFarland**](http://urcad.umbc.edu/abstracts-2019/#mcfarland) | Visual Arts
*Derik’s Inferno: A Retro Two-dimensional Platformer From Hell*
Mentor(s): Eric Jordan
UC Ballroom Lounge | 10 – Noon
* [**Stephanie Milani**](http://urcad.umbc.edu/abstracts-2019/#milani) | Computer Science and Electrical Engineering
*A Hierarchical Framework For Norm-Aware Planning And Reinforcement Learning*
Mentor(s): Marie desJardins
UC Ballroom | 10 – 11:30 a.m.
* [**Rachel Morin**](http://urcad.umbc.edu/abstracts-2019/#morin) | Physics
*Microscopic Processes That Shape The High Energy Universe: Teaching Physics With Art*
Mentor(s): Markos Georganopoulos
UC 310 | 3:45 – 4 p.m.
* [**Tanzeem Naqvi**](http://urcad.umbc.edu/abstracts-2019/#naqvi) | Psychology
*Investigating The Relationships Between Therapeutic Bond, Self-Efficacy, Therapy Conditions and Treatment Adherence*
Carlo DiClemente(s): Name
UC Ballroom | 1 – 2:30 p.m.
* [**Adam Ng**](http://urcad.umbc.edu/abstracts-2019/#ng) | History
*Conservative Interest In British Fascism In The 1930s*
Mentor(s): Daniel Ritschel
UC 312 | 2:45 – 3 p.m.
* [**Tiffany Nguyen**](http://urcad.umbc.edu/abstracts-2019/#nguyen2) | Psychology
*Confirming And Identifying Dimensions Of Learning Engagement To Predict Performance In College STEM Gateway Courses*
Mentor(s): Shuyan Sun
UC Ballroom | 1 – 2:30 p.m.
* [**Howard Nicholson**](http://urcad.umbc.edu/abstracts-2019/#bailer) | Chemical, Biochemical, and Environmental Engineering
*Design and Analysis Of Hydrogels To Protect Biosensors From Enzyme-Catalysed Degradation*
Mentor(s): Jennie Leach
UC Ballroom | 1 – 2:30 p.m.
* [**Anna Gifty Opoku-Agyeman**](http://urcad.umbc.edu/abstracts-2019/#opoku-agyeman) | Economics
*Evaluating The Impact Of Early Childhood Malaria On Normal School Progression In Ghana*
Mentor(s): Thomas Gindling
UC 310 | 10 – 10:15 a.m.
* [**Afia Osei-Ntansah**](http://urcad.umbc.edu/abstracts-2019/#osei-ntansah) | Biological Sciences
*Role Of The N-myc Downstream Regulated Gene (NDRG) 1 In The Adaptation Of The Kidney To Low Oxygen*
Mentor(s): Rachel Brewster
UC 204 | 11:45 – Noon
* [**Yaw Owusu-Boaitey**](http://urcad.umbc.edu/abstracts-2019/#owusu-boaitey) | Biological Sciences
*Identifying A Role Of Skp2 In Border Cell Migration In The Drosophila Ovary*
Mentor(s): Michelle Starz-Gaiano
UC Ballroom | 10 – 11:30 a.m.
* [**Maia Parker**](http://urcad.umbc.edu/abstracts-2019/#parker2) | Education
*Is Baltimore City Meeting The Needs Of Students: The Integration Of Latinx Students Into Baltimore City Schools*
Mentor(s): Jennifer Mata-McMahon
UC Ballroom | 1 – 2:30 p.m.
* [**Shirin Parsa**](http://urcad.umbc.edu/abstracts-2019/#parsa) | Biological Sciences
*The Effect Of Sleep Hormones On Cancer Cell Growth And Response To Chemotherapeutic Drugs*
Mentor(s): Daniel Gioeli
UC Ballroom | 10 – 11:30 a.m.
* [**Nishka Patel**](http://urcad.umbc.edu/abstracts-2019/#patel1) | Individualized Studies
*Cognitive Profile Of Patients With Gaucher Disease And Heterozygous Mutation Carriers At Risk For Parkinson’s Disease*
Mentor(s): Grisel Lopez
UC Ballroom | 1 – 2:30 p.m.
* [**Rishit Patel**](http://urcad.umbc.edu/abstracts-2019/#patel2) | Biological Sciences
*Analysis Of Half-decay Response Duration To Various E-cigarette Chemicals In Mice Nasal Epithelium*
Mentor(s): Weihong Lin
UC Ballroom | 1 – 2:30 p.m.
* [**Alexia Petasis**](http://urcad.umbc.edu/abstracts-2019/#petasis) | Individualized Studies
*Becoming Survivor: Understanding Human Trafficking Through Dance*
Mentor(s): Steven McAlpine
Dance Cube, 337 PAHB | 10:30
* [**Abigail Pollock**](http://urcad.umbc.edu/abstracts-2019/#pollock) | Psychology
*Examining The Role Of Trust In Sexual Health Decision Making Among Black Women*
Mentor(s): Jasmine Abrams
UC Ballroom | 10 – 11:30 a.m.
* [**Julianna Posey**](http://urcad.umbc.edu/abstracts-2019/#posey) | Mechanical Engineering
*Nephelometer Implementation For Aerosol Property Retrieval*
Mentor(s): Ruben Delgado
UC Ballroom | 10 – 11:30 a.m.
* [**Jeremy Rubin**](http://urcad.umbc.edu/abstracts-2019/#rubin) | Mathematics and Statistics
*Letting The LaxKAT Out Of The Bag: Packaging, Simulation, And Neuroimaging Data Analysis For A Powerful Kernel Test*
Mentor(s): Russell Shinohara
UC 310 | 3:15 – 3:30 p.m.
* [**Shea Sandifer**](http://urcad.umbc.edu/abstracts-2019/#sandifer) | Computer Science and Electrical Engineering
*UMBC Game Developers Club 2018-2019 Game Projects*
Mentor(s): Marc Olano
UC Ballroom Lounge | 10 – Noon
* [**Claire Scott**](http://urcad.umbc.edu/abstracts-2019/#scott) | Biological Sciences
*Speciation Of Elephant Ivory Tusks From Java Sea Shipwreck To Inform Ancient Trade Routes*
Mentor(s): Cynthia Wagner
UC 204 | 9:45 – 10 a.m.
* [**Areej Shahid**](http://urcad.umbc.edu/abstracts-2019/#shahid) | Chemical, Biochemical, and Environmental Engineering
*Characterization Of Electronic And Photonic Nanomaterials*
Mentor(s): Joshua Zide
UC Ballroom | 1 – 2:30 p.m.
* [**Cliel Shdaimah**](http://urcad.umbc.edu/abstracts-2019/#shdaimah) | Gender and Women’s Studies
*Perspectives Of Queer Jewish Leaders On The Intersections Of Their Jewish And Queer Identities*
Mentor(s): Amy Bhatt
UC Ballroom | 1 – 2:30 p.m.
* [**Aarsh Sheth**](http://urcad.umbc.edu/abstracts-2019/#sheth) | Biological Sciences
*Effects Of Gene Knockdown On Fecundity In Candidate Genes Within Drosophila Melanogaster*
Mentor(s): Jeff Leips
UC Ballroom | 10 – 11:30 a.m.
* [**Sammy Siegel**](http://urcad.umbc.edu/abstracts-2019/#siegel) | Dance
*I Make Milk*
Mentor(s): Doug Hamby
Dance Cube, 337 PAHB | 10 a.m.
* [**Joshua David Slaughter**](http://urcad.umbc.edu/abstracts-2019/#slaughter) | Geography and Environmental Systems
*The Ephemerality of Secondary Forests In Southern Costa Rica*
Mentor(s): Matthew Fagan
UC Ballroom | 10 – 11:30 a.m.
* **Ariana Taj** | Biological Sciences
*Developing A Rat Model Of Aggressive Prostate Adenocarcinoma*
Mentor(s): Charles Bieberich
UC Ballroom | 1 – 2:30 p.m.
* [**Dave Tandy**](http://urcad.umbc.edu/abstracts-2019/#tandy) | Political Science
*Postmaterialism And The 2018 Midterm Elections In Baltimore County*
Mentor(s): Ian Anson
UC Ballroom | 1 – 2:30 p.m.
* [**Jordan Troutman**](http://urcad.umbc.edu/abstracts-2019/#troutman) | Computer Science and Electrical Engineering
*Understanding Machine Learning Bias Without A Ground Truth*
Mentor(s): Anand Sarwate
UC Ballroom | 10 – 11:30 a.m.
* [**Inaya Wahid**](http://urcad.umbc.edu/abstracts-2019/#ammar) | Psychology
*Discrimination And Its Relation To Anger Expression In Emerging Adults*
Mentor(s): Danielle Beatty Moody
UC Ballroom | 10 – 11:30 a.m.
* [**Halle Welch**](http://urcad.umbc.edu/abstracts-2019/#welch) | Chemical, Biochemical, and Environmental Engineering
*Examining Characteristics Of erecta1-6 Mutant Phenotype In Physcomitrella Patens*
Mentor(s): Adrienne Roeder
UC Ballroom | 1 – 2:30 p.m.
* [**Teresa Whittemore**](http://urcad.umbc.edu/abstracts-2019/#whittemore) | Dance
*When Eve And Eve Bit The Apple*
Mentor(s): Doug Hamby
Dance Cube, 337 PAHB | 11:45 a.m.
* [**Hannah Wilcove**](http://urcad.umbc.edu/abstracts-2019/#wilcove) | Gender and Women’s Studies
*A Case Study On Abortion Policy*
Mentor(s): Amy Bhatt
UC 310 | 2 – 2:15 p.m.
* [**Linda Wiratan**](http://urcad.umbc.edu/abstracts-2019/#wiratan) | Biological Sciences
*Development Of Luciferase Reporter Constructs To Assess Circadian Control Of Defense Gene Expression In Arabidopsis*
Mentor(s): Hua Lu
UC 204 | 9:30 – 9:45 a.m.