**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.