

24<sup>TH</sup> ANNUAL

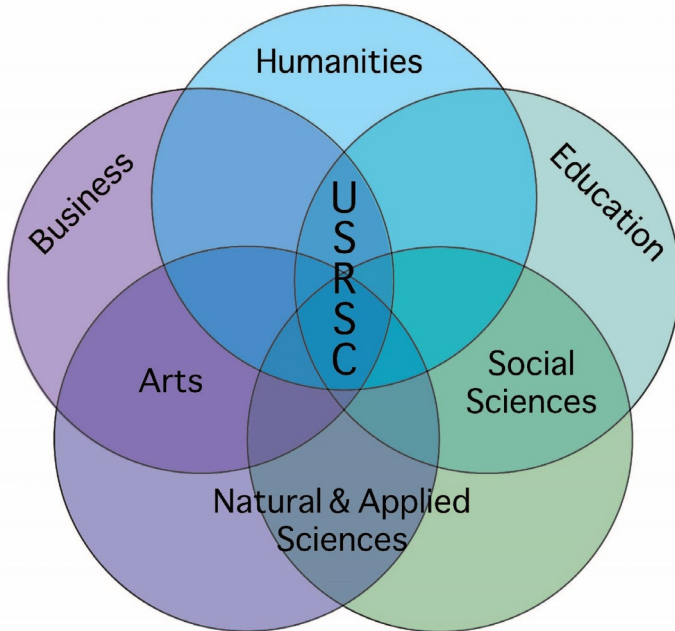


LOYOLA UNIVERSITY MARYLAND

— 1852 —

UNDERGRADUATE STUDENT RESEARCH &  
SCHOLARSHIP COLLOQUIUM

**APRIL 19, 2024**



ACADEMIC EXCELLENCE

∞ WEEKEND ∞



# UNDERGRADUATE STUDENT RESEARCH & SCHOLARSHIP COLLOQUIUM

Once a year Loyola University Maryland hosts a campus-wide forum highlighting undergraduate student research and scholarship. The goal of the colloquium is to encourage scholastic endeavors that focus on either the generation of new knowledge or creative integration of existing scholarship.

Today's presentations will be evaluated based on the following criteria:

- A. *Clear Goals: Does the student-scholar state the basic purpose(s) of his or her work?*  
Considerations: Defining objectives that are specific, realistic, and achievable.  
Identifying important questions in the field.  
Stating the objectives in a manner appropriate for a lay audience.
  - B. *Adequate Preparation: Does the student-scholar show an understanding of existing scholarship and/or scholarly processes in the field?*  
Considerations: Referencing relevant approaches, scholarship, and/or creative work in the field.  
Gathering evidence relevant to stated goals.  
Bringing the necessary skills to his or her work.
  - C. *Appropriate Methods: Does the student-scholar use methods appropriate to the goals?*  
Considerations: Selecting appropriate methods.  
Applying effectively the methods selected.  
Modifying procedures or methods in response to changing circumstances?
  - D. *Meaningful Results: Does the student-scholar achieve his or her goals?*  
Considerations: Conclusions are well-supported and convincingly argued.  
Contributes meaningfully to the field of study.  
Opens additional areas for further exploration.  
The student-artist's work is aesthetically and expressively effective.
  - E. *Effective Presentation: Does the student-scholar use a suitable style and effective organization to present his or her work?*  
Considerations: Clear oral or written presentation of the work.  
Effective organization of the presentation  
Visual appeal of the presentation.
  - F. *Reflective Critique: Does the student-scholar critically evaluate his or her own work?*  
Considerations: Demonstrates an understanding of the strengths and weakness of the work.  
Is able to respond thoughtfully to questions about the work.
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## SCHEDULE OF EVENTS

**3:00-4:30 PM**

**ORAL PRESENTATIONS**

Beatty Hall 106	–	Social Sciences Session 1
Beatty Hall 108	–	Social Sciences Session 2
Beatty Hall 112	–	Natural & Applied Sciences Session
Beatty Hall 114	–	Humanities & Fine Arts Session

**3:00-3:30 PM • MCGUIRE HALL EAST**

**POSTER JUDGING (PRESENTERS AND JUDGES ONLY)**

**3:30-5:30 PM • MCGUIRE HALL EAST**

**POSTER PRESENTATIONS AND RECEPTION (OPEN TO PUBLIC)**

**POSTER JUDGING CONTINUES**

**5:30-6:00 PM • MCGUIRE HALL WEST**

**AWARDS CEREMONY**

**Welcome:** Theresa Geiman, Ph.D. Associate Professor of Biology, Loyola University Maryland

**Remarks from Administration:** Lisa Oberbroeckling, Ph.D., Associate Vice President for Undergraduate Academic Affairs, Associate Professor of Mathematics, Loyola University Maryland

**Keynote Introduction:** David Hoe, Ph.D., Associate Professor of Engineering, Loyola University Maryland

**Keynote Speaker:** Suzanne Keilson, Ph.D., Associate Professor of Engineering, Loyola University Maryland

**Presentation of Awards**



Detailed schedule begins on page 4



# ORAL PRESENTATIONS

## HUMANITIES AND FINE ARTS SESSION

BEATTY HALL, ROOM 114

MODERATOR: DR. SELIN GURSOZLU (PHILOSOPHY)

Time: 3:00 pm

*Developments in the Era of Company Control in German East Africa*

**Eric Jackson**

Faculty Mentor: Dr. Willeke Sandler (History)

Time: 3:15 pm

*The Mediation of Martin Luther King Jr. in Baltimore's White and Black Press*

**Alexis Faison**

Faculty Mentor: Dr. Elliot King (Communications) and Dr. Sam Klug (History)

Time: 3:30 pm

*Speaking Of and Speaking Too: An Ethical Approach to Suffering*

**Israel White**

Faculty Mentor: Dr. Jill Snodgrass (Theology)

Time: 3:45 pm

*Hacking Instantaneous: Process-Based Creative Explorations in an Everyday Medium*

**Isabella Guerrero**

Faculty Mentor: Jon Malis, MFA (Visual Arts)

## NATURAL & APPLIED SCIENCES

BEATTY HALL, ROOM 112

MODERATOR: DR. THERESA GEIMAN (BIOLOGY)

Time: 3:00 pm

*The Efficacy of Dinaciclib Treatment to Double Resistant ER-Positive Breast Cancer and miRNA-222*

**Cecelia Mota, Chloe Kuminkoski**

Faculty Mentor: Dr. Armina Kazi (Biology)

Time: 3:15 pm

*Optimizing Small-Scale Production of Insulin*

**Anna Rico, Muskaan Wadhava, Grace Millis**

Faculty Mentor: Dr. Lisa Scheifele (Biology)

Time: 3:30 pm

*The Effects of Zinc on Arabidopsis Lyrata*

**Markus Dudley**

Faculty Mentor: Dr. Maren Blohm (Biology)

Time: 3:45 pm

*Evaluating Blood Pressure Optimization in Hypertensive Patients as a Predictive Indicator of Future Hospitalization*

**Mia Aglieco**

Faculty Mentor: Dr. Derek Kendig (Biology)

Time: 4:00 pm

*Creating an Optimal Connect Four Playing Program*

**Joe Fielding**

Faculty Mentor: Dr. Hoang Bui (Computer Science)

Time: 4:15 pm

*Comparing Surface Water Microbe Community Composition and Group Abundances to That of Benthic Microbe Communities from Microbial Communities in Wadable Streams Using Open Source Data*

**Megan O'Grady**

Faculty Mentor: Dr. Bernadette Roche (Biology)

Time: 4:30 pm

*Basilar Artery Stenosis in Children with Moyamoya Disease*

**Daniel Reilly**

Faculty Mentor: Dr. Michael Tangrea (Biology)

## **SOCIAL SCIENCES SESSION 1**

**BEATTY HALL, ROOM 106**

**MODERATOR: DR. RACHEL GROVER (PSYCHOLOGY)**

Time: 3:00 pm

*From Personality to Well-Being: The Mediating Mole of Social Interaction*

**Ivy Gallagher**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

Time: 3:15 pm

*Sleeping for success: Subjective Well-being and Sleep Among University Students*

**Emma Fogle**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

Time: 3:30 pm

*How Parent-Adolescent Relationships Relate to Romantic Relationship Quality in Emerging Adulthood*

**Josh Hurst, Grace Adegoke, Ava Thomas,**

Faculty Mentor: Dr. Rachel Grover (Psychology)

Time: 3:45 pm

*"I'm Sexy and I Know It": Sexual Self-Concepts and Adolescent Dating Patterns*

**Andrea Maldonado, Tory Tafe, Emily Mozgai**

Faculty Mentor: Dr. Rachel Grover (Psychology)

Time: 4:00 pm

*Personality and Self-Esteem and Relationships to Romantic Relationship Patterns*

**Marianne Grace Villaflor, Morgan Fuerbacher, Salvri Manalansan**

Faculty Mentor: Dr. Rachel Grover (Psychology)

Time: 4:15 pm

*Understanding the Correlation Between Social Media Use Motivations, Relationship Expectations, and Relationship Satisfaction Among Emerging Adults*

**Cali Barton, Aidan Hunter, Diba Ramezan**

Faculty Mentor: Dr. Rachel Grover (Psychology)

## **SOCIAL SCIENCES SESSION 2**

**BEATTY HALL, ROOM 108**

**MODERATOR: DR. MICHIKO IWASAKI (PSYCHOLOGY)**

Time: 3:00 pm

*Descriptive Study of Sleep Patterns and Knowledge among Department of Juvenile Services Staff*

**Lily Bistline, Erin Vermette**

Faculty Mentor: Dr. Amy Wolfson (Psychology)

Time: 3:15 pm

*Examining the Relationship between Conflict, Relationship Satisfaction, and Intentions to Leave in African American Heterosexual Couples*

**Tori Copeland**

Faculty Mentor: Dr. Heather Lyons (Psychology)

Time: 3:30 pm

*Leadership Qualified: The Common Career of Speakers of the House, 1899-2024*

**Elizabeth Gilmore**

Faculty Mentor: Dr. Douglas Harris (Political Science)

Time: 3:45 pm

*The Statute of Limitations*

**Aderinsola Fatungase**

Faculty Mentor: Dr. Matt Beverlin (Political Science)

Time: 4:00 pm

*Assessing the Relationship between Judicial Ethics and Court Efficiency*

**Emma Alexander**

Faculty Mentor: Dr. Matt Beverlin (Political Science)

Time: 4:15 pm

*The Big Four: How to Regulate Streaming Platforms' Growing Expansion?*

**Kavon Burley**

Faculty Mentor: Dr. Matt Beverlin (Political Science)

## POSTER SESSION

### EDUCATION SESSION 1

MC GUIRE HALL, STARTING AT 3:30PM

*Incorporating Manipulatives into Classroom Practice*

**Matt Cardano**

Faculty Mentor: Dr. Karen Terrell (Education)

*Reading in the Classroom*

**Madeline Dagnes**

Faculty Mentor: Stacy Williams, MAT (Education)

*Enhancing Math Literacy in a Third-Grade Classroom: A CUBES Intervention*

**Mckenna Stablein**

Faculty Mentor: Stacy Williams, MAT (Education)

*Improving Decoding Skills in Elementary Students*

**Emily Lehberger**

Faculty Mentor: Stacy Williams, MAT (Education)

*Increasing Decoding Skills*

**Rosie Peters**

Faculty Mentor: Stacy Williams, MAT (Education)



*Vocabulary Knowledge: Best Practices of Reading Comprehension*

**Emma Braganza**

Faculty Mentor: Jennifer Pettey (Education)

*Increasing Low Readers Passage Fluency*

**Sajel Patel**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Increasing Sight Word Fluency*

**Margot White**

Faculty Mentor: Melissa Gilroy (Education) and Melissa Mulieri, MA (Education)

*Reflective Inquiry: Inclusion and Explicit Instruction of Writing Skills in Mathematics*

**Erin Megill**

Faculty Mentor: Melissa Gilroy (Education)

*Fostering Fluency Rates in School*

**Marrick Golladay**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Phonemic Awareness Intervention*

**Caleb Kelly**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Multisensory Instruction to Increase Phonics Achievement*

**Matilda Davis**

Faculty Mentor: Stacy Williams, MAT (Education)

*Students with Autisms' Penmanship*

**Stella Meyerhoeffer**

Faculty Mentor: Stacy Williams, MAT (Education)

*Improving Students' Ability to Decode CVC Words Through Explicit and Multisensory Phonics Instruction*

**Amanda Micceri**

Faculty Mentor: Melissa Gilroy (Education) and Melissa Mulieri, MA (Education)

## **EDUCATION SESSION 2**

**MCGUIRE HALL, STARTING AT 3:30PM**

*The Impact of Writing Workshops on Punctuation and Capitalization*

**Carolyn Foley**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Using Fluency to Increase Mathematical Ability*

**Sofia Dorrego**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Using Multi-sensory Education to Teach 5th Grade Special Education Students the Silent -E Rule*

**Jordan Durkin**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Math Vocabulary and Concepts*

**Kenzie Garino**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Vocabulary Development Through Poetry*

**Meg Cappabian**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Increasing Student Achievement in Reading Fluency*

**Sarah Vavricka**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Increasing Student Achievement in Reading Comprehension with Decoding Practice*

**Bridget Hackett**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Setting the Foundation for Student Achievement*

**Caitlin Churney**

Faculty Mentor: Melissa Mulieri, MA (Education)

*The Implementation of Nonsense Word Instruction in Improving Decoding Abilities*

**Lauren Hayes**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Instructional Strategies for Spelling Words With Inflectional Ending -ed*

**Emily Stoner**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Explicitly Teaching Students Prefixes in Order to Enhance Academic Achievement within Vocabulary Reading Skills*

**Heather Grant**

Faculty Mentor: Melissa Mulieri, MA (Education)

*Increasing Vocabulary Understanding in Elementary Mathematics Classrooms*

**Megan Cutter**

Faculty Mentor: Stacy Williams, MAT (Education) and Melissa Mulieri, MA (Education)

*Inquiry Project: Reading Comprehension*

**Reagan Waters**

Faculty Mentor: Stacy Williams, MAT (Education)

*Reading comprehension inquiry project*

**Megan Donnelly**

Faculty Mentor: Stacy Williams, MAT (Education)

*Inquiry of Phonics*

**Caroline McDowell**

Faculty Mentor: Stacy Williams, MAT (Education)

## **NATURAL & APPLIED SCIENCES**

**MCGUIRE HALL, STARTING AT 3:30PM**

*Investigating the Role of the Transcription Factor Npas4 in Cognitive Outcome in Aging*

**Gwenyth Lowery**

Faculty Mentor: Dr. Craig Myrum (Biology)

*Establishing and Validating Telemetry Devices to Quantify Sleep*

**Brianne Smith**

Faculty Mentor: Dr. Craig Myrum (Biology)

*The Role of PGC1-Alpha in the Development of Muscle Atrophy Following Spinal Cord Injury*

**Amaya Core-Jones**

Faculty Mentor: Dr. Brian Barr (Chemistry & Biochemistry)

*The Effect of Charged Membrane Lipid Compositions on the Specific Activity of Phytoene Desaturase*

**Chloe Kuminkoski**

Faculty Mentor: Dr. Brian Barr (Chemistry & Biochemistry)

*Studying Binding in TPGS-750-M Micelles Using Competition Reactions*

**Benick Mbaya**

Faculty Mentor: Dr. Courtney Hastings (Chemistry & Biochemistry)

*Comparative Study on Bird Activity Around the Dawn Chorus and Various Habitats*

**Luisa Glass, Anna Miller, Jewel Grant**

Faculty Mentor: Dr. Bernadette Roche (Biology)

*Photochemistry of 1,4-Diphenyl-1,3-Butadiene Isomers*

**Isabel Sedwick**

Faculty Mentor: Dr. Elizabeth Dahl (Chemistry & Biochemistry)

*Neurobiological Effects of Antiepileptic Drugs in Rats with Age-related Spatial Memory Deficits*

**Diba Ramezan**

Faculty Mentor: Dr. Craig Myrum (Biology)

*Solving Coding Problems with Machine Learning*

**Jay Gnanasekaran, Joshua Brooks**

Faculty Mentor: Dr. Nguyen Ho (Computer Science)

*The Role of Sleep in Age-related Cognitive Decline: A Search for Cellular and Molecular Substrates*

**Bradley Stinnette**

Faculty Mentor: Dr. Craig Myrum (Biology)

*Cell Fate Engineering of Sox9+ Condroprogenitors*

**Kaily Young**

Faculty Mentor: Dr. Theresa Geiman (Biology)

*Targeted Modification of Lsh in Human Glioblastoma Cells*

**Grace Acle**

Faculty Mentor: Dr. Theresa Geiman (Biology)

## **SOCIAL SCIENCES**

**McGUIRE HALL, STARTING AT 3:30PM**

*Happiness and Gratitude Project*

**Michael Graziano**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

*Professor Well-Being*

**Abena Ansah, Isabella Barnette, Hannah Matrangola**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

*The Relation between Emerging Adults' Perceived Parental Involvement and Their Perceived Social Withdrawal*

**Victoria Marcondes**

Faculty Mentor: Dr. Carolyn Barry (Psychology)

*The Varying Perceptions of Happiness*

**Hayden Beach, Erin Rooney, Quinn Bateman**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

*The Relation Between Materialism, Subjective Well-being, and Gratitude*

**Mary Donnelly**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

*Stroop Task Response Time: A comparison between Sequential Bilinguals*

**Sophia Launay-Falasse**

Faculty Mentor: Dr. Kathleen Siren (Speech-Language) and Dr. Tepanta Fossett (Speech-Language)

*Myths Behind Being Bilingual*

**Izabella Borsukiewicz**

Faculty Mentor: Dr. Sara Collins (Speech-Language)

*Subjective Well-being and Values: Their Connection and How it Differs among United States Regions*

**Derek Martin, Gaddi Rodriguez, Charlie Sayers, Amelia Silberger**

Faculty Mentor: Dr. Theresa DiDonato (Psychology)

*Senior Caretakers and Senior Sexuality: How do Senior Caretakers' Behaviors and Attitudes Constrain or Allow for Senior Sexual Expression?*

**Ella Mallon**

Faculty Mentor: Dr. Amanda Konradi (Sociology)

*The Effect of Different Institutional Approaches on Adolescent Sleep and Wellbeing: A Literature Review*

**Sara Jaffie**

Faculty Mentor: Dr. Amy Wolfson (Psychology)

*Modeling Analysis of School Start Times and Commutes for Baltimore City Youth*

**Madelyn Beckett, Emma O'Hare**

Faculty Mentor: Dr. Amy Wolfson (Psychology)

*Assessment of Gerotranscendence: Development of Survey Item Pool Closely Reflecting Theoretical Perspectives*

**Alessia Petroni, Brian Holder, Nima Rafei**

Faculty Mentor: Dr. Michiko Iwasaki (Psychology)

*Adolescent School Start Times in Baltimore City Public Schools*

**Bendu Kaba, Victoria Louis, Chloe Connor**

Faculty Mentor: Dr. Amy Wolfson (Psychology)

## THANKS TO OUR REVIEWERS, JUDGES, AND MODERATORS

### **HUMANITIES, EDUCATION, AND FINE ARTS**

Dr. Willeke Sandler (Philosophy), Dr. Jim Snow (Philosophy), Dr. Selin Gursozlu (Philosophy), Billy Friebele MFA (Visual Arts), Stacy Williams, MAT (Education), Dr. Margarita Gomez (Education), Dr. Joshua Smith (Education), Dr. Karen Terrell (Education), Carrie Lang (Education), Amy Cosentino MS (Education), Melissa Gilroy (Education), Dr. James Zheng (Finance)

### **NATURAL & APPLIED SCIENCES**

Dr. Yanko Kranov (Engineering), Dr. Chloe Garfinkel (Biology), Dr. Nguyen Ho (Computer Science), Dr. Rob Bailey (Engineering), Dr. David Hoe (Engineering), Dr. Hoyeon Kim (Engineering), Dr. Mary Lowe (Physics), Dr. Theresa Geiman (Biology)

### **SOCIAL SCIENCES**

Dr. Jason Prenoveau (Psychology), Dr. Rachel Grover (Psychology), Dr. Amanda Thomas (Psychology), Dr. Marianna Carlucci (Psychology), Dr. Diana Betz (Psychology), Dr. Rachel Chase (Psychology), Dr. Matt Beverlin (Political Science), Dr. Theresa DiDonato (Psychology), Dr. Jeff Barnett (Psychology), Dr. Andy Futterman (Psychology), Dr. Amy Wolfson (Psychology), Dr. Amanda Konradi (Sociology), Dr. Michiko Iwasaki (Psychology)

## SPECIAL THANKS

### **THE USRSC COMMITTEE WOULD ALSO LIKE TO THANK:**

Heather Kavanaugh, Events Coordinator; Salvatore Lenzo, Director of Information Systems, Sellinger School of Business; Event Services; Dr. Lisa Oberbroeckling, Associate Professor of Mathematics and Associate Vice President for Undergraduate Academic Affairs

**UNDERGRADUATE STUDENT RESEARCH AND SCHOLARSHIP COLLOQUIUM  
COMMITTEE 2023-24:**

Dr. Theresa Geiman, Co-Chair (Biology), Dr. David Hoe, Co-Chair (Engineering), Dr. Michiko Iwasaki (Psychology), Dr. Selin Gursozlu (Philosophy), Dr. James Zheng (Finance)

## STATEMENT OF STUDENT-SCHOLARSHIP

Student-scholarship is an intellectual undertaking which creates something that did not exist before, is substantive to the discipline, and is communicated to others. Expressions of student-scholarship generate one or more of the following: knowledge about ourselves and our universe, new insights, and new technologies and applications of knowledge that can benefit humankind. The aim of student-scholarship can be discovery, artistic creativity, integration, or application.

### Forms of Scholarship

	<b>Discovery</b>	<b>Artistic Creativity</b>	<b>Integration</b>	<b>Application</b>
<b><i>Nature of Scholarship</i></b>	Generates new knowledge through systematic investigation or comprehensive analysis.	Interprets the human spirit; creates and communicates new insights; fosters self-reflection and critical thinking.	Synthesizes and communicates new or different understandings of knowledge or technology and its relevance.	Develops and communicates new technologies, materials or uses; fosters inquiry and invention; develops and refines new methods.
<b><i>Types of Activities</i></b>	Data analysis, historical documentation, etc.	Creative synthesis and interpretation.	Integration of new knowledge with existing knowledge; makes connections across disciplines.	Application of existing knowledge towards problem-solving.
<b><i>Criteria for validating scholarship</i></b>	Originality, scope, and significance of new knowledge; applicability and benefits to society.	Originality, impact, and duration of public value; scope and persistence of influence and public appreciation.	Usefulness and originality of new or different understandings, applications, and insights.	Breadth, value, and persistence of use and impact.

