

22nd Annual
FRONTIERS

**IN UNDERGRADUATE RESEARCH
POSTER EXHIBITION**

April 12, 2019

2:00-3:30 p.m. • 4:00-5:30 p.m.

April 13, 2019

10:00-11:30 a.m. • 12:00-1:30 p.m.

Schedule of Events

Poster Exhibition

Friday, April 12, 2019

Session 1: 2:00 p.m. – 3:30 p.m.

Session 2: 4:00 p.m. – 5:30 p.m.

Saturday, April 13, 2019

Session 3: 10:00 a.m. – 11:30 a.m.

Session 4: 12:00 p.m. – 1:30 p.m.

Student and

Friday, April 12, 2019

Faculty Reception

5:30 p.m. – 6:30 p.m.

Introduction and Welcome

Caroline McGuire, Director, Office of Undergraduate Research

Presentation of the Mentorship Excellence Awards

Faculty Awards

Seok-Woo Lee, Assistant Professor, Materials Science and Engineering

Presented by **Hetal Patel '19** (ENG)

Charles W. Mahoney, Professor, English

Presented by **Lauren Cenci '19** (CLAS)

Graduate Student Award

Elizabeth Knapp, Ph.D. Candidate, Physiology and Neurobiology

Presented by **Celina Caetano '19** (CLAS) and **Ekatarina Skaritanov '20** (CLAS)

Closing Remarks

Jennifer Lease Butts, Assistant Vice Provost, Enrichment Programs and Director, Honors Program

About Frontiers in Undergraduate Research

The Frontiers Poster Exhibition is a multidisciplinary research forum and the largest showcase of undergraduate research, scholarship, and creative projects at the University of Connecticut. Frontiers 2019 is the twenty-second annual Frontiers event sponsored by the Office of Undergraduate Research (OUR). This year's exhibition includes 303 students presenting posters for 269 research and creative projects.

Students' projects span the disciplines and include both independent research and work pursued in collaboration with other undergraduates. The projects presented reflect the invaluable contributions of research mentors, including graduate students, postdoctoral scholars, staff, and faculty members. We hope you enjoy meeting our wonderful students and learning about their innovative projects.

About the Office of Undergraduate Research

The Office of Undergraduate Research (OUR) is a resource for students interested in enriching their undergraduate experience through participation in research, scholarship, and creative activity. OUR provides information and advising to assist students in identifying relevant opportunities, as well as several funding programs to support the students and their faculty mentors.

Many of the Frontiers presenters have received financial support for their projects from the OUR, which awarded over \$500,000 in 2017-18 in support of students' research and creative endeavors. These awards are funded by the Office of Undergraduate Research with generous support from the Office of the Provost, the Office of the Vice President for Research, the Deans of the schools and colleges, and private donations from alumni, parents, and other friends of UConn and undergraduate research.

Sequential Listing of Poster Presentations

This listing of projects includes the undergraduate student authors and their faculty mentors. Please note that this is not a comprehensive listing of mentors: many projects also reflect the contributions and mentorship of dedicated graduate students, post-doctoral scholars, and research staff members.

- Friday Session 1 presentations are listed on pages 3-12.
- Friday Session 2 presentations are listed on pages 13-21.
- Saturday Session 3 presentations are listed on pages 22-30.
- Saturday Session 4 presentations are listed on pages 31-39.
- An alphabetical listing of presenters begins on page 41.

SESSION 1 PRESENTATIONS

1. CreateAT - Making Assistive Technology

Nancy Kuhn, Allied Health Sciences

Karl Douglass Mueller, Materials Science and Engineering & German Studies

Advisor: Alyssa Marinaccio, Assistive Technology Coordinator, Center for Students with Disabilities

2. Prismatic: Reflections on Transgender and Non-Binary Identity

Blue Wallick, Art – Printmaking

Advisor: Laurie Sloan, Associate Professor, Art and Art History

3. Exploring the Relationship between District Income Segregation and Achievement in Connecticut

Michael Reid Jr., English

Advisor: Betsy McCoach, Professor, Educational Psychology

4. The Asian American Educational Experience

Clarissa Tan, English & Secondary English Education

Advisor: Catherine Little, Professor, Educational Psychology

Advisor: Cathy Schlund-Vials, Associate Dean, College of Liberal Arts and Sciences, and Professor, English & Asian/Asian American Studies

5. Wordsworth's Elegiac Mode

Lauren Cenci, English

Advisor: Charles Mahoney, Professor, English

Advisor: A. Harris Fairbanks, Associate Professor, English

Advisor: Yohei Igarashi, Assistant Professor, English

6. The Black Hole of Modernism: Transgressive Realism by African-American Writers in Modernist Literature

Brianna McNish, English

Advisor: Sean Forbes, Professor, English

7. The Social Influence on HIV Testing Among Black Students at a PWI

Caira Ward, Human Development and Family Studies

Advisor: Edna Brown, Associate Professor, Human Development and Family Studies

8. Comparing the Efficacy of Sexual Health Intervention Techniques among Sexually Active and Abstinent Hispanic and Latino Youth in the United States: Results from a Meta-Analysis

Geycel Muniz, Allied Health Sciences

Ashley Holmes, Psychological Sciences

Melanie Moreno, Allied Health Sciences

Advisor: Tania Huedo-Medina, Associate Professor, Allied Health Sciences

9. Understanding the Experience of Parents Utilizing Car Bed Travel

Christina O'Connor, Nursing

Advisor: Jacqueline McGrath, Professor Emeritus, Nursing

Advisor: Michele DeGrazia, Director of Nursing Research, Neonatal Intensive Care Unit, Boston Children's Hospital

10. Family Attitudes on Aromatherapy Use in a Pediatric Setting

Maria Zinter, Nursing

Advisor: Deborah McDonald, Associate Dean and Associate Professor, Nursing

11. Neonatal Nurses' Self-Reported Practices, Knowledge and Attitudes toward use of Maternal Voice for Preterm Infants

Selena Williamson, Nursing

Advisor: Jacqueline McGrath, Professor Emeritus, Nursing

Advisor: Deborah McDonald, Associate Dean and Associate Professor, Nursing

12. Caring for the Family of the Neonate: A Descriptive Analysis of Nurse Beliefs

Anna Baxter, Nursing

Advisor: Deborah McDonald, Associate Dean and Associate Professor, Nursing

13. Is the Green Revolution Making Farmers Sick?: Agricultural Transformation and Chronic Kidney Disease of Unknown Etiology (CKDu) in Sri Lanka

Fajar Alam, Molecular and Cell Biology

Advisor: Stephen Schensul, Professor, Community Medicine and Healthcare

14. Urinary Analysis on the Effects of Dietary Intake on Sulfur-Containing Metabolites in Newborns at Risk for Autism Spectrum Disorder (ASD)

Ama Appiah, Molecular and Cell Biology & Communication

Meeshali Patel, Allied Health Sciences

Sejal Patel, Molecular and Cell Biology

Sai Vietla, Physiology and Neurobiology

Advisor: Ruth Lucas, Assistant Professor, Nursing

Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

15. Maternal Healthcare Accessibility and Quality for Refugee Women in Greece: A Human Rights Perspective

Usra Qureshi, Human Rights & Molecular and Cell Biology

Advisor: Kathryn Libal, Associate Professor, Social Work & Human Rights

16. Advocacy and Action: Improving Food Security for UConn Students

Wanjiku Gatheru, Environmental Studies

Abhishek Gupta, Molecular and Cell Biology & Sociology

Advisor: Phoebe Godfrey, Assistant Professor in Residence, Sociology

17. West Indian Diasporic Consciousness: The Case of Hartford, CT

Leann McLaren, Political Science and History

Advisor: Evelyn Simien, Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

Advisor: Fiona Vernal, Associate Professor, History

18. Six Years to Life: The Impact of Term Length on Judicial Independence

Frederick Augur, Political Science

Advisor: Virginia Hettinger, Associate Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

19. A Study of the Relationship Between Race, Gender and Victim Blaming on College Campuses

Odia Kane, Cognitive Science and Political Science

Advisor: Shayla Nunnally, Associate Professor, Political Science

20. The Feminine Touch: How Female Representation Affects the Legislative Success of Women's Issues Legislation

Jessica Weaver, Political Science

Advisor: Virginia Hettinger, Associate Professor, Political Science

21. Presidential Power Couples: Does a Strong First Lady Correlate with a Strong President?

Misha Jethwa, Political Science & Economics

Advisor: Jeffrey Ladewig, Associate Professor, Political Science

22. Determining Defense: Bureaucracy, Threat and Missile Defense

Emilyn Tuomala, Individualized Major: International Security & Political Science

Advisor: Evan Perkoski, Assistant Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

23. In The Eye of the Storm: An Anthropological Perspective of Risk and Preparedness in Connecticut

Akhil Choudhary, Anthropology

Advisor: Eleanor Ouimet, Assistant Professor In Residence, Anthropology

24. Dyadic Worry Induced in a Laboratory Setting Increases Anxiety Between Friends

Carly Danziger, Psychological Sciences

Seyenah Lopez, Psychological Sciences & Human Development and Family Studies

Izabela Zubrzycka, Biological Sciences & English

Advisor: Kimberli Treadwell, Associate Professor, Psychological Sciences

25. Can Discussing Worries Promote Anxiety Contagion? An Observational Study of Worry Conversations

Kimberly Morais, Psychological Sciences & Human Development and Family Studies

Advisor: Kimberli Treadwell, Associate Professor, Psychological Sciences

26. Dyadic Worry Amongst Friends

Nathan Rivera, Psychological Sciences

Jeffrey Hunt, Psychological Sciences

Advisor: Kimberli Treadwell, Associate Professor, Psychological Sciences

27. The Influence of Talker Idiolect on Dynamic Phonetic Adaptation

Ana Hernandez, Biological Sciences & Psychological Sciences

Advisor: Emily Myers, Associate Professor, Speech, Language, and Hearing Sciences

28. Be Quiet! Activity and Noise Level Characteristics of Mandated Periods of Quiet in College Students with Varied Noise Exposure Histories

Claire Murphy, Speech, Language, and Hearing Sciences

Advisor: Erika Skoe, Assistant Professor, Speech, Language, and Hearing Sciences

29. Finding the Self Through the Narratives We Tell

Madeline Eldredge, Psychological Sciences & Speech, Language, and Hearing Sciences

Advisor: Letitia Naigles, Professor, Psychological Sciences

30. Testing the Test: Implicit Theory of Mind Measurements

Samantha Richards, Speech, Language, and Hearing Sciences

Advisor: Marie Coppola, Associate Professor, Psychological Sciences

Advisor: Deanna Gagne, Assistant Professor, Linguistics, Gallaudet University

31. Evaluating Cross-Site Reliability of Relationships among Cortical Structure and Age in Children and Adolescents

Vidyalaxmi Kandarpa, Biomedical Engineering & Molecular and Cell Biology

Arun Narikatte, Molecular and Cell Biology

Emma Wolfman, Psychological Sciences

Advisor: Nicole Landi, Associate Professor, Psychological Sciences

32. Distinguishing Electrode Placement in Dorsal and Ventral Hippocampus using the Microorganism *Bacillus Subtilis*

Nathalia Hernandez, Molecular and Cell Biology & Spanish

Advisor: Etan Markus, Professor, Psychological Sciences

Advisor: Patricia Rossi, Assistant Professor in Residence, Molecular and Cell Biology

Advisor: Peter Setlow, Distinguished Professor, Molecular Biology and Biophysics

33. Rat Observational Learning in a Working Memory Task

Judie Wang, Physiology and Neurobiology & Psychological Sciences
Nathalia Hernandez, Molecular and Cell Biology & Spanish
Thomas Shao, Physiology and Neurobiology
Advisor: Etan Markus, Professor, Psychological Sciences

34. Developing a Reliable Rating System for Observing Oral Tremor in Rodents

Emily Robertson, Physiology and Neurobiology
Advisor: John Salamone, Distinguished Professor, Psychological Sciences

35. Behavioral Score and Neuroanatomical Correlation in a Rat Model of Hypoxic Ischemic Brain Injury Measuring the Effect of Caffeine Treatment

Sara Rohde, Physiology and Neurobiology & Psychological Sciences
Advisor: R. Holly Fitch, Professor, Psychological Sciences

36. The Ketogenic Diet on Seizure Reduction in a Drosophila Model

Anna Vaeth, Physiology and Neurobiology
Adeline Bray, Physiology and Neurobiology
Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

37. Resistance Training for Health Related Outcomes in the Elderly Population

Charles Abrams, Individualized Major: Exercise Physiology and Health
Advisor: Craig Denegar, Professor, Kinesiology

38. Extracellular HSP Responses to Endurance Running in a High-Risk Race for Exertional Heatstroke

Zoha Sarwat, Physiology and Neurobiology
Advisor: Elaine Lee, Assistant Professor, Kinesiology

39. Identification and Characterization of the Roles of MicroRNA Sequences in *Salpa thompsoni*

Melinda Wei, Molecular and Cell Biology
Advisor: Rachel O'Neill, Professor, Molecular and Cell Biology

40. Examining the Potential for Nitrogen Fixation by Bacteria Present in the *Trachymyrmex septentrionalis* Fungus Gardens

Brandon O'Sullivan, Molecular and Cell Biology
Advisor: Jonathan Klassen, Assistant Professor, Molecular and Cell Biology

41. Endogenous MyoF complementation in Δ Ku80- Δ MyoF *Toxoplasma gondii* Parasites

Raphael Britt, Molecular and Cell Biology

Advisor: Aoife Heaslip, Assistant Professor, Molecular and Cell Biology

42. Virtual Modeling and Analysis of EGFR molecules

Kelvin Peterson, Molecular and Cell Biology

Advisor: Leslie Loew, Professor, Cell Biology & Computer Science and Engineering

43. Single Cell RNA Sequencing Analysis to Identify Genetic Deviations That Lead to Colorectal Cancer

Ramsha Khan, Molecular and Cell Biology & Human Development and Family Studies

Advisor: Carolyn Teschke, Professor, Molecular and Cell Biology

44. Tracking Illegal Logging: Cyberinfrastructure for Data Collection and Management of Georeferenced Trees

Peter Richter, Computer Science and Engineering

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

45. Multi-responsive Chromic System

Mengting Zhu, Chemical Engineering

Advisor: Luyi Sun, Professor, Chemical and Biomolecular Engineering

46. Advances in 3D Printing Using Image Projection

Justin Schroeder, Mechanical Engineering & Computer Science and Engineering

Advisor: Xu Chen, Assistant Professor, Mechanical Engineering

47. 3D Bioprinting for Application to Drug Manufacturing

Eric Lepowsky, Mechanical Engineering

Advisor: Savas Tasoglu, Assistant Professor, Mechanical Engineering & Biomedical Engineering

Advisor: Luyi Sun, Professor, Chemical and Biomolecular Engineering

Advisor: Sharareh Emadi, Assistant Professor in Residence, Biomedical Engineering

48. Assembly of Compact Neurostimulator Circuit Board for Neuroprosthetic Applications

Amanda Johnson, Biomedical Engineering

Advisor: Martin Han, Associate Professor, Biomedical Engineering

49. Characterization of Biopotential Electrodes

Michaela Green, Biological Sciences

Advisor: Insoo Kim, Assistant Professor, Medicine

50. The Morphological and Molecular Responses of Articular Cartilage to Mechanical Load

Kelsey Richard, Individualized Major: Global Health

Advisor: Caroline Dealy, Associate Professor, Center for Regenerative Medicine and Skeletal Development, Cell Biology, & Orthopedic Surgery

Advisor: David Pierce, Associate Professor, Mechanical Engineering & Biomedical Engineering

51. Deferoxamine Conjugated Hydrogel Effects on Bone Regeneration in Mice

Paige Holden, Biomedical Engineering

Advisor: Lakshmi Nair, Associate Professor, Orthopedic Surgery

52. A Novel Cerebral Spinal Fluid Shunt

Ariane Garrett, Biomedical Engineering & Spanish

Advisor: Kazunori Hoshino, Associate Professor, Biomedical Engineering

53. The Utilization of Dental Burrs to Create a Tibial Growth Plate Injury in Col2 x Col10 x Col3.6 Genetic Reporter Mice

Natasha Patel, Molecular and Cell Biology

Advisor: Liisa Kuhn, Associate Professor, Center for Regenerative Medicine and Skeletal Development & Biomedical Engineering

54. MYB Transcription Factors influence on Flavonoid Production in Aronia

Liam Iorio, Molecular and Cell Biology

Advisor: Huanzhong Wang, Associate Professor, Plant Science and Landscape Architecture

55. Lighting up the Route to the Photocatalytic Oxidative Transformation of Amines to Amides

Joshua Paolillo, Chemistry

Advisor: Nicholas Leadbeater, Associate Professor, Chemistry

56. Determination of PFC's in Bloodspots Using Rapid Liquid-Liquid Extraction Followed by Analysis Using UPLC-MS/MS

Patrick Kaplita, Chemistry

Son Nguyen, Chemistry

Eric Noi, Chemical Engineering

Advisor: Anthony Provatav, Academic Assistant II, Center for Environmental Sciences and Engineering

57. A Canonical Metacommunity Structure in a Hurricane-Prone Tropical Forest

Eve Cullerton, Natural Resources and the Environment

Advisor: Michael Willig, Distinguished Professor, Ecology and Evolutionary Biology

58. Analysis of Insecticides in Lobster and Shellfish using GC-MS/MS followed by Rapid Quenchers Extraction and Phospholipid Sample Purification

Myagmarsuren Otgonbayar, Biological Sciences

Patrick Nguyen, Biological Sciences

Lynn Vo, Biological Sciences

Advisor: Anthony Provatav, Academic Assistant II, Center for Environmental Sciences and Engineering

59. No Droplet Too Small: Nanoliter Blood Osmolality Measurements

Rebecca Bullers, Biological Sciences

Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

60. Phenological Changes in Avian Migration Revealed by Local Long-Term Data From Northeast Connecticut

Sarah Rumsey, Ecology and Evolutionary Biology

Advisor: Morgan Tingley, Assistant Professor, Ecology and Evolutionary Biology

61. Diversity of Terrestrial Green Algae from Chile and Panama, with a focus on *Diplosphaera* (Trebouxiophyceae, Chlorophyta)

Maryam Shahabadi, Biological Sciences

Advisor: Louise Lewis, Professor, Ecology and Evolutionary Biology

62. Macro- and Microevolution of Salinity-specific Ionocyte Morphologies in Euryhaline Fishes

Melinda Gosselin, Natural Resources

Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

63. Sediment Oxygen Consumption and Denitrification in Wequetequock Cove

Clare Schlink, Marine Sciences & Chemistry

Advisor: Julie Granger, Associate Professor, Marine Sciences

Advisor: Craig Tobias, Professor, Marine Sciences

64. Seasonal Patterns of Denitrification in Salt Marshes

Kayleigh Granville, Environmental Sciences

Advisor: Ashley Helton, Assistant Professor, Natural Resources and the Environment

Advisor: Beth Lawrence, Assistant Professor, Natural Resources and the Environment

Advisor: Chris Elphick, Associate Professor, Ecology and Evolutionary Biology

65. Deicing Salt-Induced Cation Exchange in Roadside Soils

Katherine Bell, Environmental Sciences & Molecular and Cell Biology

Advisor: Ashley Helton, Assistant Professor, Natural Resources and the Environment

Advisor: John Volin, Vice Provost for Academic Affairs and Professor, Natural Resources and the Environment

66. Poor Maternal Nutrition During Gestation Alters Placental IGF-I, IGF-II, and IGFBP-3 mRNA Expression in Sheep

Caitlyn Splaine, Animal Science

Advisor: Sarah Reed, Associate Professor, Animal Science

67. Force Applied to the Horse's Head by Bitted and Bitless Bridles

Kelli Knapp, Animal Science

Advisor: Jenifer Nadeau, Associate Professor, Animal Science

68. Bending Borders – An Exploration of Social, Political, and Economic Implications of Language in Catalonia Through Documentary Film

Sahil Laul, Molecular and Cell Biology & Individualized Major: Global Health

Michael Costello, Biomedical Engineering

Advisor: Gustavo Nanclares, Associate Professor, Literatures, Cultures, and Languages

Advisor: Catherine Masud, Adjunct Faculty, Digital Media and Design

SESSION 2 PRESENTATIONS

1. Making Welcome: Space Material and Human Centered Design

Olivia Crosby, Art – Graphic Design

Advisor: Ray DiCapua, Professor, Art and Art History

Advisor: Gary Krewson, Machine Shop Engineer/Manager, School of Fine Arts

2. Issues of Gender and Modernism in Ralph Vaughan Williams' Folksongs of the Four Seasons

Christine Goss, Music History

Advisor: Eric Rice, Associate Professor, Music

Advisor: Jessica VonVillas-Dickerson, Assistant Professor in Residence, Music

3. Moving Day: A Reimagining of LGBT Families in Children's Books

Kenneth Glazer, Art – Illustration/Animation

Advisor: Alison Paul, Assistant Professor, Art and Art History

4. Make History Accessible: The Case for YouTube

Rohit Kandala, History

Advisor: Frank Costigliola, Distinguished Professor, History

5. Vignettes of Physician Experience

Dhruv Shah, Molecular and Cell Biology & English

Advisor: Bruce Cohen, Instructor in Residence, English

6. An Interdisciplinary Education: Just A Bridge Away

Nicole Gerardin, Secondary English Education & English

Advisor: Hannah Dostal, Associate Professor, Curriculum and Instruction

7. Assessing the Mindsets of Introductory Physics Students through the Lens of Intellectual Humility (IH)

Meagan Sundstrom, Mathematics/Physics

Advisor: Fabiana Cardetti, Professor, Mathematics

8. Associations Between Low Birthweight and Cognitive Development in Early Childhood

Kristen Cardascia, Human Development and Family Studies & Speech, Language, and Hearing Sciences

Advisor: Caitlin Lombardi, Assistant Professor, Human Development and Family Studies

9. Child Birth Weight and Reading Skills: A Moderation by Race

Kalea Coles, Human Development and Family Studies & Psychological Sciences
Advisor: Annamaria Csizmadia, Associate Professor, Human Development and Family Studies

10. Bullying Experiences of Children of Immigrants

Alyssa Sullivan, Human Development and Family Studies
Advisor: Linda Halgunseth, Associate Professor, Human Development and Family Studies

11. College Students' Perceptions of On-Campus Civility as Influenced by Communication Processes in Families of Origin

Casey Cunningham, Human Development and Family Studies & Psychological Sciences

Valerie Girard, Human Development and Family Studies & Psychological Sciences

Jordyn Isabelle, Psychological Sciences

Advisor: Shannon Weaver, Associate Professor, Human Development and Family Studies

12. Support for Mothers and Families: A Battle on Neonatal Abstinence Syndrome

Amberly Lao, Nursing

Tessa Weidig, Nursing

Advisor: Xiaomei Cong, Associate Professor, Nursing

Advisor: Valarie Artigas, Assistant Clinical Professor, Nursing

13. Low Breastfeeding Rates in Infants Born with Neonatal Abstinence Syndrome

Sarah Squillace, Nursing

Advisor: Xiaomei Cong, Associate Professor, Nursing

14. Health Literacy, Cognitive Impairment, and Diabetes Knowledge among Incarcerated Persons Transitioning to the Community: Considerations for Innovative Intervention Development

Sarah Todd, Nursing

Advisor: Louise Reagan, Assistant Professor, Nursing

15. The Acceptability of a Self-Management Intervention for Irritable Bowel Syndrome (IBS)

Carleen Joyce Tan, Nursing

Advisor: Angela Starkweather, Associate Dean and Professor, Nursing

16. Perceived Discrimination, Health Behavior, and Health Status among Muslims Living in the US

Anita Luxkaranayagam, Physiology and Neurobiology

Sania Saeed, Biological Sciences

Advisor: Rick Gibbons, Professor, Psychological Sciences

Advisor: Meg Gerrard, Research Professor, InCHIP and Psychological Sciences

17. Party Differences in Candidate Emergence and Successes in the 2018 House Elections

Kyle Adams, Political Science & Economics

Advisor: Paul Herrnson, Professor, Political Science

18. Cooperation or Conflict: Using Alliance Theory to Explain the Current Gulf Cooperation Council Crisis

Pierre Aguirre, Political Science & Economics

Advisor: Evan Perkoski, Assistant Professor, Political Science

19. The Positive Impact of Decentralization on Public Services in Khyber Pakhtunkhwa, Pakistan

Mishaal Aftab, Political Science

Advisor: Betty Hanson, Professor Emeritus, Political Science

20. Native American Children's Access to Nutritional Food in the Age of Qualification: How Food Insecurity on Native American Reservations Underscores Children's Realization of the Right to Health

Emily Dodson, Political Science & Human Rights

Advisor: Francoise Dussart, Professor, Anthropology

21. Immigration in the Media: Political Ideologies of Online Media Sites and Their Effects on Immigration Discourse

Rosella Aluia, Individualized Major: Crime, Law, and Justice

Advisor: Charles Venator-Santiago, Associate Professor, Political Science

22. The Education of American Political Elites

Brian Forbes, History

Gianna Demasi, Economics

Advisor: David Weakliem, Professor, Sociology

23. Predicting Tone Discrimination Abilities from Characteristics of Autism

Anusha Mohan, Psychological Sciences

Advisor: Inge-Marie Eigsti, Associate Professor, Psychological Sciences

24. Mindful Muse? Assessing Tools to Help College Students Manage Mental Health: A Randomized Controlled Trial

Mareyna Simon, Psychological Sciences & Individualized Major: Neuroscience

Jacob Kustra, Biological Sciences

Spencer Low, Individualized Major: Computational Neuroscience

Advisor: Blair Johnson, Distinguished Professor, Psychological Sciences

25. How Timing Cues Enhance and Bias Categorical Perception of Sound

Vishruthi Palanivel, Physiology and Neurobiology & Psychological Sciences

Advisor: Heather Read, Associate Professor, Psychological Sciences

26. Matching the Mismatch: How Bilinguals' MMN Reflects the Interaction between Perceptual and Conceptual Cues in Speech Perception

Lina Kane, Speech, Language, and Hearing Sciences & Human Development and Family Studies

Ashley Lombardi, Speech, Language, and Hearing Sciences

Advisor: Adrian Garcia-Sierra, Assistant Professor, Speech, Language, and Hearing Sciences

27. My Dominant Hand Speaks My Language: Hand Effects are Specific to Linguistic Experience

Calli Smith, Cognitive Science

Cynthia Dias, Cognitive Science

Advisor: Adrian Garcia-Sierra, Assistant Professor, Speech, Language, and Hearing Sciences

28. Finding Familiarity in the Unfamiliar: Native Speech Perception in Different Linguist Contexts

Eilis Welsh, Speech, Language, and Hearing Sciences

Sam Beacham, Speech, Language, and Hearing Sciences

Crystal Flores, Speech, Language, and Hearing Sciences & Anthropology

Advisor: Adrian Garcia-Sierra, Assistant Professor, Speech, Language, and Hearing Sciences

29. Effects of Lisdexamfetamine on Selection of Voluntary Physical Activity in a Rat Model of Binge-Eating Disorder

Olivia DiMarco, Psychological Sciences & Physiology and Neurobiology

Advisor: John Salamone, Distinguished Professor, Psychological Sciences

30. Overexpression of Cyclin D1 in the Development of Parathyroid Adenomas and Hyperparathyroidism

Mitali Banerjee, Physiology and Neurobiology & Molecular and Cell Biology
Advisor: Andrew Arnold, Murray-Heilig Chair in Molecular Medicine and Professor, Medicine & Genetics and Genome Sciences
Advisor: Jessica Costa-Guda, Assistant Research Professor, Center for Molecular Oncology

31. Microtubule Acetylation in Drosophila Germ Cell Development

Taylor Simao, Molecular and Cell Biology
Advisor: Mayu Inaba, Assistant Professor, Cell Biology

32. Subcellular Localization of Protocadherin Gamma C4 and Protocadherin 8 in Relation to GABAergic Synapses in the Rat Brain

Michael Taylor, Biological Sciences
Advisor: Angel de Blas, Professor, Physiology and Neurobiology

33. Dietary Effects on Lifespan and Fertility in a Drosophila Model of Traumatic Brain Injury

Salaheddine Madhoun, Molecular and Cell Biology
Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

34. Investigating the Ketogenic Diet as a Treatment in a Drosophila Model of Chronic Traumatic Encephalopathy

Krishna Vali, Physiology and Neurobiology
Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

35. Pxt Plays an Active Role in Oocyte Maturation and Ovulation

Celina Caetano, Physiology and Neurobiology & Molecular and Cell Biology
Advisor: Jianjun Sun, Assistant Professor, Physiology and Neurobiology

36. Neuroanatomical and Behavioral Analysis of GABAergic Neurons in the Lateral Hypothalamic Area

Eric Beltrami, Physiology and Neurobiology & Molecular and Cell Biology
Advisor: Alexander Jackson, Assistant Professor, Physiology and Neurobiology

37. Defining a Tachykininergic Projection to Melanin-Concentrating Hormone (MCH) Neurons in the Lateral Hypothalamic Area (LHA)

Lily Zhong, Physiology and Neurobiology
Advisor: Alexander Jackson, Assistant Professor, Physiology and Neurobiology

38. Neuroanatomical Characterization of Lateral Hypothalamic Neurotensin and Somatostatin Neurons and their Projections in the Mouse Brain

James Costanzo, Physiology and Neurobiology

Advisor: Alexander Jackson, Assistant Professor, Physiology and Neurobiology

39. Developmental Changes to the Brain Stem Cell Niche in Fetal-Onset Hydrocephalus

Saurabh Kumar, Physiology and Neurobiology

Patrick Briody, Physiology and Neurobiology

Advisor: Joanne Conover, Professor, Physiology and Neurobiology

40. Mechanisms of Stem Cell Division in the V-SVZ Stem Cell Niche

Patrick Briody, Physiology and Neurobiology

Amar Kalaria, Physiology and Neurobiology

Saurabh Kumar, Physiology and Neurobiology

Derek Pan, Molecular and Cell Biology

Advisor: Joanne Conover, Professor, Physiology and Neurobiology

41. Interactions of the C11orf95-RELA Oncogene and NF- κ B Subunits in the Development of Ependymoma Brain Tumors in Mice

Ericka Randazzo, Physiology and Neurobiology & Pathobiology

Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

42. Preparation and Characterization of Gastrointestinal Stable Nanoparticles as an Oral Delivery Vehicle for Lipophilic Nutrients

Nikolas Rodriguez, Nutritional Sciences

Advisor: Yangchao Luo, Assistant Professor, Nutritional Sciences

43. Cracking Protein Clumps: Characterization of Phenylalanine Self-Assembly

Alexis Barrera, Biomedical Engineering

Advisor: Anna Tarakanova, Assistant Professor, Mechanical Engineering & Biomedical Engineering

44. The Characterization of the Tropoelastin-Fibrillin Complex through Molecular Modeling

Helena Newandee, Biomedical Engineering

Advisor: Anna Tarakanova, Assistant Professor, Mechanical Engineering & Biomedical Engineering

45. Stem Cell Spheroids for Cartilage Regeneration

Ming-Yeah Hu, Molecular and Cell Biology & Allied Health Sciences

Advisor: Syam Nukavarapu, Associate Professor, Biomedical Engineering

46. Vascular Laser Induced Thermolysis of Vessels Varying in Size

Fawaz Mohsin, Biomedical Engineering

Advisor: Thomas Milner, Professor, Biomedical Engineering, University of Texas at Austin

47. Development of a Sonically Powered Biodegradable Nanogenerator for Bone Regeneration

Avi Patel, Molecular and Cell Biology & Individualized Major: Health, Medicine, and Society

Advisor: Thanh Nguyen, Assistant Professor, Mechanical Engineering

Advisor: David Goldhamer, Professor, Molecular and Cell Biology

48. Analyzing Driver Fatigue and Testing Reduced Graphene Oxide Electrodes

John Nelson, Physiology and Neurobiology

Advisor: Insoo Kim, Assistant Professor, Medicine

49. Computational Analysis of Assembly of CPLS Nanoparticles

Alessandro Fisher, Mechanical Engineering & Molecular and Cell Biology

Advisor: Ying Li, Assistant Professor, Mechanical Engineering

50. Computational Study of Designed Tau Protein Antibodies with Enhanced Binding Characteristics

Aberdeen Taylor, Structural Biology and Biophysics

Advisor: Eric May, Assistant Professor, Molecular and Cell Biology

51. The Effect of the Microbiome on Alzheimer's Diseases Pathogenesis

Michael Zhu, Molecular and Cell Biology & Economics

Advisor: Nichole Broderick, Assistant Professor, Molecular and Cell Biology

52. Signaling Pathways of Metallothionein-Mediated Chemotaxis in Breast Cancer

Jennifer Messina, Molecular and Cell Biology

Advisor: Michael Lynes, Professor, Molecular and Cell Biology

53. The Hunt for Rare Genes in Salty Communities

Marlene Abouaassi, Molecular and Cell Biology & Sociology

Advisor: Johann Peter Gogarten, Distinguished Professor, Molecular and Cell Biology

54. Chemical Trends in Al-Cu and Al-Ag Interfaces from First-Principles Theory

Cassidy Atkinson, Materials Science and Engineering

Advisor: Pamir Alpay, GE Professor in Advanced Manufacturing, Materials Science and Engineering

55. The Effect of the Tip Radius on Dislocation Nucleation in [0 0 1] Tungsten Single Crystal Under Spherical Nanoindentation

Hetal Patel, Materials Science and Engineering

Advisor: Seok-Woo Lee, Assistant Professor, Materials Science and Engineering

56. NTRUEncrypt in a Quantum World: Using and Implementing Post-Quantum Cryptosystems

Sam Markelon, Computer Science

Advisor: Walter Krawec, Assistant Professor, Computer Science and Engineering

57. Continuous Biometric Authentication in Haptic Users

Stephen Sam, Computer Science

Advisor: Paolo Gasti, Assistant Professor, Computer Science, New York Institute of Technology

Advisor: Kiran Balagani, Assistant Professor, Computer Science, New York Institute of Technology

58. Subset Clustering for Analyzing Seasonal Trends in Energy Usage at UConn

Hang Zeng, Mathematics and Statistics

Advisor: Ming-Hui Chen, Professor, Statistics

59. Temperature Bin Model (TBM) for Comparative Assessment of Energy Usage

Ziyi Kang, Statistics

Advisor: Ming-Hui Chen, Professor, Statistics

60. Adaptive Box-Cox Transformation Models for Analyzing Energy Usage at UConn

Yutong Chen, Statistics, Psychological Sciences, & Finance

Advisor: Ming-Hui Chen, Professor, Statistics

61. The Effect of Lactic Acid Bacteria on Terpene Biosynthesis in Cannabis Flowers

Evert McKee, Sustainable Plant and Soil Systems

Advisor: Gerald Berkowitz, Professor, Plant Science and Landscape Architecture

62. The Effect of Density and Diet Quality on Lepidopteran Larvae Melanization

Nikki Pirtel, Environmental Sciences

Amanda Minicucci, Ecology and Evolutionary Biology & Psychological Sciences

Advisor: Robert Bagchi, Assistant Professor, Ecology and Evolutionary Biology

63. Detection of Dairy Cattle Mastitis Using Ultrasound

Alexander Calvi, Animal Science

Advisor: Sheila Andrew, Professor, Animal Science

64. The Effects of Poor Maternal Nutrition on Fetal Brain Development

Lauren Engels, Animal Science

Advisor: Kristen Govoni, Associate Professor, Animal Science

65. Effects of Restricted Maternal Nutrition and Realimentation during Gestation on the Fetal Progenitor Cell Population in Semitendinosus Muscle of Sheep

Michaela Mitchell, Animal Science

Advisor: Sarah Reed, Associate Professor, Animal Science

66. Differential Expression of Needle Abscission Zones to Study the Progression of Autumn Senescence in a Gymnosperm

Olivia Maher, Biological Sciences

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

67. Strategies to Improve Annotation and Assembly for Complex and Large Plant Genomes

Alyssa Ferreira, Pathobiology

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

68. Utilizing Blockchain Trade Finance to Promote Financial Inclusion

Bryce Ciccaglione: Individualized Major: Global Finance and Political Economy

Advisor: Stanley McMillen, Adjunct Faculty, Economics

Advisor: Richard Langlois, Professor, Economics

SESSION 3 PRESENTATIONS

1. The Color of You

Regan Kilkenny, Digital Media and Design

Lucian Hatfield, Theater Studies

Christian Partenio, Digital Media and Design

Advisor: Vincent Tycer, Assistant Professor in Residence, Dramatic Arts

2. Catharsis Theory: A Graphic Novel Exploring LGBT Adolescence and Coming of Age

Taylor Grunert, English and Ecology and Evolutionary Biology

Advisor: Cathy Schlund-Vials, Associate Dean, College of Liberal Arts and Sciences, and Professor, English & Asian/Asian American Studies

3. Musket Ball Analysis of the 17th Century Pequot War in Southern New England

Srishti Sadhir, Ecology and Evolutionary Biology & Anthropology

Advisor: Kevin McBride, Associate Professor, Anthropology

4. Cultural Influences on Traditional Chinese Medicine (TCM) Decision Making

Maria Latta, Pharmacy Studies

Advisor: Nathaniel Rickles, Associate Professor, Pharmacy Practice

5. Comparing the Influence of Gender on Female College Students Majoring in Physics and/or Human Rights

Jillian Rastinejad, Human Rights and Physics

Advisor: Shareen Hertel, Associate Professor, Political Science & Human Rights

6. Child Marriage in the United States

Chineze Osakwe, Political Science and Human Rights

Advisor: Françoise Dussart, Professor, Anthropology

7. Sexual Assault Recovery in the LGBTQIA+ Community

Danielle Hartshorn, Individualized Major: Film and Global Activism & Human Rights

Advisor: David Richards, Associate Professor, Political Science & Human Rights

8. Maternal Perceptions in Comparison to Infant Breastfeeding Behavior

Anusha Basnet, Physiology and Neurobiology

Advisor: Ruth Lucas, Assistant Professor, Nursing

9. Physiological Feeding Behavior Comparison Between Pre-Term and Full-Term Infants

Ajeetej Rai, Psychological Sciences & Physiology and Neurobiology
Advisor: Ruth Lucas, Assistant Professor, Nursing

11. Males vs. Females: Who Uses it Most? A Meta-analysis of the Disparities in Condom Use Outcomes from Sexual Health Interventions among Hispanic and Latino Youth in the United States

Melanie Moreno, Allied Health Sciences
Ashley Holmes, Psychological Sciences
Geycel Muniz, Allied Health Sciences
Advisor: Tania Huedo-Medina, Associate Professor, Allied Health Sciences

12. Islands in Limbo: An Argument to Anchor U.S. Virgin Islands' Citizenship in the Fourteenth Amendment

Garrett D'Amato, Political Science & Individualized Major: Law and Society
Advisor: Charles Venator-Santiago, Associate Professor, Political Science

13. Executive Approval in Latin America

Shankara Narayanan, Political Science & History
Advisor: Matthew Singer, Associate Professor, Political Science

14. Temporary Protected Status for El Salvador as a Foreign Policy Response

Veronica Rollins, Political Science & Individualized Major: Law and Immigration
Advisor: Charles Venator-Santiago, Associate Professor, Political Science
Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

15. The Scholio Project: Designing Online News Comments to Promote Intellectual Humility in Public Discourse

Brendan Hogan, Political Science & Psychological Sciences
Advisor: Michael Morrell, Associate Professor, Political Science

16. Seizing the News Cycle: The Coverage of Terrorism in American Hard and Soft News Sources

Mary Szarkowicz, Political Science & Accounting
Advisor: Evan Perkoski, Assistant Professor, Political Science

17. Analyzing the Impact of Behavioral Modification in Delaying the Progression of Chronic Kidney Disease of Unknown Etiology (CKDu) Amongst Rural Laborers in Sri Lanka: A Multidisciplinary Approach

Jonathon Hastings, Molecular and Cell Biology & Individualized Major: Community Health

Advisor: Stephen Schensul, Professor, Community Medicine and Healthcare

18. Is Villainy Written in the Star (War)s?

Rachel Sullivan, Political Science

Advisor: Stephen Dyson, Associate Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

19. "I Grew It, I Made It, I Ate It!" Evaluating a Bilingual Curricular Intervention for Middle School Students

Celeste Kurz, Nutritional Sciences

Advisor: Michael Puglisi, Assistant Extension Professor, Nutritional Sciences

Advisor: Hedley Freake, Professor, Nutritional Sciences

Advisor: Phoebe Godfrey, Associate Professor in Residence, Sociology

20. Race-Gender Identities in the 2018 House Elections

Isabelle Geller, Political Science

Advisor: Paul Herrnson, Professor, Political Science

21. Family Perspectives on Accessing Community Resources to Mitigate Toxic Stress

Maria Antony, Molecular and Cell Biology & Allied Health Sciences

Advisor: Aoife Heaslip, Assistant Professor, Molecular and Cell Biology

Advisor: Sharon Smith, Adjunct Professor, Molecular and Cell Biology

22. Pediatric Nasal Burns During Operative Cautery: Are Aural Speculums More Protective Than Nasal Speculums?

Anika Makol, Molecular and Cell Biology & Human Rights

Advisor: Victoria Robinson, Associate Professor, Molecular and Cell Biology

23. Risk Factors and Exposure to Violence in Pediatric Emergency Department Patients

Maryyam Ali, Molecular and Cell Biology

Advisor: Victoria Robinson, Associate Professor, Molecular and Cell Biology

24. Vocabulary and Speed-Accuracy Tradeoffs in Three Different Executive Function Tasks

Maria Sol Anyosa, Psychological Sciences & Human Development and Family Studies

Advisor: Nicole Landi, Associate Professor, Psychological Sciences

25. Relationships between Personality, Coping and Medication Adherence among Female College Students

Mairead Deacy, Psychological Sciences

Advisor: Dean Cruess, Professor, Psychological Sciences

26. The EEG Mu Rhythm and Temperament in 6- and 12-Month-Olds

Christina Flores, Psychological Sciences

Advisor: Kimberly Cuevas, Associate Professor, Psychological Sciences

27. Effects of Age Stereotypes on Hireability Ratings: Examining the Right Fit for a Job Within the Five Factor Framework

Sam Strizver, Psychological Sciences and English

Advisor: Janet Barnes-Farrell, Professor, Psychological Sciences

28. Investigating Speech Perception in Noise and Noise Exposure Patterns in College Musicians

Helena Sun, Speech, Language, and Hearing Sciences & Music

Advisor: Erika Skoe, Assistant Professor, Speech, Language, and Hearing Sciences

29. Using Quantitative Methods to Assess Language Use in the Home Environment: A Feasibility Study

Madison Thompson, Psychological Sciences & Speech, Language, and Hearing Sciences

Sarah Arnett, Speech Language, and Hearing Sciences & Cognitive Science

Advisor: Jennifer Mozeiko, Assistant Professor, Speech, Language, and Hearing Sciences

30. Investigating Molecular Targets of Dietary Therapies for Seizure-Like Event in *Drosophila* Metabolic Mutants

Jazmine Riley, Physiology and Neurobiology

Mirella Fernandez, Physiology and Neurobiology

Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

31. Ketogenic Diet Treatment for Cognitive Deficits in a *Drosophila* Model of Glial Tauopathy

Muhammad Shahzad, Physiology and Neurobiology

Xuezhi Zhang, Physiology and Neurobiology

Advisor: Geoffrey Tanner, Assistant Professor in Residence, Physiology and Neurobiology

32. Effects of the VMAT-2 Inhibitor Tetrabenazine on Effort-Related Choice Behavior Using Mouse Touchscreen Procedures

Arsal Shah, Biological Sciences

Taina Quiles, Biological Sciences

Advisor: John Salamone, Distinguished Professor, Psychological Sciences

33. Investigating the Neurobiology of Motivational Deficiencies in Major Depressive Disorder: 5-HT_{1B} Receptor Involvement in Behavioral Effects of Fluoxetine (Prozac)

Sarah Ferrigno, Psychological Sciences & Molecular and Cell Biology

Advisor: John Salamone, Distinguished Professor, Psychological Sciences

34. The Effect of Different Rhythmic Frequencies on Negative Mean Asynchrony

Danielle LaMay, Individualized Major: Computational Neuroscience

Advisor: Edward Large, Professor, Psychological Sciences

35. The Role of Vasculature Tone in the Retrotrapezoid Nucleus in Response to Hypoxia

Carlos Calderón Valero, Physiology and Neurobiology

Advisor: Daniel Mulkey, Professor, Physiology and Neurobiology

36. The Role of ApoC-III on Circulating Immune Cells in Response to a Western Diet

Nicholas Tambini, Allied Health Sciences

Advisor: Alison Kohan, Assistant Professor, Nutritional Sciences

37. Identification of Early Gene Differentiation Markers in Progenitor Cells Involved in the Onset of Fibrodysplasia Ossificans Progressiva (FOP)

Annie Jin, Molecular and Cell Biology & Nutritional Sciences

Advisor: David Goldhamer, Professor, Molecular and Cell Biology

38. Identification of Enterohemorrhagic *Escherichia coli*-Encoded Noncanonical Inflammasome Inhibitors

Sree Kolli, Biomedical Engineering

Advisor: Sivapriya Kailasan Vanaja, Assistant Professor, Immunology

39. Cranial Neural Crest-Targeted Deletion of Cdc73 Results in Embryonic Lethality

Lilia Shen, Biological Sciences

Advisor: Jessica Costa-Guda, Assistant Research Professor, Center for Molecular Oncology

Advisor: Andrew Arnold, Murray-Heilig Chair in Molecular Medicine and Professor, Medicine & Genetics and Genome Sciences

40. Effects of Bone Morphogenetic Proteins and Fibroblast Growth Factors on Mammalian Cells

Jolene Addi, Psychological Sciences

Advisor: Wai Hong (Kevin) Lo, Assistant Professor, Medicine & Endocrinology

Advisor: Cato Laurencin, University Professor, Albert and Wilda Van Dusen Distinguished Professor of Orthopedic Surgery, and Professor of Chemical, Materials, and Biomedical Engineering

41. Identity of Downstream Partners of SMa0113

Daniel Netting, Molecular and Cell Biology

Advisor: Daniel Gage, Professor, Molecular and Cell Biology

42. Investigating the Role of RhoD in the Regulation of Autophagy

Jessica Lohret, Molecular and Cell Biology

Advisor: Kenneth Campellone, Associate Professor, Molecular and Cell Biology

43. Muscle Activation in Patients with a History of Anterior Cruciate Ligament Reconstruction (ACLR)

Elena Masiello, Exercise Science

Advisor: Adam Lepley, Assistant Professor, Kinesiology

44. Imatinib Reduces the Efficacy of Cytotoxic Chemotherapy Agents

Willie Dong, Physiology and Neurobiology

Advisor: Andrew Wiemer, Associate Professor, Pharmaceutical Sciences

45. Molecular Mechanisms of Phenylalanine Aggregation

Samuel Kokomoor, Electrical Engineering, Computer Engineering, & Computer Science

Advisor: Anna Tarakanova, Assistant Professor, Mechanical Engineering & Biomedical Engineering

47. Galaxies Which Hosted Multiple Type IA Supernova in the Dark Energy Survey and Pan-STARRS

Aisha Massiah, Mathematics/Physics

Advisor: Daniel Scolnic, Assistant Professor, Physics, Duke University

Advisor: Cara Battersby, Assistant Professor, Physics

48. Preparation of Single Stranded Modified Vectors for Mutagenesis Studies in Bacteria and Mammalian Cells Using Recombinant DNA Technology

Mishil Nana, Physiology and Neurobiology

Advisor: Ashis Basu, Professor, Chemistry

49. Geochemical Signatures of Life in an Extreme Environment: Chemical "Footprints" of a Martian Analogue?

Benjamin Teerlinck, Molecular and Cell Biology and Geoscience

Advisor: Michael Hren, Assistant Professor, Chemistry

50. Development of an Open-Source Physiologically-based Pharmacokinetic Model to Predict Maternal-fetal Exposures of CYP450-metabolized Drugs

Madeleine Gastonguay, Applied Mathematical Sciences

Advisor: Ahmed Elmokadem, Research Scientist, Metrum Research Group

Advisor: Matthew Riggs, Chief Science Officer, Metrum Research Group

51. A Modular Approach to Multiscale Modeling of Invasive Pulmonary Aspergillosis

Yu Mei, Computer Science

Advisor: Reinhard Laubenbacher, Professor, Cell Biology & Computational Biology

52. Role of CD13 in Focal Adhesion Turnover and Its Significance in the Formation of Tunneling Nanotubes

Brian Aguilera, Molecular and Cell Biology

Advisor: Mallika Ghosh, Assistant Professor, Cell Biology & Center for Vascular Biology

Advisor: Linda Shapiro, Professor, Cell Biology & Center for Vascular Biology

53. Soluble Epidermal Growth Factor Receptor Isoforms: Functional Roles and Potential Therapeutic Application in Rheumatoid Arthritis

Tyler Ackley, Pharmacy & Molecular and Cell Biology

Advisor: Caroline Dealy, Associate Professor, Center for Regenerative Medicine and Skeletal Development, Cell Biology, & Orthopedic Surgery

54. Cellular Response to Biodegradable Stent in Vascular Bioreactor

Vinayak Mishra, Molecular and Cell Biology

Advisor: Laura Niklason, Professor, Anesthesiology and Biomedical Engineering, Yale University

55. Low-Cost Wearable Rhythmic Auditory Stimulation Device for Gait Enhancement

Ryanne Ramadan, Biomedical Engineering & Electrical Engineering

Advisor: Patrick Kumavor, Assistant Professor, Biomedical Engineering

56. Evaluation of Gallium Nitride Power Devices

Hamza Malik, Electrical Engineering

Advisor: Sung Yeul Park, Associate Professor, Electrical and Computer Engineering

57. Effect of Targeted Delivery of Hyaluronan by a Polymer-Peptide System on Ocular Surface Lubrication

Robert Driscoll, Biomedical Engineering

Advisor: Tannin Schmidt, Associate Professor, Biomedical Engineering

58. CartograTree: A Web-based Landscape Genomics Tool for Georeferenced Trees

Ronald Santos, Computer Science

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

59. Creating a Deep Learning Pipeline to Improve the Accuracy and Efficiency of Non-Model Genome Annotation

Jeremy Bennett, Biomedical Engineering & Computer Science and Engineering

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

60. Assessing the Accuracy of Gene Tree Rooting Methods on Prokaryotic Gene Families

Taylor Wade, Biomedical Engineering

Advisor: Mukul Bansal, Assistant Professor, Computer Science and Engineering

61. Analyzing Microplastics in Long Island Sound

Julia Lineweber, Environmental Engineering

Caroline Anastasia, Chemistry

Advisor: James Stuart, Senior Research Scientist, Center for Environmental Sciences and Engineering and Professor Emeritus, Chemistry

Advisor: Christopher Perkins, Academic Assistant II, Center for Environmental Sciences and Engineering

62. Mastitis Trends in Dairy Herds in Connecticut: A Retrospective Analysis

Kelsey Tyler, Animal Science

Advisor: Guillermo Risatti, Associate Professor, Pathobiology and Veterinary Science

63. Culicoides Vectors Involved in the Transmission of Epizootic Hemorrhagic Disease Virus-6 in the State of Connecticut

Sarah Srivichitranond, Molecular and Cell Biology & Pathobiology

Advisor: Guillermo Risatti, Associate Professor, Pathobiology and Veterinary Science

64. Road Salts Influence Ranavirus Outbreaks in Wood Frog (*Lithobates sylvaticus*) Tadpoles

Sarah Jacobson, Natural Resources

Advisor: Tracy Rittenhouse, Associate Professor, Natural Resources and the Environment

65. How Does Sea Level Rise Alter Salt Marsh Plant Biomass Allocation and Nitrogen Content

Fiona Liu, Ecology and Evolutionary Biology

Advisor: Beth Lawrence, Assistant Professor, Natural Resources and the Environment

66. Impacts of Salt Marsh Vegetation and Sea-Level Rise on Soil Carbon Stability

Alaina Bisson, Environmental Sciences

Advisor: Beth Lawrence, Assistant Professor, Natural Resources and the Environment

67. Learning How To Improve Sanitation Practices in the Peruvian Andes: Community-Led Total Sanitation and Citizen Science

Mateo Escobar, Biomedical Engineering & Materials Science and Engineering

Caitlin Turney, Chemical Engineering & German Studies

Advisor: Jonathan Mellor, Assistant Professor, Civil and Environmental Engineering

68. Something Scary: Exploring Otherness through the Art of Horror

Kat Folker, Puppetry

Advisor: Bart Roccoberton, Professor, Dramatic Arts

Advisor: John Bell, Associate Professor, Dramatic Arts

Advisor: Lewis Gordon, Professor, Philosophy

SESSION 4 PRESENTATIONS

1. Anonymous is a Woman

Isabella Saraceni, Art – Painting

Advisor: Ray DiCapua, Professor, Art and Art History

2. Painting with Plants

David Rascati, Sustainable Plant and Soil Systems

Advisor: Eleanor Ouimet, Assistant Professor in Residence, Anthropology

Advisor: Julia Kuzovkina, Professor, Plant Science and Landscape Architecture

3. Out of Sight

Mei Buzzell, Art – Graphic Design

Advisor: Janet Pritchard, Professor, Art and Art History

Advisor: Edwin Yegir, Associate Professor, Art and Art History

Advisor: Kelly Dennis, Associate Professor, Art and Art History

4. What Are You? Documenting Filipino American Diversity Through Film

Nina Drozdenko, Digital Media and Design

Advisor: Matthew Worwood, Assistant Professor in Residence, Digital Media and Design

5. The Great Forest Beast

Carly Martin, Secondary English Education & English

Advisor: Alison Paul, Assistant Professor, Art and Art History

6. When Trends and Sustainability Clash: The Environmental Impacts of the Fast Fashion Industry

Taylor Muncy, History & Human Rights

Advisor: Shareen Hertel, Associate Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

7. Linguistic Contact and Conflict in the Balkans

Geoffrey Horvath, Individualized Major: Historical Linguistics

Advisor: Andrea Calabrese, Professor, Linguistics

8. Understanding Nigeria's Energy Security Paradox: A Cross Regional Case Study of Niger Delta and Lagos

Matthew Byanyima, Political Science & Economics

Advisor: Oksan Balyugen, Associate Professor, Political Science

9. The New Deal: Elements of Socialism in American Capitalism

Dea Ballij, Political Science & Economics

Advisor: Stacy Maddern, Adjunct Faculty, Urban and Community Studies

11. Ideological Inquiry: An Analysis of the Rhetoric Nominees Face In Supreme Court Confirmation Hearings

Michael Cocchiola, Political Science

Advisor: Virginia Hettinger, Associate Professor, Political Science

12. Domestic Minors in Sex Trafficking: Victims or Criminals?

Cyrene Nicholas, Physiology and Neurobiology & Anthropology

Advisor: Françoise Dussart, Professor, Anthropology

13. Measuring the Impacts of Regional Violence against Women Treaties on Domestic Practice

Amelia Henkel, Physics and Human Rights

Advisor: David Richards, Associate Professor, Political Science & Human Rights

14. Relationships Between Prejudice, Hate Crimes, and Gun Violence

Joshua Lovett-Graff, Women's, Gender, and Sexuality Studies & Chemical Engineering

Advisor: Blair Johnson, Distinguished Professor, Psychological Sciences

15. Can Educational Attainment Help Reduce the Gun Violence Crisis in the United States?

Rachel Rogerson, Political Science & Statistics

Advisor: Thomas Hayes, Assistant Professor, Political Science

Advisor: Jennifer Sterling-Folker, Alan R. Bennett Honors Professor, Political Science

16. Spit Take: The Surprisingly Under-Regulated Realm of Direct-To-Consumer Genetic Testing

Haley Hinton, Political Science and Individualized Major: Law, Science, and Technology

Advisor: Molly Land, Professor, Human Rights & Law

Advisor: Kristin Kelly, Associate Professor, Political Science

17. To Blame or Back the Blue: The Socio-Political Development of *Miranda v. Arizona* on Television Crime Dramas from 1967 to 1987

William Weishaupt, Political Science & American Studies

Advisor: Kimberly Bergendahl, Assistant Professor in Residence, Political Science

18. Global Terrorism: Examining the Radicalization of Terrorist Organizations Worldwide

Shreya Murthy, Individualized Major: Criminology, Human Rights, Finance

Advisor: David Richards, Associate Professor, Political Science & Human Rights

19. Courts and Torts: How Tort Reform Influences Public Opinion of the Civil Justice System

Mary Vlamis, Economics & Political Science

Advisor: Virginia Hettinger, Associate Professor, Political Science

20. In the Best Interests of the Child: A 50-State Comparison of Statutes

Maryanne Bowman, Human Development and Family Studies

Advisor: Preston Britner, Professor, Human Development and Family Studies

21. The Implications of Caregiver-Child Racial/Ethnic Match on Children's Early Care Quality and Developmental Outcomes

Hayley McDonald, Human Development and Family Studies

Advisor: Caitlin Lombardi, Assistant Professor, Human Development and Family Studies

22. To Cohabit or Not to Cohabit: Do Selection Factors Influence Marital Success or Dissolution?

Amanda Blazka, Human Development and Family Studies

Advisor: Caitlin Lombardi, Assistant Professor, Human Development and Family Studies

23. Sexting Behaviors and Justifications in Heterosexual and Homosexual Young Adults

Emily Karr, Human Development and Family Studies

Advisor: Alaina Brenick, Associate Professor, Human Development and Family Studies

24. #EATINGFORTWO: What are People Posting about When They Use This Hashtag in Instagram Posts about Diet, Physical Activity, and Weight Gain during Pregnancy?

Caitlyn Sward, Dietetics

Advisor: Molly Waring, Assistant Professor, Allied Health Sciences

25. Filling Gaps by Creating Webs to Support Student Mental Health: Applying a Multi-Tiered Systems of Support Framework to Postsecondary Education

Ireti Adegbesan, Human Development and Family Studies

Corona Zhang, Anthropology

Advisor: Sandra Chafouleas, Distinguished Professor, Educational Psychology

26. Testing Components of Yoga's Influence on Proposed Psychosocial Mechanisms of Yoga

Chrystal Charles, Psychological Sciences

Advisor: Crystal Park, Professor, Psychological Sciences

27. Modelling Visual Attention During Natural Optic Flow

Andrew Banasiak, Psychological Sciences

Advisor: Ian Stevenson, Assistant Professor, Psychological Sciences

28. Pain in African American Young Adults and Their Pain Reduction Strategies

Bright Eze, Nursing

Advisor: Deborah McDonald, Associate Dean and Associate Professor, Nursing

29. A Survey of Parent Engagement in the Neonatal Intensive Care Unit (NICU)

Joeanna Novak, Nursing

Advisor: Dorothy Vittner, Assistant Clinical Professor, Nursing

Advisor: Deborah McDonald, Associate Dean and Associate Professor, Nursing

30. Near Infrared Spectroscopy to Diagnose Statin-Associated Muscle Symptoms: Reflections on A Student Learning Experience

Isabella Sanchez, Allied Health Sciences

Advisor: Beth Taylor, Associate Professor, Kinesiology

31. Size Threshold for Sonographic Follow-up of Simple Postmenopausal Adnexal Cysts: 1 cm versus 3 cm?

Mallika Shekhar, Physiology and Neurobiology

Advisor: Priyanka Jha, Assistant Professor, Radiology and Biomedical Imaging, University of California, San Francisco

32. INP Enhancement of Radiation Dosage and its Localization within U87 Tumors

Ferris El-tayyeb, Biological Sciences

Advisor: Henry Smilowitz, Associate Professor, Cell Biology

33. Computational Pathway Analysis and Categorization of Colorectal Cancers

Raven Vella, Structural Biology and Biophysics and Spanish
Advisor: Charles Giardina, Professor, Molecular and Cell Biology

34. A Robust Delivery System for RNA Therapeutics

Suleyman Bozal, Structural Biology and Biophysics
Advisor: Diane Burgess, Distinguished Professor, Pharmaceutical Sciences
Advisor: Antonio Costa, Assistant Research Professor, Pharmaceutical Sciences

35. The Effect of Stress on the Microbiome and Physiology of *Drosophila melanogaster*

Sabrina Yum-Chan, Psychological Sciences & Molecular and Cell Biology
Advisor: Nichole Broderick, Assistant Professor, Molecular and Cell Biology

36. Assessing the Level of Shiga Toxin Production in *Escherichia coli* Strains

Corey Mallozzi, Structural Biology and Biophysics
Advisor: Sivapriya Kailasan Vanaja, Assistant Professor, Immunology

37. The Highly Conserved Intron of the DBP2B Gene May Effect Cis-Splicing in *T. Brucei*

Zachary O'Connor, Molecular and Cell Biology
Advisor: Arthur Gunzl, Professor, Genetics and Genome Sciences

38. Investigating: Carbon Source Utilization by Symbiotic Bacteria in the Hawaiian Bobtail Squid, *Euprymna scolopes*

Abishek Arokiadoss, Physiology and Neurobiology
Advisor: Spencer Nyholm, Associate Professor, Molecular and Cell Biology

39. Antifouling Effects Provided by Bacterial Symbionts in the Hawaiian Bobtail Squid Egg

Hope Dieffenbach, Biological Sciences
Advisor: Spencer Nyholm, Associate Professor, Molecular and Cell Biology

40. Microglia Invasion and Activation in Low Grade Glioma Brain Tissue

Veolette Hanna, Physiology and Neurobiology
Advisor: Joseph LoTurco, Professor, Physiology and Neurobiology

41. Investigating the ETS Transcription Factor, Pointed, for its Role in *Drosophila* Ovulation

Ekaterina Skaritanov, Physiology and Neurobiology

Advisor: Jianjun Sun, Assistant Professor, Physiology and Neurobiology

42. Construction of a 64-Channel Microelectrode Array for In-vivo, Single Neuron Recording in Rats

Neha Mathew, Physiology and Neurobiology

Advisor: Etan Markus, Professor, Psychological Sciences

43. Cyp4e2 is a Marker for *Drosophila* Trichogen Cells in Antenna Sensilla

Monica Nagalla, Physiology and Neurobiology

Advisor: Karen Menuz, Assistant Professor, Physiology and Neurobiology

Advisor: Linnaea Ostroff, Assistant Professor, Physiology and Neurobiology

Advisor: Rahul Kanadia, Associate Professor, Physiology and Neurobiology

44. The Effects of Lipopolysaccharide-Induced Inflammation on Effort-Related Choice Behavior

Jason Gallo, Physiology and Neurobiology

Advisor: John Salamone, Distinguished Professor, Psychological Sciences

45. Effects of the Novel Atypical Dopamine Transporter Blocker (S)-CE-123 on Effort-Based Choice: Studies with a Progressive Ratio/Chow Feeding Choice Procedure

Shanna Samels, Physiology and Neurobiology & Psychological Sciences

Advisor: John Salamone, Distinguished Professor, Psychological Sciences

47. FISHing in the Eye: An Investigation into the Mechanisms of Axon Regeneration

Kathleen Renna, Diagnostic Genetic Sciences

Advisor: Ephraim Trakhtenberg, Assistant Professor, Neuroscience

Advisor: Judy Brown, Associate Professor in Residence, Allied Health Sciences

48. Delayed Delivery of Simvastatin Using Biomimetic Materials in Elderly Mouse Calvarial Defects

Michael Nicolson, Biomedical Engineering

Advisor: Liisa Kuhn, Associate Professor, Center for Regenerative Medicine and Skeletal Development & Biomedical Engineering

49. Prototyping and Development of a Hands Free Umbrella System

Ryan Newell, Biomedical Engineering

Advisor: Savas Tasoglu, Assistant Professor, Mechanical Engineering & Biomedical Engineering

50. Developing Approaches for Genotyping Assay Design for Complex and Repetitive Plant Genomes

Ava Fritz, Biomedical Engineering

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

51. Mimubase: A Genomics Database for the Monkeyflower Research Community

Charles Demurjian, Biological Sciences

Advisor: Yaowu Yuan, Assistant Professor, Ecology and Evolutionary Biology

Advisor: Jill Wegrzyn, Assistant Professor, Ecology and Evolutionary Biology

52. Platform to Custom Pattern Electrospun Nanofibers to Study Cell-Material Interaction

Joshua Moskow, Biomedical Engineering and Materials Science and Engineering

Advisor: Sangamesh Kumbar, Associate Professor, Orthopedic Surgery

53. Exploring New Materials For Nanopositioning: Strontium Titanate as a Cryogenic Piezoelectric

Emerson Dang, Physics

Advisor: Ilya Sochnikov, Assistant Professor, Physics

54. Novel Script for Finding Unique Gene Combinations for scRNAseq Clusters

Jacky Yang, Molecular and Cell Biology

Advisor: Ephraim Trakhtenberg, Assistant Professor, Neuroscience

55. Coupling of Markov Chains

Mason DiCicco, Mathematics & Computer Science

Advisor: Iddo Ben-Ari, Associate Professor, Mathematics

56. School Policy Evaluated with Reversible Discrete Time Markov Chain

Trajan Murphy, Applied Mathematical Sciences

Advisor: Iddo Ben-Ari, Associate Professor, Mathematics

57. Pricing VIX and TYVIX Options Using a Risk-Neutralized Historical Returns Distribution

Anthony Sisti, Mathematics/Statistics

Advisor: Marcel Blais, Professor, Mathematical Sciences, Worcester Polytechnic Institute

Advisor: Stephan Sturm, Associate Professor, Mathematical Sciences, Worcester Polytechnic Institute

58. Molecular Mechanisms of Tropoelastin Elasticity

Julia Oppenheimer, Mechanical Engineering

Michael Bernard, Mechanical Engineering

Advisor: Anna Tarakanova, Assistant Professor, Mechanical Engineering & Biomedical Engineering

59. Molecular Design of Soluble Zein Protein

Kaixiang Lin, Computer Science and Engineering and Engineering Physics

Advisor: Anna Tarakanova, Assistant Professor, Mechanical Engineering & Biomedical Engineering

60. Analyzing Perfluorinated Alkyl Acids in Surface Water by Solid Phase Extraction Followed by Ultra High-Performance Liquid Chromatography/Tandem Mass Spectrometry

Trevor McBrine, Chemistry

Jacob Cortigiano, Chemistry

Advisor: James Stuart, Senior Research Scientist, Center for Environmental Sciences and Engineering and Professor Emeritus, Chemistry

Advisor: Anthony Provas, Academic Assistant II, Center for Environmental Sciences and Engineering

Advisor: Christopher Perkins, Academic Assistant II, Center for Environmental Sciences and Engineering

61. Electron Delocalization in Nitrile-Functionalized Oligopolyphenylenes

Reid Wilson, Chemistry

Advisor: Tomoyasu Mani, Assistant Professor, Chemistry

62. Silver Nanoparticle Toxicity and the Effect on Soil Protists

Daniel Zeigher, Environmental Engineering

Advisor: Leslie Shor, Associate Professor, Chemical and Biomolecular Engineering

63. Microbial Succession of a Newly Developed Aquaponics System

Tanzin Begam, Biological Sciences

Advisor: Kendra Maas, Academic Assistant III, Microbial Analysis, Resources, and Services (MARS)

64. Causes of Synchrony in Food Provisioning to Nestlings and Its Relationship to Nest Success in Forest Fragments

Benjamin Ranelli, Ecology and Evolutionary Biology & English

Advisor: Chris Elpick, Associate Professor, Ecology and Evolutionary Biology

65. Investigating Geographical Differentiation in Sculpin (*Cottus* spp.) Morphology in Connecticut Watersheds

Joshua Tellier, Ecology and Evolutionary Biology

Advisor: Eric Schultz, Professor, Ecology and Evolutionary Biology

66. The Relationship Between Soil Conditions, Forest Composition, and Morph Frequencies of a Woodland Salamander, *Plethodon cinereus*

Ryan Mayer, Ecology and Evolutionary Biology

Advisor: Elizabeth Jockusch, Professor, Ecology and Evolutionary Biology

67. The Effects of Maternal Nutrient Restriction Followed by Realimentation on Offspring Immunity and Metabolism

Veronica Pleasant, Animal Science & Pathobiology

Advisor: Kristen Govoni, Associate Professor, Animal Science

68. The Role of Probiotic Lactic Acid Bacteria in Treating *Clostridium Difficile* Infections

Jamie Georgelos, Molecular and Cell Biology

Advisor: Kumar Venkitanarayanan, Associate Dean, College of Agriculture, Health, and Natural Resources, and Professor, Animal Science

Special Thanks

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Brendan Hogan '21 (CLAS)

Shahan Kamal '19 (CLAS)

Natasha Patel '19 (CLAS)

Veronica Pleasant '19 (CAHNR)

Emily Regan '19 (SFA)

Alphabetical Listing of Presenters with Poster Numbers

S1 denotes a Session 1 presentation – Friday, April 12 at 2:00 p.m.

S2 denotes a Session 2 presentation – Friday, April 12 at 4:00 p.m.

S3 denotes a Session 3 presentation – Saturday, April 13 at 10:00 a.m.

S4 denotes a Session 4 presentation – Saturday, April 13 at 12:00 p.m.

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Banerjee, Mitali – 30 (S2)
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Bowman, Maryanne – 20 (S4)
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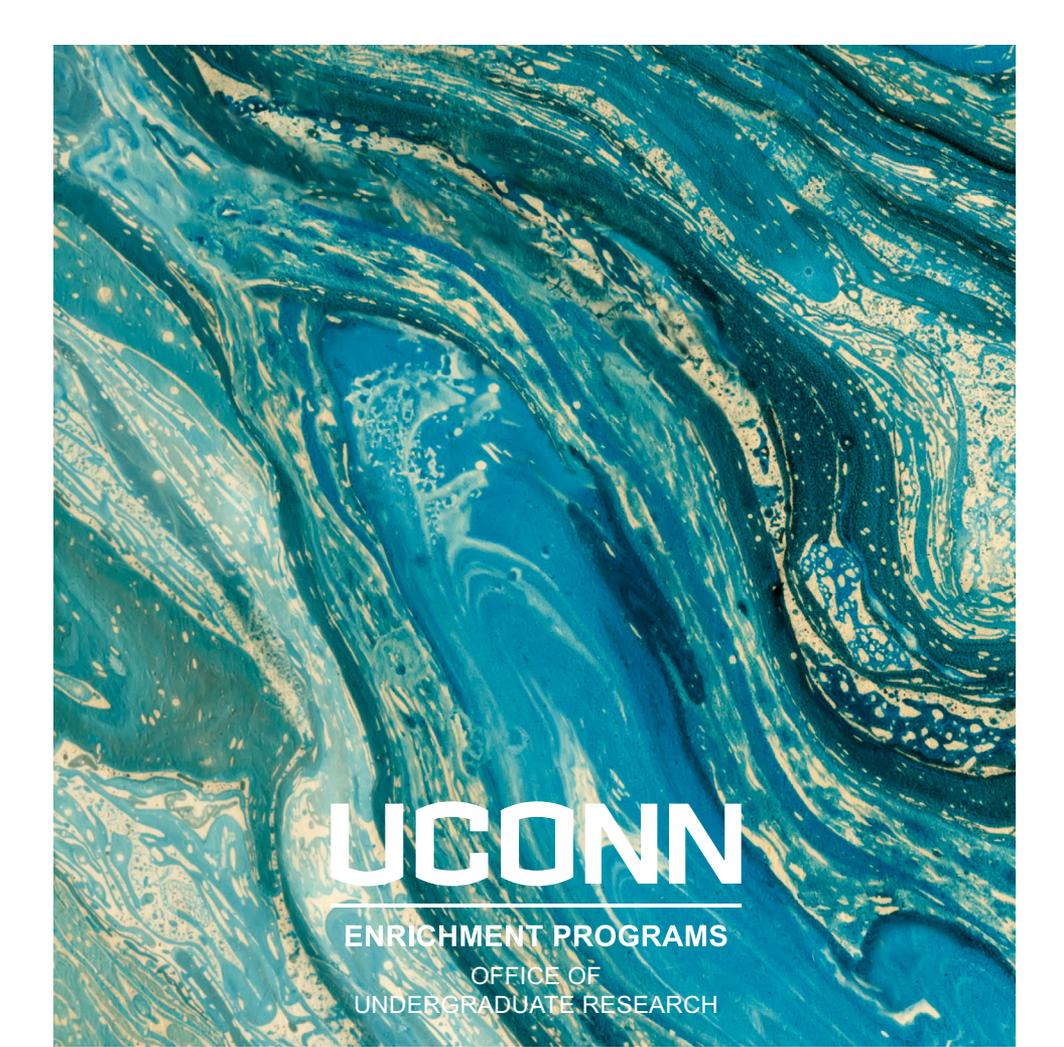
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