UNIVERSITY OF DELAWARE

UNDERGRADUATE RESEARCH PROGRAM

SYMPOSIUM FOR UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY

2023 Symposium for Undergraduate Research and Creative Activity
Harker Lab
Thursday, August 10, 2023
8:30 a.m. – 5:00 p.m.

8:00 – 8:25	Poster Session I Set-Up	Commons

8:30 --10:00	*Poster Session I*	Commons
	8:30-9:15 (ODD-numbered posters present)	
	9:15-10:00 (EVEN numbered posters present)	

8:30 – 9:45	*Oral Session 1*	
	1. Fashion and Design	ISE 202
	2. Work and Society	ISE 205
	3. Musical Education and History	ISE 207
	4. Art & History	ISE 302

10:00-10:15	Switch Posters for Session II	Commons

10:00 – 11:15	*Oral Session 2*	
	1. The World of Science	ISE 202
	2. The Brain and Body	ISE 205
	3. Health and Wellbeing	ISE 207
	4. Studies in Healthcare	ISE 302

10:15 – 11:45	*Poster Session II*	Commons
	10:15-11:00 (ODD-numbered posters present)	
	11:00-11:45 (EVEN numbered posters present)	

11:30 – 12:45	*Oral Session 3*	
	1. Education and Human Development	ISE 202
	2. Issues of Higher Education	ISE 205
	3. Exploring Economics	ISE 207
	4. Studies of Power	ISE 302

11:45-12:00	Switch Posters for Session III	Commons

12:00– 1:30	*Poster Session III*	Commons
	12:00-12:45 (ODD-numbered posters present)	
	12:45-1:30 (EVEN numbered posters present)	

12:00 – 2:30	LUNCH	
	Perkins Student Center	

1:30-1:45	Switch Posters for Session IV	Commons

1:45-3:15	*Poster Session IV*	Commons
	1:45-2:30 (ODD-numbered posters present)	
	2:30-3:15 (EVEN numbered posters present)	

2:00-3:15	*Oral Session 4*	
	1. Violence and Injustice in Our Society	ISE 202
	2. Studies in Psychology	ISE 205
	3. Earth and Environment	ISE 207
	4. Culture, Society and Policy	ISE 302
3:15-3:30	Switch Posters for Session V	Commons
3:30-4:45	*Oral Session 5*	
	1. Public Policy in Delaware and Beyond	ISE 202
	2. Visual Communication	ISE 205
	3. Artistic Expression	ISE 207
	4. Interdisciplinary Research Topics	ISE 302
3:30-5:00	*Poster Session V*	Commons
	3:30-4:15 (ODD-numbered posters present)	
	4:15-5:00 (EVEN numbered posters present)	
3:00-4:30	UD Creamery Ice Cream	Commons

August 2023

Dear Friends of Undergraduate Research:

Welcome to the University of Delaware's fourteenth Annual Symposium for Undergraduate Research and Creative Activity. We are very excited to have over 500 undergraduate students sharing their research projects with you. This year we are finally able to host a fully in-person event in the Patrick T. Harker ISE Lab, allowing for the excitement and energy that comes from engaging in face-to-face intellectual conversations.

The Symposium program features a remarkable range of projects that represent innovative work in a variety of disciplines across the university. During the past ten weeks, students have been learning how to use research to address some of the most perplexing problems we face as a society. Under the direction of faculty mentors, and often in collaboration with graduate students, industry, or community partners; students have been learning how to conduct original research and how to communicate their process and findings to a variety of audiences. Numerous studies have demonstrated that participation in undergraduate research can powerfully shape students' interest and engagement in learning, and open new career pathways for students.

The summer programs that provide research opportunities for students and today's event would not be possible without the collaboration and support from extraordinary people and offices across campus. I especially want to thank the staff of the Undergraduate Research Program for making this event possible. Special gratitude is also due to faculty, mentors, staff, community partners, and donors who give generously of their expertise, time and resources to broaden our students' learning through research and creative activities.

On behalf of all these members of the UD community, thank you for joining us at today's Symposium. We hope you will learn something new and deepen your appreciation for research as your hear and see our students present the intellectual and creative work they have been doing over the summer. Our future looks bright!

Sincerely,

Rosalie Rolón-Dow, Ph.D.
Faculty Director, Undergraduate Research Program

August 2023

Dear UD Colleagues and Friends,

Welcome to the University of Delaware's 2023 Symposium for Undergraduate Research and Creative Activity. This event celebrates the results of 10 weeks of hard work, dedication and commitment of more than 500 UD undergraduate students. During these 10 weeks students have worked tirelessly to develop the knowledge and skills that are associated with these experiential learning opportunities. Students have learned from faculty, community partners, graduate students, peers and others. They have been engaged in projects that represent disciplines across the university, learned how to solve real world problems and developed the confidence needed to succeed both at UD and beyond. Examples this year have included addressing the overall health and wellbeing of older adults, exploring ways in which to improve the lives of downtown Wilmington residents, and evaluating how microrobots could possibly be used to treat some Sickle-Cell symptoms.
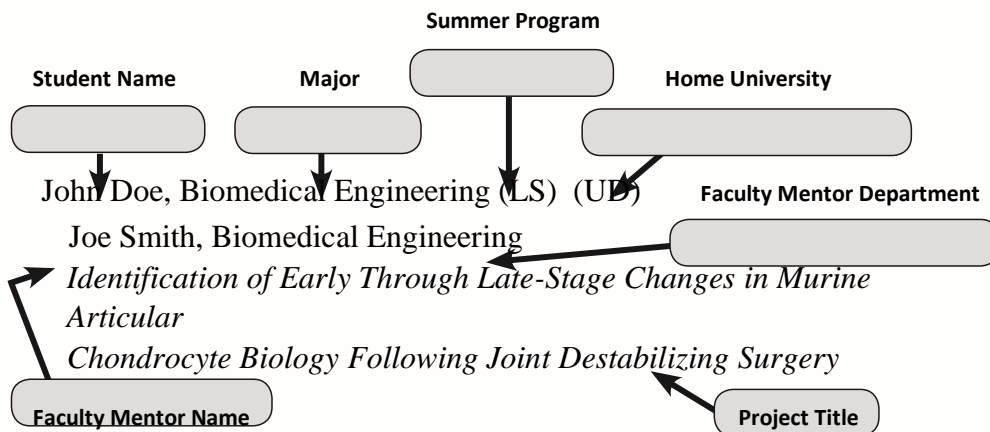
So as we can see, UD has a rich history in providing these high impact opportunities for our undergraduate students and the commitment and dedication of those individuals who support our students is readily apparent and appreciated. On behalf of the University of Delaware I would like to thank all those individuals, including the staff of the Undergraduate Research Program, that have made this a rich and rewarding experience for our students.

Sincerely,

Avron Abraham, Ph.D.
Interim Vice Provost for Undergraduate Education
University of Delaware

Explanation of Program Entries

Student Name

Major

Summer Program

Home University

John Doe, Biomedical Engineering (LS) (UB)

Faculty Mentor Department

Joe Smith, Biomedical Engineering

Identification of Early Through Late-Stage Changes in Murine Articular

Chondrocyte Biology Following Joint Destabilizing Surgery

Faculty Mentor Name

Project Title

POSTER SESSION I 8:30 - 10:00AM

(Agriculture, Animal Science, Wildlife Ecology Conservation, Plant Science, Education, Music, Public Policy)

AGRICULTURE

1) Nicholas Sharp, Agribusiness Management (UD Envision) (University of Maryland Eastern Shore)
Abby Reeves, Plant and Soil Sciences
The Effects Of Light Availability On Plant In Small Space Container Gardens

2) Kaneko Azuma, Agricultural & Natural Resources (Cooperative Extension Program) (University of Delaware)
Jenn Volk, Cooperative Extension
Investigating the Benefits of Individual Climate Change Actions

3) Rylee Ridgley, Agricultural Education (Cooperative Extension Program) (Oklahoma State University)
Susan Garey, Cooperative Extension
Leading and Learning with Animal Science Extension

4) Zuri Hobson-Gladney, Agriculture: Pre-Veterinary Science (Delaware INBRE) (Delaware State University)
Aditya Dutta, Animal and Food Sciences
Analyses of Differentially Expressed Genes in Broiler Breeder Ovarian Follicles to Enhance Reproductive Efficiency

PLANT SCIENCE

5) Kevin Chan, Plant Science (CANR Unique Strengths) (University of Delaware)
Nicole Donofrio, Plant and Soil Sciences
Foliar and Soilborne Fungal pathogens: Resistance to the bacterium Bacillus velezensis strain S4

6) Emilia Pierce, Plant Science (Summer Scholars) (University of Delaware)
Harsh Bais, Plant and Soil Sciences
Functional characterization of maize nitrogen transporters

7) Yuki Jatmiko, Plant Science (UD Envision) (University of Maryland Eastern Shore)
Alyssa Koehler, Plant and Soil Sciences
Diversity of Pythium Species Associated with Snap Bean Production in Delaware

8) Raven McIntosh, Plant Science (CANR Summer Institute) (St. Augustine University)
Harsh Bais, Plant and Soil Sciences
Bacterial-derived components drives synthetic community (SYNCOM) association in plants

LANDSCAPE ARCHITECTURE

9) Talia Brinker, Landscape Architecture (Summer Scholars) (University of Delaware)
Zach Hammaker, Plant and Soil Sciences
Coastal Resilience Design Studio: Conceptual Community Plan

WILDLIFE ECOLOGY

10) Dominic Carrea, Wildlife Ecology (CANR Unique Strengths) (University of Delaware)
Vincenzo Ellis, Entomology and Wildlife Ecology
Prevalence and Diversity of Avian Malaria Parasites in North American Raptors

11) Ekaterina Hampton, Wildlife Ecology (UD Envision) (Shippensburg University)
Zach Hammaker, Plant and Soil Sciences and Chris Williams, Entomology and Wildlife Ecology
Measuring Carbon Sequestration of University of Delaware's Central Campus

12) Lauren Pollock, Wildlife Ecology & Conservation, Insect Ecology & Conservation (Lomax Cooperative Extension Scholars Fund) (University of Delaware)
Deborah Delaney, Cooperative Extension
Kids and Bees and Gardens, Oh My!

13) John Hendell, Wildlife Ecology Conservation (Summer Scholars) (University of Delaware)
Jeffrey Buler, Entomology and Wildlife Ecology
Chris Williams, Entomology and Wildlife Ecology

Using Automated Radio Telemetry to Quantify Fine Scale Habitat Use Patterns of Northern Bobwhite (Colinus virginianus)

14) Kara Taylor, Wildlife Ecology Conservation (Summer Scholars) (University of Delaware)
Greg Shriver, Entomology and Wildlife Ecology
Effects of phenology and territory intrusion on Carolina Wren behavior

15) Emma Feldman, Wildlife Ecology (UD Envision) (University of Delaware)
Chris Williams, Entomology and Wildlife Ecology/Sustainability
Energetic availability of wintering Green-winged Teal foods in North Carolina

ANIMAL SCIENCES

16) Isabella Ferraro, Animal Science (Summer Fellows) (University of Delaware)
Amy Biddle, Mathematical Sciences
Identifying Uncharacterized Proteins Associated with Anthelmintic Resistance in Cyathostomins

17) Giovanni Rollo, Animal Science (CANR Unique Strengths) (University of Delaware)
Hong Li, Animal and Food Science
Field Evaluation of a Novel Water Treatment System in Commercial Boiler Operations

18) Mia Sanders, Animal Science (UD Envision) (University of Delaware)
Yihang Li, Animal and Food Science
In Ovo injection of Glutamine and the Effects on Intestinal Epithelium

PRE-VETERINARY SCIENCES

19) Sydney Iredell, Pre-Veterinary Medicine and Animal Biosciences (Summer Scholars) (University of Delaware)
Shawn Polson, Biological Sciences
DNA Polymerase I enzyme biochemistry reflects life cycles of environmental phages

20) Jillian Reifsnyder, Pre-Veterinary Medicine and Animal Biosciences (Summer Scholars) (University of Delaware)
Amy Biddle, Animal and Food Science
Effect of Nutritional Management Strategies on Ulcer Incidence in Standardbred Racehorses

21) Gabrielle Bannister, Pre-Veterinary Sciences (UD Envision) (University of Delaware)
Gianna Metzger, Pre-Veterinary Sciences (University of Delaware)
Amy Biddle, Animal and Food Science
Correlating levels of salivary and fecal SIgA in horses with differing cyathostomin parasite egg shedding rates

22) Nia Hopkins, Pre-Veterinary Sciences (UD Envision and UD Equine Science Program) (University of Delaware)
Amy Biddle, Animal and Food Sciences
Identifying the Source of Gastric Ulcers in Standardbred Racehorses

23) Stefanie Severin, Pre-Veterinary Sciences (UD Envision) (University of Delaware)
Mark Parcells, Animal and Food Sciences
Identifying the Source of Gastric Ulcers in Standardbred Racehorses

MARINE SCIENCE

24) Thomas Repetz, Marine Biology (Summer Fellows) (University of Delaware)
Edward Hale, Marine Biology
Assessing Relative Habitat Quality of Freshwater Tributaries using Relative Abundance and Size of Resident Fishes

25) Elizabeth Roros, Marine Science (Summer Scholars) (University of Delaware)
Mark Warner, Marine Studies
Will genotypes of Breviolum minutum retain thermal tolerance? Photochemical analysis of Caribbean symbiotic dinoflagellates across various heat exposure

26) Alyssa Wentzel, Marine Science and Public Policy (Civil and Environmental Engineering) (University of Delaware)
Tian-Jian Hsu, Civil and Environmental Engineering
The Effects of EPS, Clay Minerals, and Sand on the Flocculation Process

ENVIRONMENTAL SCIENCE AND ENGINEERING

27) Charles Sobocinski, Environmental and Resource Economics (NSF Project WiCCED) (University of Delaware)
Kent Messer, Applied Economics and Statistics
Diya Ganguly, Experimental and Applied Economics
Is Cash Trash?: A Study on Participant Recruitment from the Field

28) Georgia Angeletakis, Environmental Engineering (Summer Scholars) (University of Delaware)
Earl Lee, Civil and Environmental Engineering
The Greenhouse Gas Estimator for Road Construction and Rehabilitation Projects

29) Ryan Kim, Environmental Engineering (USDOT Center for Integrated Asset Management for Multimodal Transportation Infrastructure Systems) (University of Delaware)
Daniel Cha, Civil and Environmental Engineering
Sustainable Production of Bioplastics Utilizing Halophiles

30) Dillon Siple, Environmental Engineering (Summer Scholars) (University of Delaware)
Yu-Ping Chin, Civil and Environmental Engineering
Effects of Solid Phase Extraction on Stemflow DOM Properties

31) Evan Bletz, Environmental Science (UD Envision) (Franklin & Marshall)
Shree Inamdar, Plant and Soil Sciences
Bulk Density of Soils at Floodplain Restoration Sites

32) Grace Chen, Environmental Science (CANR Summer Institute) (University of California-Berkley)
Michael Crossley, Entomology and Wildlife Ecology
Evaluating the Decomposition Rate of Hermetia illucens on Compostable Takeout Waste

33) Shayna Demick, Environmental Science (University of Delaware)
Kelly Cobb, Fashion and Apparel Studies
Luis Quijano, Fashion and Biotechnology
Bacterial Cellulose in Fashion

34) Itzel Duran-Herrera, Environmental Science (University of Delaware)
Pinki Mondal, Geography and Spatial Sciences
The Agricultural History of Brandywine Park

35) Kadisha Mitchell, Environmental Science (Howard University)
Changqing Wu, Animal and Food Sciences
Jinglin Zhang, Animal and Food Science
Efficacy of DCN Filters in Removing Micro/Nanoplastics from Water

36) Lauren Schechter, Environmental Science (University of Delaware)
Yan Jin, Plant and Soil Sciences
Effect of Salinity and Flooding Events on the Mobilization of Size-fractionated Colloid-bound Phosphorus in Marshland

37) Ryan Eagan, Environmental Science (University of Delaware)
Tracy DeLiberty, Geography
Climate Change and Variability in the East Antarctic Icescape

38) Chase Thompson, Environmental Stewardship (University of Maryland College Park)
Abby Reeves, Plant and Soil Sciences
How To Create Plant Pigments

CIVIL ENGINEERING

39) Steffan Ghin, Civil Engineering (USDOT Center for Integrated Asset Management for Multimodal Transportation Infrastructure Systems) (University of Delaware)
Jovan Tatar, Civil and Environmental Engineering
Durability of Composites Derived from Renewable Resources

40) Adriana Mercado Cruz, Civil Engineering (National Science Foundation) (Universidad de Puerto Rico-Mayagüez)
Monique Head, Civil and Environmental Engineering
Vulnerability Assessment of Coastal Bridges

41) Semon Rezkalla, Civil Engineering (USDOT Center for Integrated Asset Management for Multimodal Transportation Infrastructure

Systems) (University of Delaware)
Haritha Malladi, Civil and Environmental Engineering
Evaluation of the Bond Strength of Tack Coat

42) Agatha Seretni Uchi, Civil Engineering (National Science Foundation) (Rowan University)
Chris Williams, Office of Sustainability Michael Chajes, Civil and Environmental Engineering
Jeffrey Summerhays, Office of Sustainability
Developing A Rapid Assessment System For Evaluating The Energy Efficiency Of University Of Delaware Buildings

43) Cornia (Nia) Spears, Civil Engineering (National Science Foundation) (University of Missouri-Columbia)
Tiana Noelani Thorp, Civil Engineering (University of Delaware)
Jennifer McConnell, Civil and Environmental Engineering
Evaluation of Dry Film Thickness Data for Assessing Field Performance of Uncoated Weathering Steel

VISUAL COMMUNICATIONS

44) Lauren Bothum, Visual Communications (Community Engagement Initiative) (University of Delaware)
Katherine Deveney, Fine Arts (University of Delaware)
Lois Stoehr, Museum Studies
Art Therapy Express

ANTHROPOLOGY

45) Cole Purcell, Anthropology (NSF Project WiCCED) (University of Delaware)
Kedron Thomas, Anthropology
Moving Fashion Forward: At the Crossroads of Adaptability and Sustainability

46) Alyssa Gorton, Anthropology BA (McNair Scholars Program) (University of Delaware)
Carla Guerron-Montero, Anthropology
Spiritual Colonialism or Cultural Borrowing, New Age Influences in the Era of Contemporary Spirituality and Social Media

47) Morgan Boulden, Education & Human Development (ArtsBridge/ Community Engagement Initiative) (University of Delaware)
Monica Frichtel, Theater/Dance
Black Artists in the Jazz Age: A Collection of Dance-Integrated Lesson Plans

48) Cary Lucchino, Sociology (NSF Project WiCCED) (University of Delaware)
Kendron Thomas, Anthropology
Global Inequalities Perpetuated Through Fashion

49) Marissa Jackson, Public Policy (Community Engagement Initiative) (University of Delaware)
Lynnette Overby, Theater
Undergraduate Research in Dance: Contributions to the Second Edition

EDUCATION AND HUMAN DEVELOPMENT

50) Michaela Herdoiza, International Bus Studies BS (McNair Scholars Program) (University of Delaware)
Kedron Thomas, Anthropology
TBD

51) Krysta Laughrun, English (Graduate College) (University of Delaware)
Siobhan Carroll, English
The Gothic Revised — A Study of 19th-Century Gothic Literature and Applying its Thematics to Contemporary Storytelling

52) Michael Shields, Education & Human Development (Institute for Public Administration, Biden School) (University of Delaware)
Eric Layland, Human Development and Family Sciences
Mary Mitsdarffer, Public Policy
First Need In the First State: LGBTQ+ Youth Face Too Many Barriers to Secure Housing In Delaware

53) Natalie Maruer, Human Development and Family Services (Delaware INBRE) (University of Delaware)
Lisa Jaremka, Psychological and Brain Sciences
TBD

54) Geraldine Lara-Silva, Elementary Teacher Educ BSED (McNair Scholars Program) (University of Delaware)
Elizabeth Soslau, School of Education
What discriminatory barriers do college-level multilingual students face?

MATERIAL SCIENCE

55) Owen Shullaw, Materials Science and Engineering (CHARM REU) (Purdue University)
Matthew Doty, Materials Science and Engineering
Improving the Functionality of Time-Domain Terahertz Spectroscopy Systems to Further Characterize Materials

COGNITIVE SCIENCE

56) Kezia Osei-Sebuabe, Medical Diagnostics BS (McNair Scholars Program) (University of Delaware)
Naomi Samimi-Sadeh, Psychological and Brain Sciences
TBD

57) Jazmine Winters, Cognitive Science BS (McNair Scholars Program) (University of Delaware)
Amanda Owen Van Horne, Communication Sciences and Disorders
Examining Special Education Policy Documents Before and After Natural Disasters

LINGUISTICS

58) Anna Koppy, Linguistics (Delaware INBRE) (University of Delaware)
Amanda Owen Van Horne, Communication Sciences and Disorders
Some Structures are Learned more Easily than Others: Analysing non-corrective recasts for children with DLD

59) Claudia McCormick, Biomedical Engineering (Delaware INBRE) (University of Delaware)
Nathan Lazarus, Electrical and Computer Engineering
Liquid Metal Strain Sensors For Pediatric Patients

60) Gharem Santos, Psychology Education (Delaware INBRE) (University of Delaware)
Lisa Jaremka, Psychological and Brain Sciences
Stress Reduction Training Can Improve Emotional Connection and Relationship Satisfaction in Couples Engaging in Conflict Discussions

61) Juan Felipe Marin, Chemistry and Biochemistry (Latin American Undergraduate Summer Scholars) (Universidad Nacional de Colombia)
Jodi Hadden-Perilla, Chemistry and Biochemistry
Phosphorylation-Dependent Modulation of HBV Nuclear Import: Insights from Molecular Dynamics Simulations

62) Pohl Moreno, Chemistry and Biochemistry (Latin American Undergraduate Summer Scholars) (Universidad Nacional de Colombia)
Jodi Hadden-Perilla, Chemistry and Biochemistry
Understanding the Structural Determinants of Dye Accessible Surface Area (DASA) in Brome Mosaic Virus Capsid: Insights from Molecular Dynamics Simulations

63) Alejandro Salas-Estrada, Chemistry and Biochemistry (University of Delaware) (Latin American Undergraduate Summer Scholars)
Juan Perilla, Chemistry and Biochemistry
Determining the molecular mechanism of NDDX4 liquid-liquid phase separation under physiological

POSTER SESSION II
10:15 - 11:45AM
(Biological Sciences, Chemistry & Biochemistry)

BIOLOGICAL SCIENCES

1) Anastasia Pashukov, Bioinformatics & Computational Biology (Graduate College) (Worcester Polytechnic Institute)
Jia Song, Department of Biological Sciences, University of Delaware
Karen Hoober, Center for Bioinformatics and Computational Biology
Investigating Transport Mechanisms of Mitotic Spindle Localized Transcripts

2) Raktim Basu, Applied Molecular Biology and Biotechnology (Summer Scholars) (University of Delaware)
Mona Batish, Department of Medical and Molecular Sciences
Optimization of 2-step smFISH for specific exon detection in the BOK gene

3) Trevor Burleigh, Applied Molecular Biology and Biotechnology (Summer Scholars) (University of Delaware)
Mona Batish, Medical and Molecular Sciences
Identifying Expression of Circular RNA in Cardiac Fibroblasts and Cardiac Myocytes

4) Julia Serjantova, Applied Molecular Biology and Biotechnology (Summer Scholars) (University of Delaware)
Chi Keung Lam, Biological Sciences
Mapping Binding Domains between HAX1, HSP90, and PLN

5) Atif Bacchus, Biological Sciences (Summer Scholars) (University of Delaware)
Scott Siegel, ChristianaCare Helan f. Graham Cancer Center Research Institute
Deconstructing a Hot Spot of Advanced Breast Cancer Among Women in Wilmington: An Exploratory Study on Root Causes

6) Emily Borell, Biological Sciences (Summer Scholars) (University of Delaware)
Deni Galileo, Biological Sciences
Effects of Small-Molecule Inhibitors of FGFR, Integrins, and FAK on L1CAM-Stimulated Glioblastoma Stem Cell Motility and Proliferation

7) Luke Coster, Biological Sciences (Summer Scholars) (University of Delaware)
Sharon Rozovsky, Department of Chemistry and Biochemistry
Expression and Characterization of P97

8) Kailey DeGeorge, Biological Sciences (Summer Scholars) (University of Delaware)
Anja Nohe, Biological Sciences,
Optimizing the Concentration of Peptide CK2.1 for Chondrogenesis in Primary Cells from Patients with Osteoarthritis and Osteoporosis

9) Owen Donnelly, Biological Sciences (Summer Scholars) (University of Delaware)
K. Wommack, Plant and Soil Sciences
Enterobacteria phage T7 DNA Polymerase I point mutation greatly affects enzyme activity

10) Melissa Grogin, Biological Sciences (Summer Fellows) (University of Delaware)
Curtis Johnson, Biomedical Engineering
A Custom Carbon Filament Bite-Bar Enhances Signal-to-Noise Ratio in Preclinical Magnetic Resonance Elastography Scanning Using a 9.4T Bruker Scanner

11) Austin Jensen, Biological Sciences (NSF Award #2040346 & USDA Award #2022-67012-36840) (University of Delaware)
Ashley Hostetler, USDA NIFA Postdoctoral Fellow UD Sparks Lab Department of Plant and Soil Sciences
Erin Sparks, Delaware Biotechnology Institute, Department of Plant and Soil Sciences
Characterization of brace root development in Sorghum bicolor x Sorghum propinquum RIL population

12) Adam Kerzner, Biological Sciences (Summer Scholars) (University of Delaware)
Ramona Neunuebel, Biological Sciences

Characterizing PIP-binding Legionella Pneumophila effector proteins using Halo-tag and GFP constructs

13) McKenna Millar, Biological Sciences (Summer Scholars) (University of Delaware)
Jessica Tanis, Biological Sciences
Impact of Vitamin B12 on Amyloid-Beta Proteotoxicity

14) Christina Natalini, Biological Sciences (NSF Project WiCCED) (University of Delaware)
Thomas Hanson, Marine Science and Policy
Discovering Diversity in Delaware

15) Krisha Parekh, Biological Sciences (Summer Scholars) (University of Delaware)
Jessica Tanis, Biological Sciences,
Investigating the effects of stam-1 on extracellular vesicle biogenesis

16) Esha Patlola, Biological Sciences (Summer Scholars) (University of Delaware)
Amber Krauchunas, Biological Sciences
Characterization of a mutation in C. elegans

17) Alyssa Perrin, Biological Sciences (Summer Scholars) (University of Delaware)
Jeremy Bird, Biological Sciences
Adapting a ppGpp Biosensor To Alternative E.coli Strains

18) Donna Price, Biological Sciences (Summer Scholars) (University of Delaware)
Molly Sutherland, Biological Sciences,
Engineering Single Amino Acid Cysteine Variants to Investigate the Heme Receptor Domain for System I Bacterial Cytochrome c Biogenesis

19) Nikolaos Rafalidis, Biological Sciences (McNair Scholars Program) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
CodonBERT: A Novel Machine Learning Approach to Improve Protein Semantic Understanding

20) Krisztina Sershen, Biological Sciences (Summer Scholars) (University of Delaware)
Deni Galileo, Biological Sciences

Flow Cytometry Analysis of the Differentiation of Stem Cells Using Staining Procedures with Various Markers

21) Spencer Toth, Biological Sciences (Summer Scholars) (University of Delaware)
Eric Wommack, Plant and Soil Sciences,
Jeffry Fuhrmann, Plant and Soil Sciences
Genomic similarities reflect infectivity patterns in Bradyrhizobium rhizobacteriophage

22) Amberly Tran, Biological Sciences (Summer Scholars) (University of Delaware)
Mona Batish, Biological Sciences
The role of cyclic-di AMP in the regulation of Staphylococcus aureus

23) Sophia Vrh, Biological Sciences (Graduate College) (University of South Carolina)
Mi-Ling Li, Earth Sciences, Water Sciences, and Policy
Assessing Methylmercury Biomagnification in the Delaware Bay Food Web

24) Zachary Waterman, Biological Sciences (Summer Scholars) (University of Delaware)
Deni Galileo, Biology
Assessment of Small Molecule Inhibitors on Glioblastoma Cell Invasiveness in an Ex Vivo Brain Slice Culture System

25) Hannah Weile, Biological Sciences (Summer Scholars) (University of Delaware)
Jeremy Bird, Department of Biological Sciences
The Use of Type III-A CRISPR-Cas Systems to Determine Sequence Importance in E. coli's Defense Against T4 Phage

26) Derek Wu, Biological Sciences (Summer Scholars) (University of Delaware)
Jennifer Biddle, Marine Sciences
Recovery and identification of ancient DNA from deep sea J-Anomaly Ridge & Newfoundland Ridge sediment cores

27) Mckenzie Yurcaba, Biological Sciences (Delaware INBRE) (Delaware State University)
Scott Siegel, ChristianaCare Helen F. Graham Cancer Center and Research Institute

Deconstructing a hot spot of advanced breast cancer among younger women in Middletown: An exploratory study on root causes

28) Paul Schultz, Biological Sciences BA (McNair Scholars Program) (University of Delaware)
Lisha Shao, Biological Sciences
Social Density and Feeding Behavior in Drosophila melanogaster

29) Nikolas Rafailidis, Biological Sciences (McNair Scholars Program) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
CodonBERT: A Novel Machine Learning Approach to Improve Protein Semantic Understanding

30) Sana Patil, Human Physiology (Summer Scholars Program) (University of Delaware)
Reid Nichols, Orthopedics, Nemours A.I. Dupont Hospital for Children
Chris Church, Orthopedics, Nemours A.I. Dupont Hospital for Children
Health-Related Quality of Life in Ambulatory Children with Physical Disabilities

31) Rachel Wang, Neuroscience (Summer Fellows) (University of Delaware)
Jessica Tanis, Biological Sciences
Protective effects of vitamin B12 on Aβ-induced chemotaxis defects in C. elegans

32) Daivik Arora, Biology (Delaware INBRE) (University of Delaware)
Austin Keeler, Biology
TBD

33) Abram Banoub, Biology (Delaware INBRE) (University of Delaware)
Michele Lobo, Physical Therapy, University of Delaware
Julie Orlando, Physical Therapy
The Effects of Play Education on Infant Positioning Using a Smart Garment: A Randomized Control Trial

34) Victoria Barbone, Biology (Delaware INBRE) (Delaware Technical Community College)
Shawn Polson, Depts. of Computer & Information Sciences, Plant & Soil Sciences, Biological Science

Biochemical properties of helicase types are predictive of marine phage infection strategy

35) Emma Bertolino, Biology (Delaware INBRE) (University of Delaware)
Arit Ghosh, Delaware Biotechnology Institute
Multiparametric flow cytometry panels for analyses of whole blood samples as a tool for drug screening and immunotherapy-based applications

36) Heather Boliver, Biology (University of Delaware)
Sadia Islam
The Role of Non-Muscle Myosin IIA (NMIIA) in Lens Epithelial Cell Shape Change

37) Katie Bushong, Biology (Delaware INBRE) (Wilmington University)
Nancy Lennon, Nemours Childrens Hospital,
Early Physical Therapy and Mobility Outcomes in Youth with Cerebral Palsy who Undergo High Burden Multi-Level Surgery

38) Austin Chambers, Biology (Delaware INBRE) (Delaware Technical Community College)
Clara Chan, College of Earth, Ocean and Environment
Quantifying Growth of an Iron Oxidizer and Building Tools to Find Functional Genes

39) Maria Chihuahua, Biology (Delaware INBRE) (Delaware Technical Community College)
Velia Fowler, Biology
TBD

40) Gabriel DaSilva, Biology (Delaware INBRE) (University of Delaware)
Michael Crossley, Entomology and Wildlife Ecology
TBD

41) Sarah Garner, Biology (University of Delaware) (Delaware INBRE)
Molly Sutherland, Biology
Analysis of a Putative Heme Receptor Domain for Bacterial Cytochrome c Biogenesis

42) Anh Ho, Biology (University of Delaware) (Delaware INBRE)
Justin Parrino, Biology

–14–

TBD

43) Simran Kaur, Biology (Delaware INBRE)
(University of Delaware)
Amiee Jaramillo-Lambert, Biological Sciences
Characterization of nurf-1 mutations in suppressing of top-2-induced embryonic lethality in C. elegans

44) Areli Martinez, Biology (Delaware INBRE)
(Delaware State University)
Carissa Baker-Smith, Nemours Children's Hospital
TBD

45) Jack Mason, Biology (Delaware INBRE)
University of Delaware)
Velia Fowler, Biological Sciences
Investigating the protein expression of a novel short isoform of Tensin 1 in mouse tissue

46) Dexter Matthews, Biology (Delaware INBRE)
(University of Delaware)
Chi Keung Lam, Biological Sciences
The Effect of Hsp90b Knockout on Murine Myocardial Mitochondria

47) Mason Meadows, Biology (Delaware INBRE)
(Delaware Technical Community College)
Juan Perilla, Chemistry & Biochemistry
Developing immersive experiences into the world of pathogens: from atomistic motions to biological phenotypes

48) Karen Melo-Rubio, Biology (Delaware INBRE)
(University of Delaware)
Jessica Tanis, Biological Sciences
How Nicotinamide Riboside affects rate of paralysis in c. elegans

49) Chloe Mirack, Biology (Delaware INBRE)
(University of Delaware)
Justin Parreno, Biological Sciences
Decreased Substrate Stiffness Prevents Epithelial-to-Mesenchymal Transition in Lens Cells

50) Zaina Punter, Biology (Delaware INBRE)
(Delaware Technical Community College)

RAD51 Superfamily and RecA-like Superfamily II Helicases as Indicators of Phage Infection Strategy

51) Alison Ramirez, Biology (Delaware INBRE)
(University of Delaware)
Shawn Polson, Biological Sciences
Barbra Feller
RAD51 Superfamily and RecA-like Superfamily II Helicases as Indicators of Phage Infection Strategy

52) Caitlyn Zeller, Biology (Delaware INBRE)
(University of Delaware)
John Jungck, Department of Mathematics and Department of Biology
Origami of Viral Capsids

53) Medha Annam, Biology / Liberal Studies - Medical Scholar Concentration (Delaware INBRE) (University of Delaware)
Heather Bittner Fagan, Family and Community Medicine, ChristianaCare
Karen Antell, Family and Community Medicine, ChristianaCare
Bringing Light: Opportunities Missed in Breast Cancer

54) Julia Rusinski, Biology/Psychology (Delaware INBRE) (University of Delaware)
Lisha Shao, Biological Sciences
Investigating the Role of Pepck2 in Feeding
Behaviors of Female Virgin Drosophila melanogaster in Various Social Densities

55) Rohith Maraka, Quantitative Biology (Summer Scholars) (University of Delaware)
Curtis Johnson, Biomedical Engineering
Accurate generation of 3D structural brain stiffness maps using Generative Adversarial Networks

56) Mariela Alfaro Garcia, Microbiology (Iowa State University)
Erin Sparks, Department of Plant and Soil Sciences, University of Delaware
Jingjing Tong, Department of Plant and Soil Sciences
Establishment of a PEG-mediated Maize Root Protoplast Transformation System

57) Ishika Sharma, Molecular Biology Biotechnology (Delaware INBRE) (University of Delaware)
Vincenzo Ellis, Entomology and Wildlife Ecology
Selective Whole Genome Amplification Shows Potential for Sequencing Avian Malaria Pathogen Genomes

58) Maliyah Long, Forensic Biology (Delaware INBRE) (Delaware State University)
Amber Krauchunas, Biological Sciences
Characterization of F57A8.6; a DX domain Protein

CHEMISTRY

59) Elizabeth Bodio, Chemistry (University of Delaware)
Joel Rosenthal, Chemistry and Biochemistry
Synthesis of Extended Isocorroles as a Photosensitizer for Photodynamic Therapy

60) Daniel Chaykin, Chemistry (Stony Brook University)
Koffi Pierre Yao, Mechanical Engineering
Reducing or Replacing NMP as Solvent in Battery Electrode Slurry Preparations

61) Alondra Diaz-Pena, Chemistry (University of Puerto Rico at Rio)
Emil Hernández-Pagán, Chemistry and Biochemistry, University of DelawareJoel Rosenthal, Chemistry and Biochemistry,
Surface Plasmon-Assisted Peractivation of Nitrile Functional Groups

62) Jacob Letnaunchyn, Chemistry (University of Delaware)
Donald Watson, Department of Chemistry and Biochemistry, University of Delaware
Jessica Sampson, Department of Chemistry and Biochemistry
Enhancing Reproducibility in Organic Chemistry and Analytical Data Comparisons

63) Kaitlin Lupinacci, Chemistry (Summer Fellows) (University of Delaware)
Catherine Grimes, Chemistry/Biochemistry
Automation of Mature PG Synthesis

64) Julian Novin, Chemistry (Delaware INBRE) (University of Delaware)
Erin Mulhearn, Chemistry, University of Delaware
Ariel Alperstein, Chemistry
Investigating protein-plastic interactions: visualization and analysis of the protein corona

65) Andrew Richards, Chemistry (Summer Scholars) (University of Delaware)
Donald Watson, Chemistry and Biochemistry
Synthesis of Anti-Trisubstituted Vinylsilanes via Palladium Catalysis

66) Kennith Ross, Chemistry (Summer Scholars) (University of Delaware)
Mary Watson, Department of Chemistry and Biochemistry
Synthesis of Alkynylated Benzisoxazolines For Copper-Catalyzed Kinetic Resolution

67) Kelsey Staniec, Chemistry (Project WiCCED) (University of Delaware)
Wei-Jun Cai, Marine Science
Developing a Relationship Between Calcium Ion Concentration [Ca 2+] and Salinity in Atlantic Coastal Waters

68) Sarah Tuoni, Chemistry (Summer Scholars) (University of Delaware)
Mary Watson, Chemistry and Biochemistry
Synthesis of Tertiary Benzylic Pivalate Substrates for Stereospecific Borylation Optimization

69) Jessica Williams, Chemistry (CHARM REU) (Johns Hopkins University)
Thomas Epps, Chemical Engineering, University of Delaware
LaShonda Korley, Materials Science & Engineering
Lignin-derivable non-isocyanate polyurethane-epoxy hybrid thermosets with tunable thermal properties

70) Carina Eisenberg, Chemistry (CANR Summer Scholars) (New York University)
Angelia Seyfferth, PLSC
Cadmium Levels Across Spinach Varieties

BIOCHEMISTRY

71) Christopher Blanda, Biochemistry (University of Delaware)
Clara Chan, Earth Sciences
Quantifying iron oxidase expression in microcosm experiments with RT-qPCR

72) Zyairr Imond, Bissoon-Gibson, Biochemistry (University of Delaware)
Jazzlyn Jones, Applied Molecular Biology & Biotechnology (University of Delaware)
Esther Biswas, Medical and Molecular Sciences
Retinal Transporter ABCA4 and Cloning of its Extracellular Domain ECD1

73) Liam Dress, Biochemistry (Summer Scholars) (University of Delaware)
Joel Rosenthal, Chemistry and Biochemistry
Synthesis and Purification of Novel Non-Aromatic Non-Cyclic Tetrapyrrolic Derivatives for Use in Photodynamic Therapy

74) Montana Edwards, Biochemistry (Summer Scholars) (University of Delaware)
Donald Watson, Chemistry and Biochemistry
Asymmetric Synthesis of 3,5-Substituted Hydantoins via an aza-Heck Cyclization

75) Jeremiah Epting, Biochemistry (Summer Scholars) (University of Delaware)
Catherine Grimes, Chemistry and Biochemistry
Evaluating the Promiscuity of Peptidoglycan Biosynthetic Enzymes to Optimize the Incorporation of 3 Azide N-Acetyl Muramic Acid (NAM) Probes in Biological Systems

76) Emma Hudgins, Biochemistry (Summer Scholars) (University of Delaware)
Ibra Fancher, Kinesiology and Applied Physiology
Hyperglycemia Degrades the Endothelial Glycocalyx Through a Decrease in Syndecan-1

77) Sarah Janney, Biochemistry (Summer Scholars) (University of Delaware)
Joseph Fox, Chemistry and Biochemistry,
Late Stage Functionalization of GalNAc Tetrazine Probes for Real-time Live Cell Labeling

78) Blake Kiefer, Biochemistry (CHARM REU) (Washington & Jefferson College)
Chitraleema Chakraborty, Materials Science and Engineering
Obtaining 2D Semiconductors

79) Connor Kosinski, Biochemistry (Summer Scholars) (University of Delaware)
Neal Zondlo, Chemistry & Biochemistry
Effects of Serine and Threonine Phosphorylation on Serine-Proline cis-trans Isomerism

80) Joseph Mild, Biochemistry (Summer Scholars) (University of Delaware)
Marco Messina, Chemistry & Biochemistry
Boron-rich cluster templates for the facile synthesis of 3-dimensional polymer materials

81) Phillip Moquin, Biochemistry (Summer Scholars) (University of Delaware)
Zhihao Zhuang, Chemistry and Biochemistry
Modification of a Chemical Linker via the Finkelstein Reaction Mechanism

82) Sophie Olson, Biochemistry (Summer Scholars) (University of Delaware)
Jeffrey Mugridge, Chemistry and Biochemistry
Determining TRMT1-Protein Interaction Partners Through Proximity Labeling

83) Harrison Oven, Biochemistry (Summer Scholars) (University of Delaware)
Neal Zondlo, Chemistry & Biochemistry
Local Organization at Ser-Pro and pSer-Pro Sequences: Stabilization of the cis-amide via C—H/O Interaction

84) Liam-Michale Sandles, Biochemistry (Summer Scholars) (University of Delaware)
Catherine Grimes, Chemistry & Biochemistry
Implementation of a Leaky Outer Membrane E. Coli Cell Line for Characterization of Peptidoglycan Recycling Pathways and Improved Cell Wall Labeling

85) Nicole Wang, Biochemistry (Delaware INBRE) (University of Delaware)
Hank Chen, Radiation Oncology, ChristianaCare
Laura Doyle, Radiation Oncology, ChristianaCare

Lessons Learned from a Tragedy: Quality Assurance for Dose Delivery in Radiation Therapy

86) Caroline Zu, Biochemistry (Center for Plastics Innovation) (Purdue University)
Mark Blenner, University of Delaware
Discovery and characterization of polyethylene degrading microbes from the gut of the yellow mealworm

POSTER SESSION III 12:00 - 1:30PM

(Chemical and Biochemical Engineering, Civil and Environmental Engineering, Mechanical Engineering)

GENETICS

1) Saffiya Haider, Genetics/Genomics (CANR Summer Institute) (University of Texas Austin)
Irene Ikiriko, Sparks Lab, University of Delaware
Erin Sparks, Sparks Lab, University of Delaware
Linking Biomechanics To Cellular-Scale Signaling

CHEMICAL AND BIOMOLECULAR ENGINEERING

2) Jadira Fuentes Bautista, Chemical Engineering (NSF CAREER) (University of Delaware)
Identifying essential native protein Interactors of Clostridium butyricum Argonaute

3) Mahdi Al Ismail, Chemical Engineering (University of Delaware)
Tejas Goculdas, Chemical and Biomolecular Engineering, University of Delaware
Sunitha Sadula, Chemical and Biomolecular Engineering
Scaling-up Aldol Condensation Reaction in Flow Reactor for Branched Bio-Lubricant Base Oil Production

4) Aravind Arunachalam, Chemical Engineering (ARC Grant from the Delaware Bioscience Center for Advanced Technologies) (University of Delaware)
Eleftherios Papoutsakis, Chemical and Biochemical Engineering
Manipulating Electron and Nitrogen Flux to Improve Product Selectivity and pH Control in a Syntrophic Clostridia Consortium

5) Grace Azevedo, Chemical Engineering (Summer Scholars) (University of Delaware)
Emily Day, Biomedical Engineering
Biomimetic Nanoparticles for the Homotypic Targeting of Triple-Negative Breast Cancer

6) Altaf Bacchus, Chemical Engineering (Summer Scholars) (University of Delaware)
Millicent Sullivan, Chemical and Biomolecular Engineering
Hydrogel Microparticles for MMP-Mediated Gene Delivery to Chronic Wounds

7) Xiomaris Baez-Santiago, Chemical Engineering (Center for Plastics Innovation) (University of Puerto Rico at Mayaguez)
Mary Watson, Department of Chemistry and Biochemistry, University of Delaware
Pankti Mehta, Department of Chemistry and Biochemistry
Post-polymerization Functionalization of PMMA

8) Paige Bastek, Chemical Engineering (Summer Scholars) (University of Delaware)
Eleftherios Papoutsakis, Chemical and Biomolecular Engineering
Exploring Impact of Hydrogen Gene Engineering, Cell Density, and Fermentation Mode on Isopropanol Production and Testing Fluorescence Based Population Tracking in a Clostridium Coculture

9) Gavin Brownstein, Chemical Engineering (Center for Composite Materials) (University of Delaware)
Eleftherios Papoutsakis, Chemical and Biomolecular Engineering
Exploring Impact of Hydrogen Gene Engineering, Cell Density, and Fermentation Mode on Isopropanol Production and Testing

Fluorescence Based Population Tracking in a Clostridium Coculture

10) Joshua Bryan, Chemical Engineering (Center for Plastics Innovation) (University of Delaware)
Roman Dickey, Department of Chemical and Biomolecular Engineering
Development of Biocatalytic Cascade for the Valorization of Plastic Deconstruction Products

11) Anoushka Buddhikot, Chemical Engineering (Summer Scholars) (University of Delaware)
Aditya Kunjapur, Chemical and Biomolecular Engineering
Determining Optimal Conditions for in vitro Threonine Transaldolase Activity

12) Abigail Conklin, Chemical Engineering (University of Delaware)
Munetaka Kubota
Effects of Recycling Processes on Carbon Fiber Strength and Adhesion with PMMA

13) Mattherw Conlon, Chemical Engineering (Center for Composite Materials) (University of Delaware)
Yeonsu Kwak, Chemical Engineering
Kewei Yu, Chemical Engineering
Dionisios Vlachos, Chemical Engineering,
Electrified heating properties of carbon supports for propane dehydrogenation

14) Andrew Dalton, Chemical Engineering (Summer Scholars) (University of Delaware)
Joseph Dougherty, Chemical Engineering (University of Delaware)
Eleftherios Papoutsakis, Chemical and Biomolecular Engineering
Bioreactor Development for Bioenergy Production from an Engineered Mixotrophic Consortium for Enhanced CO2 Fixation

15) Defne Elbeyli, Chemical Engineering (Summer Scholars) (University of Delaware)
Aditya Kunjapur, Chemical and Biomolecular Engineering
Synthetic Auxotrophy as A Pathway for Obligate Commensialism

16) Jake George, Chemical Engineering (Summer Scholars) (University of Delaware)

Norman Wagner, Department of Chemical and Biomolecular Engineering
Ted Egnaczyk, Department of Chemical and Biomolecular Engineering
Effects of Curing Conditions on Material Properties of BP-1 Lunar Regolith Simulant Geopolymer Binders

17) Nicole Gill, Chemical Engineering (Summer Scholars) (University of Delaware)
Catherine Fromen, Chemical Engineering
Survival Analysis and Identification of Pro-Survival Signal From Macrophages Treated With PEG-Based Nanoparticles

18) Shirly Gottieb, Chemical Engineering (Summer Fellows) (University of Delaware)
Stephen Sidebotham, History
Engineering Yeast to produce human glycoproteins

19) Rohan Goyal, Chemical Engineering (CHARM REU) (University of Massachusetts Amherst)
Lars Gundlach, Department of Chemistry and Biochemistry
Synthesizing Au/NiO Nano-Heterostructures for Effective Hot Charge Carrier Harvest

20) Guillen Kuroki, Chemical Engineering (University of Delaware) (Center for Composite Materials)
TBD

21) Jaylen Harrison, Chemical Engineering (Summer Scholars) (University of Delaware)
Ross Klauer, Biomolecular Engineering, University of Delaware
Darien Nguyen, Chemical Engineering
Effect of plasma oxidation on plastics degradation by the yellow mealworm and their gut microbes

22) Lila Hintz, Chemical Engineering (Summer Scholars) (University of Delaware)
Norman Wagner, Chemical & Biomolecular Engineering
Colloidal Stability Analysis in the Formulation Process of the Type II Diabetes Drug

23) Tiffany Jung, Chemical Engineering (Summer Scholars) (University of Delaware)

William Hartt, Chemical Engineering,
Alexandra Bayles, Chemical Engineering
*Computational Modeling of Glycerol-Water
Solutions in Laminar Flow Through SMX
Mixers*

24) Ashley Kalan, Chemical Engineering (Delaware
INBRE) (University of Delaware)
Kevin Solomon, Chemical & Biomolecular
Engineering
*Engineering Prokaryotic Argonautes for
Transcriptional Regulation*

25) Olivia Kelly, Chemical Engineering (Summer
Scholars) (University of Delaware)
Thomas H., III Epps, Chemical Engineering
*Polymer blend electrolytes with enhanced room
temperature conductivity for lithium-ion
batteries*

26) George Lauri, Chemical Engineering (Summer
Scholars) (University of Delaware)
Thomas H., III Epps, Chemical & Biomolecular
Engineering
*Synthesis and Characterization of Biomass-
Derivable Ionic Liquids*

27) Caleb Lavallee, Chemical Engineering
(CHARM REU) (University of Minnesota:
Twin Cities)
Xinqiao Jia, Materials Science and Engineering
*Functionalizing P622-N-Cys with Tetrazine and
trans-cyclooctene for the use of interfacial
bioorthogonal cross-linking*

28) Caleb Lawson, Chemical Engineering (Summer
Scholars) (University of Delaware)
Mark Blenner, Chemical and Biomolecular
Engineering
*Toward a Serine Integrase Mediated Integration
System in Yarrowia lipolytica*

29) Hayden Marquard, Chemical Engineering
(Center for Composite Materials) (University of
Delaware)
Erik Thostenson, Mechanical Engineering
Dae Han Sung, Engineering
TBD

30) Erin McKnight, Chemical Engineering
(University of Delaware) (Center for Composite
Materials)
Thomas Cender, Center of Composite Materials
*Microstructure Evolution in Forming Aligned
Discontinuous Fiber Composites*

31) Miyu Mudalamane, Chemical Engineering
(Summer Scholars) (University of Delaware)
Aditya Kunjapur, Chemical & Biomolecular
Engineering
*An Improved Strain for Aromatic Aldehyde
Stability: Recoded RARE*

32) Jesal Patel, Chemical Engineering (Summer
Scholars) (University of Delaware)
Kevin Solomon, Chemical and Biomolecular
Engineering, University of Delaware
Akash Vaidya, Chemical and Biomolecular
Engineering
*Surface Functionalization of Barley Stripe
Mosaic Virus (BSMV) Virus-Like Particles
(VLPs)*

33) Alexander Perros, Chemical Engineering
(National Science Foundation (NSF) Future
Manufacturing Research Grant (FMRG))
(University of Delaware)
Sunitha Sadula, Chemical Engineering,
University of Delaware
Dionysios Vlachos, Chemical Engineering
*Synthesis and Property Evaluation of Branched
Bio-Lubricants*

34) Andy Redder, Chemical Engineering (Summer
Fellows) (University of Delaware)
Feng Jiao, Chemical Engineering
*Earth-Abundant Oxygen Evolution Catalysts for
Water Electrolysis*

35) Elizabeth Rock, Chemical Engineering
(University of Delaware)
Thomas Cender, Center for Composite
Materials, University of Delaware
Steve Sauerbrunn, Center for Composite
Materials
*Resin Cure Kinetics and Exploring the
Possibilities of Material Degradation*

36) Balamurugan Saravanan, Chemical Engineering
(Summer Fellows) (University of Delaware)

Mark Blenner, Biomolecular and Chemical Engineering
Advances in Production of rAAV Through Mutations to the Cap Gene Sequence

37) Brian Sipko, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical and Biomolecular Engineering
Secretion and Purification of the Hydrophobin, RodA

38) Gerard Skourlis, Chemical Engineering (Center for Composite Materials) (University of Delaware)
Jack Gillespie, Center for Composite Materials
Lukas Fuessel, Center for Composite Materials
Application of UV-Curing Resins for In-Place Pipe Repair

39) Rena So, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical and Biomolecular Engineering
Development of an Accelerated Platform for Vector Optimization using RMCE Facilitated Mini-pool Cloning

40) Vishal Somasundaram, Chemical Engineering (Summer Scholars) (University of Delaware)
Priyanka Nain, Department of Chemical and Biomolecular Engineering
Aditya Kunjapur, Department of Chemical and Biomolecular Engineering
Developing a steady state growth model for epithelial cancer cells and biocontained E.coli DEP cells

41) Abigail Spangler, Chemical Engineering (Summer Scholars) (University of Delaware)
Aditya Kunjapur, Chemical and Biomolecular Engineering
Investigating a phenylserine dehydratase from R. pickettii and aminotransferase from E. coli for nonstandard amino acid production

42) Kaveri Srivastava, Chemical Engineering (Summer Scholars) (University of Delaware)
Arthi Jayaraman, Chemical Engineering
Computational Studies of the Effect of Hydrogen Bonding on Ordering of Block Polymers

Towards Designing High Thermal Conductivity Materials

43) Zachary Stevenson, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical & Biomolecular Engineering
Flocculation of Microplastics in Aqueous Solutions Using Hydrophobins

44) Victoria Thompson, Chemical Engineering (CHARM REU) (University of Florida)
Kristi Kiick, Materials Science and Engineering
Genetic Fusion of Intrinsically Disordered Polypeptides Affords Thermoresponsiveness to Coiled Coil Bundlemers

45) Daniel Tortorella, Chemical Engineering (Summer Scholars) (University of Delaware)
Svilen Bobev, Chemistry and Biochemistry,
Various Methods of Synthesis and Analysis of Undiscovered Zintl Phases

46) Hanna White, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, ChemicalEngineering
Microplastic Removal via Microbial Flocculation

47) Mekhi Williams, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical and Biomolecular Engineering
Using DNS to Design a High-Throughput Assay for Plastic-Degrading Enzymes

48) Kayla Wolf, Chemical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical & Biomolecular Engineering
Developing Targeted Epigenetic Modifications to Induce a Biomanufacturing Stress Tolerance in CHO Cells

49) Julia Wolfe, Chemical Engineering (Summer Scholars) (University of Delaware)
Chris Cloxin, Chemical Engineering
Mammalian Cell Synthetic Biology for Advanced Biomanufacturing

50) Qi Zhang, Chemical Engineering (Summer Scholars) (University of Delaware)
April Kloxin, Chemical & Biomolecular Engineering, University of Delaware
Eric Furst, Chemical & Biomolecular Engineering
Probing Remodeling of Responsive Synthetic Extracellular Matrices with Nanoscale Characterization Techniques to Expand the 3D Cell Culture Toolbox

51) Sabrina Liskey, Chemical Engineering (CHARM REU) (University of Virginia)
Darrin Pochan, Materials Science and Engineering
Effect of Varying Solution Conditions and External Residues on Nanoparticle Assembly of Peptide Bundles

52) Taras Nagornyy, Chemical Engineering (National Science Foundation Award #2050884) (University of Massachusetts Amherst)
Christopher Kloxin, Chemical and Biomolecular Engineering
Covalent Adaptable Network Materials

53) Natassja Corrado, Chemical Engineering (National Science Foundation, Award Number MCB-20270) (University of Delaware)
Aditya Kunjapur, Chemical and Biomolecular Engineering
Optimization of Library Generation Protocols for Fluorescence-Activated Cell Sorting

54) Joshua Whitehead, Chemical Engineering (NSF) (University of Delaware)
Riley McKeon, Biochemistry, University of Delaware
Jodi Hadden-Perilla, Chemistry and Biochemistry
Characterizing Protein-Fluorophore Interaction in 3- Versus 4- Point Explicit Solvent Models

55) Ethan Speerli, Energy & Environmental Policy (Delaware Energy Institute (DEI) and the National Science Foundation (NSF)) (University of Delaware)
Dionisios Vlachos, Chemical & Biomolecular Engineering
Investigation of PET Recycling Using Long-Chain Oligomers and Biomass-Derived Monomers

56) Robyn Logue, Engineering Physics (Delaware INBRE) (Delaware State University)
Kevin Solomon, Department of Chemical and Bimolecular Engineering, University of Delaware
Akash Vaidya, Department of Chemical and Bimolecular Engineering
In Vitro Assembly of Barley-Stripe Mosaic Virus-Like Particles

57) Helen Xiang, High School Intern (Catalysis Center for Energy Innovation (CCEI) (Charter School of Wilmington)
Dianiosis Vlachos, Chemical and Biomolecular Engineering
A Kinetic Study of the Hydrolysis of Cellulose to Glucose in Molten Salt Hydrate Media

58) Maria Carattini, Engineering Physics (CHARM REU) (Delaware State University)
Joseph Fox, Chemistry and Biochemistry
Mechanistic Study of the Activation of Rapid Bioorthogonal Chemistry via Photocatalytic Oxidation of Dihydrotetrazine to Tetrazine

MECHANICAL ENGINEERING

59) Hanaa Abdallah, Mechanical Engineering (Summer Scholars Program) (University of Delaware)
Dawn Elliott, Biomedical Engineering
Automating Post-Processing of Lumbar Disc MRI Segmentation

60) Nicolas Bailey, Mechanical Engineering (Summer Scholars) (University of Delaware)
Joseph Feser, Mechanical Engineering
Using Time-Domain Thermoreflectance to Measure the Thermal Resistance of Microscopic Interfaces

61) Cameron Baines, Mechanical Engineering (Summer Scholars) (University of Delaware)
X. Lucas Lu, Mechanical Engineering
Effect of Triamcinolone Treatment on the Mechanical Properties of Cartilage

62) Andrew Brown, Mechanical Engineering (University of Delaware) (Center for Composite Materials)
Thomas Cender, Center for Composite Materials
Rheology of Thermosetting Resins During Cure for Process Modeling of Composite Materials

63) Jomar Camacho Garay, Mechanical Engineering (University of Puerto Rico Mayagüez)
TBD

64) Ben Caro, Mechanical Engineering (Center for Composite Materials) (University of Delaware)
Matthew Young, Mechanical Engineering, University of Delaware
Jared Wierzbicki, Biomedical Engineering, University of Delaware
Herbert Tanner, Mechanical Engineering, University of Delaware
Jacob Robinson, Mechanical Engineering
AUTOMATED MANUFACTURING FOR AUTONOMOUS SYSTEMS SOLUTIONS (AMASS)

65) Isaac Chandler, Mechanical Engineering (Summer Scholars) (University of Delaware)
Tyler Van Buren, Mechanical Engineering
Bio-Inspired Unmanned Underwater Vehicles

66) Owen Conway, Mechanical Engineering (Summer Scholars) (University of Delaware)
Xin Lu, Mechanical Engineering
Micro-Indentation Mechanical Testing of Cartilage

67) Kaitlyn Dohn, Mechanical Engineering (Summer Scholars) (University of Delaware)
X. Lucas Lu, Mechanical Engineering
Spontaneous Calcium Signaling Pathways of Chondrocytes in Human Osteoarthritis Joints

68) Nicholas Duncan, Mechanical Engineering (University of Delaware) (Center for Composite Materials)
Thomas Cender, Center for Composite Materials
Digital Image Correlation Calibration for High Deformation

69) Owen Ferrone, Mechanical Engineering (Center for Composite Materials) (University of Delaware)
Thomas Cender, Center for Composite Materials
Stretch Forming of Thermoplastic Aligned Discontinuous Fiber Composites: Effects of Environmental Conditions on Forming Optimization

70) Kevin Graziose, Mechanical Engineering (Summer Scholars) (University of Delaware)
Joseph Kuehl, Mechanical Engineering
High Enthalpy Effects on Hypersonic Boundary-Layer Transition

71) Jiro Guillen, Mechanical Engineering (Summer Scholars) (University of Delaware)
Matthew Yezek, Mechanical Engineering (University of Delaware)
Shashank Sharma, CCM
FORMING CELL FOR TUFF THERMOSET PART FABRICATION

72) Het Himanshu Patel, Mechanical Engineering (Summer Scholars Program) (University of Delaware)
Zubaer Hossain, Mechanical Engineering
Manufacturing Lightweight Nanocomposites

73) Prasanna Krishnamoorthy, Mechanical Engineering (Summer Scholars Program) (University of Delaware)
Tyler Van Buren, Mechanical Engineering
Time-Varying Torsional Stiffness Modulation for Bio-Inspired Hydrofoil Propulsors

74) Noah Leslie, Mechanical Engineering (Summer Scholars Program) (University of Delaware)
Sambeeta Das, Mechanical Engineering
Microrobots for Monitoring and Treating Sickle-Cell Induced Ischemia

75) Robert Martin, Mechanical Engineering (Center for Composite Materials) (University of Delaware)
Erik Thostenson, Mechanical Engineering
Dae Han Sung, Engineering
TBD

76) Connor McCleery, Mechanical Engineering (Summer Scholars) (University of Delaware)
Bingqing Wei, Mechanical Engineering

Electrochemical behavior of ferroelectric enhanced Li-S batteries of different cathode composition

77) Russel Perdue, Mechanical Engineering (Delaware INBRE) (University of Delaware)
Dawn Elliott, Biomedical Engineering
TBD

78) Tyler Phommachanh, Mechanical Engineering (Center for Composite Materials) (University of Delaware)
Sagar Doshi, Center for Composite Materials
Joseph Dietzel, Center for Composite Materials
Investigation Of Tensile Strength Of UHMWPE Fibers Extracted From Composite Panels

79) Hemelis Reyes, Mechanical Engineering (Summer Scholars) (University of Delaware)
Robert Opila, Dupont
Interdigitated Back Contact Solar Cell Using Ink-Jet Printing

80) Kamya Taneja, Mechanical Engineering (Summer Scholars) (University of Delaware)
Mahya Ghardehari, Mathematical Sciences
Understanding the Left Regular Bundle of Finite Groupoids

81) Gianluca Tiso, Mechanical Engineering (Center for Composite Materials) (University of Delaware)
Dan Han Sung, Engineering
TBD

82) Miguel Vasquez, Mechanical Engineering (Summer Scholars) (University of Delaware)
Fabrizio Sergi, Mechanical/Biomedical Engineering
Validating a Method for the Estimation of Propulsive Ground Reaction Force from Healthy Individuals at Constant Walking Speeds

83) Charles Whealton, Mechanical Engineering (Center for Composite Materials)
Thomas Cender, Center for Composite Materials
Characterization of Material Response of Highly Aligned Discontinuous Fiber Composites During Loading

84) Kevin Wolynetz, Mechanical Engineering (Delaware INBRE) (University of Delaware)
Elisa Arch, Kinesiology & Applied Physiology
Using Pressure Insoles to Measure In-Shoe Foot Energetics Affected by Shoes and Deformable Foot Orthoses

85) Joseph Yarbrough, Mechanical Engineering (Delaware INBRE) (University of Delaware)
John Jungck, Department of Mathematical Sciences and Department of Biological Sciences
Modeling Expanding Viral Capsids

86) Kayshavi Bakshi, Mechanical Engineering (National Science Foundation Award #2050879) (Arizona State University)
Jovan Tatar, Civil & Environmental Engineering
Investigating The Durability Of Thermoset Resin Under Different Temperature And Saturation Conditions

POSTER SESSION IV 1:45 - 3:15PM

(Psychological & Brain Sciences, Materials Science & Engineering, Electrical & Computer Engineering, CIS, Math and Physics)

COMPUTER ENGINEERING

1) Brandon Bauer, Computer Engineering (UR-ECE REU) (University of Delaware)
Nektarios Tsoutsos, Electrical Engineering
Investigating the Vulnerability of Cyber-Physical Systems to Side Channel Attacks

2) Logan Blackburn, Computer Engineering (Center for Composite Materials) (University of Delaware)
Tom Cender, Center for Composite Materials,
Developing Extractable Tooling to Adapt Bladder Molding of Short Fiber Composites to Create Bent Formations

3) Adam Bourjal, Computer Engineering (Summer Scholars) (University of Delaware)
Chengmo Yang, Computer Engineering

Examining Vulnerabilities in Autonomous Driving Technology

4) Jack Cartwright, Computer Engineering (Summer Scholars Program) (University of Delaware)
Chengmo Yang, Computer Engineering
Discovering Vulnerabilities in Bluetooth Connections via Hijacking Attacks

5) Roberto Alexis Cema Espiritu, Computer Engineering (Columbian Program)
Hung Feng, Computer Engineering
TBD

6) Jhan Carlos Diaz Vidal, Computer Engineering (Columbian Program)
Nektarios Tsoutsos, Computer Engineering
TBD

7) Colby Dolbow, Computer Engineering (Summer Scholars Program) (University of Delaware)
Nathan Lazarus, Computer and Electrical Engineering
Protoyping 3D Printed Components for Power Electronics

8) Noah Durbin, Computer Engineering (Summer Scholars Program) (University of Delaware)
Nathan Lazarus, Electrical and Computer Engineering
3D Printed Electrodes For Pediatric Autoimmune Disease Diagnosis

9) Michael Earley, Computer Engineering (ECE Department) (University of Delaware)
Nathan Lazarus, Electrical and Computer Engineering
3D-Printed Electrodes for Power-Producing Microbial Fuel Cells

10) Mihailo Knezevis, Computer Engineering (Columbian Program)
Chengmo Yang, Computer Engineering
Nektarios Tsoutsos, Computer Engineering
TBD

11) Herissa Monsalud, Computer Engineering (Summer Scholars Program) (University of Delaware)
Hui Fang, Electrical and Computer Engineering

Revamping Disaster Research Database for User Accessibility

12) Oluwatomiwa Morakinyo, Computer Engineering (Summer Scholars) (University of Delaware)
Mohsen Badiey, Electrical Engineering
Underwater Acustics

13) Thomas O'Flynn, Computer Engineering (UR-ECE REU) (University of Delaware)
Rudolf Eigenmann, Electrical and Computer Engineering
Miguel Rosas, Electrical and Computer Engineering
Exploring Performance Optimizations through a Comprehensive Search Space Navigation System

14) Oscar Herman Olaya Guiterrez, Computer Engineering (Columbian Program)
Chengmo Yang, Computer Engineering
TBD

15) Nathaniel Riehl, Computer Engineering (Center for Composite Materials) (University of Delaware)
Vishal Saxena, Electrical and Computer Engineering
Thomas Dillon, Electrical and Computer Engineering
Mark Mirotznik
Automated Test Bed for Passive Millimeter Wave Imaging

16) Michael Schleider, Computer Engineering (Summer Scholars Program) (University of Delaware)
John Shaw, Computer Engineering (Summer Scholars Program) (University of Delaware)
Rocco Dumnich, Electrical Engineering (Summer Scholars Program) (University of Delaware)
Richard Martin, ECE Department
Mohsen Badiey, ECE Department
Project WiCCED

17) Sebastian Torres, Computer Engineering (Summer Scholars) (University of Delaware)
Nectarios Tsoutsos, Computer Engineering
Centralizing 3D Printer Data for Analysis Through iOS Applicatio

18) Matthew Ward, Computer Engineering (UR-ECE REU) (University of Delaware)
Chengmo Yang, Electrical and Computer Engineering
Disrupting the Intelligence of a Machine: Understanding Neural Network Vulnerabilities through Voltage Glitching

COMPUTER SCIENCE

19) John Bean, Computer Science (Delaware INBRE) (University of Delaware)
Logan Hallee, Biomedical Engineering
Jason Gleghorn, Biomedical Engineering
WIPE3D: An Accessible Machine Learning Pipeline for Biomedical Image Segmentation and 3D Reconstruction

20) Devin Cummings, Computer Science (Center for Plastics Innovation) (University of Delaware)
Hui Fang, Department of Electrical and Computer Engineering
Efficient Data Management at CPI

21) Pedro Espinoza, Computer Science (National Science Foundation Award #2050882) (MiraCosta College)
Mark Nejad, Department of Computer and Information Sciences
Enhancing The Grid: Two-Sided Market for Vehicle-To-Grid

22) William Hart, Computer Science (Institute for Public Administration, Biden School) (University of Delaware)
Lori Pollock, Computer Science
Analyzing Amazon Web Service's Serverless Application Latency Times to Study Fluctuations in Cloud Platform Performance

23) Owen He, Computer Science (Summer Scholars) (University of Delaware)
Matthew Mauriello, Computer and Information Sciences
Co Creative AI Character Model Generation

24) Jack Kingham, Computer Science (USDOT Center for Integrated Asset Management for Multimodal Transportation Infrastructure Systems) (University of Delaware)
Shangjia Dong, Civil and Environmental Engineering
Predicting Travel Patterns to Healthcare Facilities for Delaware Communities During Flooding

25) Brendan Lewis, Computer Science (Summer Scholars) (University of Delaware)
John Aromando, Computer & Information Sciences
Assessing the Utility of LLMs in Generating Effective Student Feedback

26) Jingqing Liu, Computer Science (Summer Scholars) (University of Delaware)
Xing Gao, Department of Computer and Information Sciences
Invisible Threats in the Met-Averse: Investigating Roblox's Security Vulnerabilities

27) Michael Lutz, Computer Science (Summer Scholars) (University of Delaware)
Keith Decker, Computer Science
Leveraging Smartwatches to Monitor Physical Activity: A Dashboard for Behavioral Health

28) Usama Mahmood, Computer Science (Summer Scholars) (University of Delaware)
Gonzalo Arce, Electrical and Computer Engineering
HyperHeight Data Cubes: Advancing LiDAR Remote Sensing with Hyper-Spectral Integration

29) Nathan Manning, Computer Science (Summer Scholars) (University of Delaware)
Lauren Rosica, Mathematics, University of Delaware
Nikolas Schonsheck, Mathematics
Tracking Cyclic Features of Neural Coding Using Topological Data Analysis

30) Aaron Oster, Computer Science (Summer Scholars) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
Using Machine Learning for Robust Protein Function Prediction With a Large Language Model

31) Aiden Pape, Computer Science National Science Foundation Award #2050885) (Middlebury College)

Shangjia Dong, Civil and Environmental Engineering
Generating Geolocated Synthetic Population to Assess Travel Need to Access Opioid Treatment Centers

32) William Sharp, Computer Science (Summer Scholars) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
Using Machine Learning to Advance Protein Understanding through Contrastive Language Alignment

33) Aman Singh, Computer Science (Summer Scholars) (University of Delaware)
Mahya Ghandehari, Department of Mathematical Sciences
Experimental Implementation and Verification of Spectral Seriation

34) Ava West, Computer Science (Summer Scholars) (University of Delaware)
Jodi Hadden-Perilla, Chemistry and Biochemistr
Visual Abstractions of Virus Capsids for Improved Data Analysis and Outreach

ELECTRICAL ENGINEERING

35) Brendan Baird, Electrical Engineering (Summer Scholars) (Delaware Technical Community College)
Swati Singh, Department of Electrical and Computer Engineering
Examining Phase Coherence in Ultralight Dark Matter Signals

36) Jose Daniel Bemal Rodriguez, Electrical Engineering (Columbian Project)
Swati Singh, Department of Electrical and Computer Engineering
TBD

37) Marc Bonnet, Electrical Engineering (UR-ECE REU) (University of Delaware)
Ujjwal Das, Institute of Energy Conversion
Optical and Electrical Characterization of Boron Doped P-type Amorphous Silicon Thin Films for High Efficiency Silicon Heterojunction Solar Cell

38) Richard Breder, Electrical Engineering (Center for Composite Materials) (University of Delaware)
Mark Mirotznik, Engineering
TBD

39) Juan Sebastian Cachaya Munar, Electrical Engineering (Columbian Project) (Universidad Nacional de Colombia)
Austin Brockneier, Electrical Engineering
TBD

40) Maria Isabel Cano Achuri, Electrical Engineering (Columbian Program) (Universidad de Antioquia)
Colombia)
Austin Brockneier, Engineering
TBD

41) Christina Carroll, Electrical Engineering (Center for Composite Materials) (University of Delaware)
Mark Mirotznik, Electrical Engineering
TBD

42) Paola Andrea Castro Correa, Electrical Engineering (Columbia Project) (Universidad Franscisco de Paula Santander)
Mohsen Badiey, Electrical Engineering
TBD

43) Juan David Cortazar Aguiar, Electrical Engineering (University of Delaware)
Mohsen Badiey, Electrical Engineering
Nathan Lazarus, Electrical Engineering
TBD

44) Robin Depto, Electrical Engineering (University of Delaware) (Center for Composite Materials)
Vishal Saxena, Electrical and Computer Engineering
TBD

45) James Pollock, High School (University of Delaware)
Jesse Brown, Engineering
Shridhar Yarlagadda, Electrical and Computer Engineering
TBD

46) Travis Deputy, Electrical Engineering
(University of Delaware)
Austin Brockmeier, Electrical and Computer
Engineering
*Effects of Targeted Pixilation on Image
Classification Using a Custom Computer Vision
Model*

47) Joshua Hyman, Electrical Engineering
(University of Delaware)
Nathan Lazarus, Electrical and Computer
Engineering
*Force Characterization of Different Metal
Thicknesses Using Laser Folding*

48) Benjamin Mirotznik, Electrical Engineering
(University of Delaware) (Center for Composite
Materials)
Nathaniel Riehl, Computer Engineering,
(University of Delaware)
Vishal Saxena, Electrical and Computer
Engineering
Thomas Dillon, Electrical and Computer
Engineering
Mark Mirotznik, Electrical and Computer
Engineering
*Automated Test Bed for Passive Millimeter
Wave Imaging*

49) Alex Mulrooney, Electrical Engineering
(University of Delaware)
Austin Brockmeier, Electrical and Computer
Engineering
fMRI Encoding of Visual Cortex with
Contrastive Learning

50) Carlos Rafael Mundo Levano, Electrical
Engineering (Columbian Program)
Gonzolo Arce, Electrical Engineering
TBD

51) Matthew O'Donnell, Electrical Engineering
(UR-ECE REU) (Rowan University)
Ken Barner, Electrical Engineering
*From 2D to 3D: Enhancing Photogrammetry
with Machine Learning*

52) Martin Olguin Lopez, Electrical Engineering
(Summer Scholars) (University of Delaware)
Moshen Badiey, Electrical Engineering
TBD

53) Sergio Andrew Pachon Dotor, Electrical
Engineering (Columbian Program)
Abhyudai Singh, Electrical Engineering

54) Jan Passas, Electrical Engineering (UR-ECE
REU) (Northeastern University)
Yuping Zeng, Electrical and Computer
Engineering
Characterization of GaN High Electron Mobility
Transistors and Effects of Radiation Exposure to
Performance

55) Nicky Reigel, Electrical Engineering (Summer
Scholars) (University of Delaware)
Chengmo Yang, Electrical Engineering
*Fault Injection Attacks and Defense on an
Object Detection System*

56) Tyler Rizak, Electrical Engineering (Center for
Composite Materials) (University of Delaware)
Mark Mirotznik, Engineering
TBD

57) Sebastian Rojas Ortega, Electrical Engineering
(Columbian Project) (Universidad Franscisco de
Paula Santander)
Moshen Badiey, Electrical Engineering
TBD

58) Logan Suchanec, Electrical Engineering (UR-
ECE REU) (University of Delaware)
Jamie Phillips, Electrical and Computer
Engineering Delaware
Abhilasha Kamboj, Electrical and Computer
Engineering
*Characterization and Outdoor Evaluation of
Photovoltaic Cell I-V Curves for Power
Generation*

59) Phoenix Swiacki, Electrical Engineering (UR-
ECE REU) (University of Delaware)
Swati Singh, Electrical Engineering
*Spatial Correlation and Modeling of Dark
Matter Signals Across the Globe*

60) Melissa Varela Alvarez, Electrical Engineering
(Columbian Program)
Swathi Signh, Electrical Engineering
TBD

61) Lindsey Wang, Electrical Engineering (University of Delaware)
Kenneth Barner, Electrical & Computer Engineering
3D TREES: Tree Recognition via fEature Extraction & Segmentation

62) Patrick Young, Electrical Engineering (UR-ECE REU) (University of Delaware)
Gonzalo Arce, Electrical Engineering
TBD

63) Christopher Sepka, Electrical Engineering and Computer Sciences (National Science Foundation Award #2050886) (University of California Berkeley)
Danielle Lee, Department of Civil and Environmental Engineering, University of Delaware
Mark Nejad, Department of Civil and *Environmental Engineering*
Two-Sided Electricity Auction Mechanism Incorporating X2G

MATERIALS SCIENCE AND ENGINEERING

64) Isabella Leite, Materials Science and Engineering (CHARM REU) (University of Delaware)
April Kloxin, Chemical and Biomolecular Engineering
Wilfred Chen, Chemical and Biomolecular Engineering
Christopher Kloxin, Chemical and Biomolecular Engineering
Scalable Biosynthesis of Peptide Building Blocks and Nano Materials

65) Mary Musa, Materials Science and Engineering (Charm REU) (University of Delaware)
April Kloxin, Chemical and Bimolecular Engineering
Synthesis of Multifunctional Peptides for Incorporation within Hierarchically Structured Biomaterials

66) Evan Phillips, Materials Science and Engineering (Center for Plastics Innovation) (University of Florida)

Dongxia Liu, Chemical & Biomolecular Engineering, University of Delaware
Song Luo, Chemical & Biomolecular Engineering
Two-Dimensional (2D) Mesoporous Zeolite-based Catalysts for Plastics Recycling

67) Abigail Sicher, Materials Science and Engineering (Summer Scholars) (University of Delaware)
William Shafarman, Material Science and Engineering
Enhancing Solar Cell Efficiency: Antimony Chloride (SbCl3) Post-Treatment for Cadmium Zinc Telluride (CdZeTe) Cells

68) Lily Walton, Materials Science and Engineering (Summer Scholars) (University of Delaware)
Charles Dhong, Materials Science and Engineering
Distinguishability of Surfaces with Altered Molecular Structures

69) Tuan Huynh, Physics (Graduate College) (Lawrence University)
Chitraleema Chakraborty, Material Sciences and Engineering
TBD

70) Bryson Krieger, Physics (CHARM REU) (Northern Michigan University)
Anderson Janotti, Materials Science and Engineering
Simulating Strain in 2D Materials with COMSOL Multiphysics

71) Benjamin Putnam, Physics (CHARM REU) (Lafayette College)
Xi Wang, Materials Science and Engineering
Characterization of THz Polarization Modulator with THz Time-Domain Spectroscopy (TDTS)

72) Arriana Bisram, Materials Science and Engineering (Summer Fellows) (University of Delaware)
Kristi Kiick, Biomedical Engineering
Recombinant Synthesis and Characterization of Thermoresponsive Biopolymers

73) Caitlyn Edgar, Materials Science and Engineering (CHARM REU) (University of Delaware)
Christopher Kloxin, Chemical and Biomolecular Engineering
Effects of sodium pyruvate concentration on the polymerization kinetics of OEOMA

74) Julian Alberto, Chemical Engineering (University of Delaware Research Foundation) (University of Delaware)
Laure Kayser, Materials Science & Engineering
Impact of Stir Rate during Polymerization on the Properties of PEDOT:PSS

75) Emma Gutleber, Materials Science and Engineering (Summer Scholars) (University of Delaware)
Charles Dhong, Materials Science and Engineering
Microfluidic Devices

76) William Neuschwender, Applied Physics and Mathematics (CHARM REU) (SUNY Geneseo)
M. Benjamin Jungfleisch, Departments of Physics and Astronomy
Muhammed Tomal Hossain, Departments of Physics and Astronomy
Rawnak Sultana, Departments of Physics and Astronomy
Understanding Magnon Interactions in Engineered Magnetic Metamaterials

PHYSICS

77) Aidan Wensel, Physics (CHARM REU) (Lafayette College)
John Xiao, Physics and Astronom
Investigating the temperature dependent exchange coupling in NiFe RuO2 bilayers up to 500 K

78) Marisol Catalan, Physics BS (McNair Scholars Program) (University of Delaware)
Veronique Petit, Physics
Magnetic Fields in B- and Be-type Stars

MATHEMATICAL SCIENCES

79) Jordan Photis, Applied Math (Summer Fellows) (University of Delaware)
Richard Braun, Mathematical Sciences

Tear Film and Thermal Dynamics on the Ocular Surface

80) Jan Ahmed, Applied Mathematics (Summer Schoalrs) (University of Delaware)
Sebastian Cioaba, Mathematics
Synchronizing Graphs

81) Wenzhen Zhang, Applied Mathematics (Summer Scholars) (University of Delaware)
Ivan Todorov, Mathematical Sciences
Non-local games on discrete structures

82) Daniel Bowers, Mathematical Sciences (Summer Scholars) (University of Delaware)
David Edwards, Mathematical Sciences
Models for Weld Temperatures in Additive Manufacturing

83) Madison Bradshaw, Mathematical Sciences (Summer Scholars) (University of Delaware)
Tobin Driscoll, Mathematical Sciences
Training neural ordinary differential equations on data from a tear film model

84) Yuxuan Fan, Mathematical Sciences (Summer Scholars) (University of Delaware)
The Mathematics of Quantum Self-testing

85) Silo Murphy, Mathematical Sciences (Summer Scholars) (University of Delaware)
Mahya Ghandehari, Mathematical Sciences
Instance Independent Graph Signal Processing

86) Kyle Wright, Mathematical Sciences (Summer Scholars) (University of Delaware)
Sebastian Cioaba, Mathematical Sciences
Graph Drawings using Linear Algebra

87) Jeffrey Woulfe, Physics (Summer Scholars) (University of Delaware)
Adebanjo Oriade, Physics
Analysis of Question Order onStudent Test Performance in an Introductory Physical Science Course

88) Jadyn Worthington, Computer Science (NSF PFI) (University of Delaware)
Bob Opila, Computer Sciences
Surface Chemistry and Applications

POSTER SESSION V
3:30 - 5:00PM

(Health Sciences, Psychological and Brain Sciences, Biomedical Engineering)

NEUROSCIENCE

1) Samantha Haas, Neuroscience (MS) (Carol Mueller Plasket Award) (University of Delaware)
Peter Mende-Siedlecki, Psychological & Brain Sciences
Does Target Gender Appearance Moderate Sadness or Pain Perception?

2) Miguel Prysakar, Medical Diagnostics (Summer Scholars) (University of Delaware)
Tania Roth, Psychological and Brain Sciences
Changes in Epigenetic Regulation in the Periaqueductal Gray Due to Predator Odorant Exposure and Maternal Separation

3) India Dixon, Medical Diagnostics BS (McNair Scholars Program) (University of Delaware)
John Jungck, Department of Mathematical Sciences
Seeking to Improve Antidepressant Remission by Targeting P-glycoprotein

4) Arianna Mason, Medical Diagnotstics / Comm Scholar (Delaware INBRE) (University of Delaware)
Lydia Timmins, Communication
The Science of Science Communication

5) Shriya Bagid, Neuroscience (Summer Scholars) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
A Self-Assembled Vascular Network on a Chip for Ex Vivo Organoid Perfusion

6) Zoe Cronin, Neuroscience (Summer Fellows) (University of Delaware)
Helene Intraub, Psychology
Timothy Vickery, Neuroscience
NEURAL EVIDENCE OF BOUNDARY EXTENSION DURING IMAGERY

7) Paige DeVivo, Neuroscience (Community Engagement Initiative) (University of Delaware)
Mary Dozier, Department of Psychological and Brain Sciences, University of Delaware
Marta Korom, Department of Psychological and Brain Sciences, University of Delaware

8) Kristen Miller, Department of Psychological and Brain Science (University of Delaware)
Effects of Early Life Adversity on Risky Behavior during Adolescence

9) Mikul Duggal, Neuroscience (Summer Scholars) (University of Delaware)
Brian Bahnson, Department of Chemistry and Biochemistry
Jared Miller, Department of Chemistry and Biochemistry
Macromolecular Crowding Effects on non-Arrhenius "Break Point" of Thermolysin

10) Baze Gianiodis, Neuroscience (Summer Scholars) (University of Delaware)
Jaclyn Schwarz, Psychological and Brain Sciences
Effects of maternal immune activation with lipopolysaccharide on adult offspring behaviors and immune regulation

11) Rose Pristas, Neuroscience (Summer Scholars) (University of Delaware)

William Kenkel, Psychological and Brain Sciences
The Effects of Cage Size Variation on Prairie Vole Monogamy

12) Wendy Sanchez-Rodriguez, Neuroscience BS (McNair Scholars Program) (University of Delaware)
TBD

NURSING

13) Jirair Love-Stroman, Nursing (Delaware INBRE) (Delaware State University)
Sonali Barwe, Nemours
The Role of Mesothelin in Pediatric Leukemia

14) Olivia Rivera, Nursing (Delaware INBRE) (University of Delaware)
Kathleen Brewer-Smyth
What Emergency Department Healthcare Providers Can Do To Prevent a Trajectory of Violence

NUTRITION AND DIETETICS

15) Jessica Nicolich, Nutrition (Delaware INBRE) (University of Delaware)
Andrea Lobene, Cardiovascular Nutrition Research Laboratory, University of Delaware
Shannon Lennon, Cardiovascular Nutrition Research Laboratory
Sodium Density and Blood Pressure in Athletes and Non-Athletes in Young Adulthood and Midlife

PHYSICAL THERAPY

16) Matthew Carr, Physical Therapy (Peter White Fellowship) (University of Delaware)
Darcy Reisman, Physical Therapy
Effects of Cognition on Explicit Learning of a Novel Walking Task in Individuals Post-Stroke: Preliminary Results

COGNITIVE SCIENCE

17) Johana Mendoza, Cognitive Science BS (McNair Scholars Program) (University of Delaware)
Giovanna Morini, Communication Sciences Disorder
Examining the role of aerobic exercise on second language learning

EXERCISE SCIENCE AND KINESIOLOGY

18) Leah Alexander, Health Behavior Science (Summer Scholars) (University of Delaware)
Danielle Williams, Occupational Therapy (University of Delaware
Anjana Bhat, Physical Therapy
Prevalence of Mental Health Issues in Children With Developmental Disorders: An Analysis of the National Survey of Children's Health Dataset

19) Gabrielle Herman, Exercise Science (Summer Scholars)
 (University of Delaware)
Todd Royer, Kinesiology and Applied Physiology
TBD

20) Veda Sri Datta Kakarapari, Neuroscience (Delaware INBRE) (University of Delaware)
Physical Therapy and its correlation to ASD in Children

21) Katherine Rippon, Dietetics
Sheau Ching Chai, Health Behavior and Nutrition Science (University of Delaware)
Effects of Wild Blueberry Consumption on Cognitive Function in Older Adults

22) Ashwin Mhadeshwar, Department of Physical Therapy (Highschool)
Anjana Bhat, Physical Therapy
TBD

23) Dylan Ngo, Exercise Science (University of Delaware)

Jason Gleghorn, Biomedical
Engineering
*Developing manufacturing methods
for a lymph node-targeted cancer drug
delivery vehicle*

24) Sara Rata, Exercise Science
(University of Delaware)
Soumya Bhat (University of Delaware
Suzanne Morton, Exercise Science
*Comparing Implicit Motor Learning in Older
Adults With and Without Task Instructions*

25) Molysha Brown, Kinesiology
(Delaware State University)
Megan Sions, Physical Therapy
TBD

PSYCHOLOGY

26) Sarah Scotti, Health Behavior Science
(Community Engagement Initiative)
(University of Delaware)
Isabel Folger, Psychology (Carlton
College)
Jared Medina, Psychological & Brain
Sciences
*Exploring the Malleability of the Body
Schema Using the Anne Boleyn
Illusion*

27) Sean Fletcher, Honors Medical
Diagnostics (Santoro '05 MMSC
Summer Research Awardee)
(University of Delaware)
Subhasis Biswas, MMSC
*Computational analysis of Human
papillomavirus (HPV) E1, E2, E6, E7
proteins, the LCR regions, and
biological consequences*

28) Jillian Attinelly, Psychological
Science (Mind, Brain and Behavior
Fellowship) (University of Delaware)
Mary Dozier, Psychological and Brain
Sciences
*Intervention Effects on Adolescents'
Perception of Parent Relationship
Quality*

29) My Trieu, Psychological Science
(Graduate College) (Vassar College)
Mary Dozier, Psychological and Brain
Sciences
*Early Life Adversity and Adolescent
Depressive Symptoms: The Mediating
Role of Parental Attachment in
Adolescence*

30) Kiely Bol, Psychology (Graduate
College) (University of California,
Berkeley)
F. Sayako Earle, Communication
Sciences and Disorders
TBD

31) Eliza Coull, Psychology (Graduate
College) (Dickinson College)
Francis Earle Sayako, Communication
Sciences & Disorders
*The Effect of Motor Rest on the
Stabilization of a Motor Speech
Pattern*

32) Joy Harrison, Psychology (Delaware
INBRE) (University of Delaware)
Megan McMahon, Psychosocial
Oncology, University of Delaware
Hillary Howrey, Psychosocial
Oncology
*Tobacco Cessation Pilot: A quality
improvement project*

33) Kathryn Jennings, Psychology
(Community Engagement Initiative)
(University of Delaware)
Christopher Costello, Psychology,
(University of Delaware)
Maia Olsen, Psychology (University
of Delaware)
Mary Dozier, Psychology
*Associations of Parent and Child
Report of Anxiety Across Adolescence*

34) Ryan McNemey, Psychology
(Graduate College) (Middlebury
College)
Stephanie Del Tufo, School of
Education
*Associations Among Childhood
Epilepsy, Theory of Mind, and*

Academic Performance: A Preliminary Systematic Literature Review

35) L. Khawn Phang, Psychology (Graduate College) (Temple University)
Christina Barbieri, Education and Human Development
Improving Mathematical Achievement: Investigating The Impact of Errorful Learning Intervention on Metacognition

36) Kallie Sweetman, Psychology (Delaware INBRE) (University of Delaware)
Tim Vickery, Psychological and Brain Sciences
Anterior visual regions reflect boundary extension for remembered scenes

37) Nadia Brogan, Psychology BA (McNair Scholars Program) (University of Delaware)
Tania Roth, Psychology
The Effect of Maternal Care on Epigenetic Regulation in the Developing Spinal Cord

38) Ariel Grier, Psychology BA (McNair Scholars Program) (University of Delaware)
Franssy Zablah, Psychological and Brain Sciences
Examining Barriers and Outcomes Associated with Respite Care Reimbursement Services for Families with Children

39) Shanea Higgin, Psychology BA (McNair Scholars Program)
Eve Buckley, History (University of Delaware)
TBD

40) Gabriella Morra, (University of Delaware)
Christina Barbieri, School of Education

Student Satisfaction and Self-Regulation During COVID-Era Online Learning

BIOMEDICAL ENGINEERING

41) Colin Horger, Biomedical Engineering (Summer Fellows) (University of Delaware)
Jason Gleghorn, Department of Biomedical Engineering, University of Delaware
Logan Hallee, Department of Bioinformatics
Autocompleting Protein Sequences with Protein Language Models

42) Heather King, Biomedical Engineering (Summer Scholars) (University of Delaware)
Martha Hall, Health Sciences
Designing a Novel Ankle Foot Orthotic (AFO) Device for Showering and Everyday Use for Patients with Cerebral Palsy

43) Kate Menzer, Biomedical Engineering (Delaware INBRE) (Case Western Reserve University)
Jocelyn Hafer, Kinesiology and Applied Physiology
Exploring Sparse Inertial Measurement Unit Setups for Out-of-Lab Gait Kinematics

44) Shannon Rosen, Biomedical Engineering (UDRP) (University of Delaware)
Elise Corbin, Biomedical Engineering
Examining the role of cell-cell communication in spatiotemporal YAP translocation

45) Adam Burk, Biomedical Engineering (Summer Scholars) (University of Delaware)
Stephanie Cone, Biomedical Engineering
Estimating tendon wave speed from skin-mounted accelerometers

46) Kira Byers, Biomedical Engineering (Summer Scholars) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
Design of multicompartment organ-on-a-chip systems of the human endocervix capable of longitudinal time lapse imaging

47) Nikos Demetriou, Biomedical Engineering (Summer Fellows) (University of Delaware)
Emily Day, Biomedical Engineering
Evaluating the Effect of Antibody Loaded Gold Nanoparticles to Inhibit Triple Negative Breast Cancer (TNBC)

48) Gabriella Dunay, Biomedical Engineering (Summer Scholars) (University of Delaware)
Curtis Johnson, Biomedical Engineering
Acute Lower Body Negative Pressure Changes Human Brain Tissue Perfusion and Stiffness in vivo Measured with MR Elastography

49) Thomas Elia, Biomedical Engineering (Summer Scholars) (University of Delaware)
Dawn Elliott, Biomedical Engineering
Automated Analysis Method for Determining Tendon Collagen Fiber Orientation from Second Harmonic Generation Images

50) Emma Guzzetti, Biomedical Engineering (Summer Scholars) (University of Delaware)
Emily Day, Biomedical Engineering
Purification of DiD-Encapsulated Nanoparticles Through Triton-Washing

51) Tanmayee Joshi, Biomedical Engineering (Delaware INBRE) (University of Delaware)
Chris Church, Orthopedics, Nemours Hospital

Jason Howard, Orthopedics, Nemours Hospital
The Prevalence and Risk Factors Associated with Excess Anterior Pelvic Tilt in Ambulatory Children with Cerebral Palsy

52) Casey Lorch, Biomedical Engineering (Summer Scholars) (University of Delaware)
Laure Kayser, Materials Science
Reversibly Gellable Conductive Polymers for Minimally Invasive Electronics

53) Gabriel Ma, Biomedical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Biomedical Engineering
Dynamic Control of Lipid Metabolism in CHO Cells

54) Ethan Neidich, Biomedical Engineering (Summer Scholars) (University of Delaware)
Brian Kwee, Biomedical Engineering
Effect of Mechanically and Chemically Altered Alginate Hydrogels on Fibroblastic Reticular Cell Function

55) Shelby Nelson, Biomedical Engineering (Summer Scholars) (University of Delaware)
Joseph Fox, Chemistry and Biochemistry
Thiomethyltetrazine Based Reversible Covalent Chemistry Hydrogels to Support 3D Cell Culture

56) Akshay Patel, Biomedical Engineering (McNair Scholars Program) (University of Delaware)
Kristi Kiick, Biomedical Engineering
Investigating expression conditions used to synthesize recombinant proteins

57) Christopher Peters, Biomedical Engineering (Summer Scholars) (University of Delaware)

Joshua Cashaback, Biomedical Engineering
Human Motor Planning Approaches but Fails to Achieve Optimal Indecisiveness

58) Erin Smyntek, Biomedical Engineering (Summer Scholars) (University of Delaware)
Kristi Kiick, Biomedical Engineering
Injectable Hybrid Microgels for Cargo Delivery

59) Makana Steinmetz, Biomedical Engineering (Summer Scholars) (University of Delaware)
Dawn Elliott, Biomedical Engineering
Pre-processing Spine MRI to Expedite Disc Segmentation

60) Megan Tarr, Biomedical Engineering (Summer Scholars) (University of Delaware)
Mark Blenner, Chemical Engineering
Enhancing Plastic Degradation Through Mealworm Gut Enzyme Cocktails and Cascades

61) Yaren Usul, Biomedical Engineering (Summer Scholars) (University of Delaware)
Fabrizio Sergi, Biomedical Engineering
The Role of Task Instructions on the Neural Representation of Stretch Reflexes in the Brain

62) Jared Wierzbicki, Biomedical Engineering (Center for Composite Materials) (University of Delaware)
Matthew Young, Mechanical Engineering (University of Delaware)
Benjamin Caro, Mechanical Engineering (University of Delaware)
AUTOMATED MANUFACTURING FOR AUTONOMOUS SYSTEMS SOLUTIONS (AMASS)

63) Avery Wolverton, Biomedical Engineering (Summer Scholars) (University of Delaware)
Emily Day, Biomedical Engineering

Targeting Triple-Negative Breast Cancer Cells via Cancer Cell Membrane-Wrapped Nanoparticles

64) Katherine Zucaro, Biomedical Engineering (Summer Scholars) (University of Delaware)
Jason Gleghorn, Biomedical Engineering
Improved therapeutic design for local drug delivery in the lymph node

65) Tom Le, Biomedical Engineering (Summer Scholars) (University of Delaware)
Brian Kwee, Biomedical Engineering
Engineering microvasculature in vitro in biomaterials

66) Valerie West, Biomedical Engineering (National Institute of Arthritis and Musculoskeletal and Skin Diseases under grant number R01AR080059) (University of Delaware)
Justin Parreno, Biological Sciences and Biomedical Engineering
Actin Regulates Tenocyte Gene Expression via MRTF

67) Brooklyn Tyndall, Human Physiology BS (McNair Scholars Program) (University of Delaware)
Christopher Price, Biomedical Engineering
Effects of Hyaluronic Acid on the Lubrication of Degraded Articular Cartilage Under Biofidelic Sliding Conditions

68) Yuan (Marrian) Tan, Neuroscience (Graduate College) (Bryn Mawr College)
F. Sayako Earle, the College of Health Sciences' Communication Sciences & Disorders
The impact of sensitivity to native sound on second-language learning as revealed by the mismatch negativity

69) Isabella DeGuzman, Psychological and Brain Sciences (NiH/NIAAA

AA027269) (University of Delaware)
Examining the effects of third trimseter alcohol exposure and behavioral super intervention in a rodent model of FASDs

70) Angelina Sora, Medical Diagnostics (University of Pittsburgh School of Pharmacology)
Targeting Regulation of NFAT for Treatment of Leukemia

Oral Session One
8:30 – 9:45am

FASHION & DESIGN (ROOM 202)

Moderator: Belinda Orzada

Josephine Gladden, Apparel Design (Summer Scholars) (University of Delaware)
Miranda Rack, Fashion Merchandising (Summer Scholars) (University of Delaware)
Alexandra Arroyo, Apparel Design (Summer Scholars) (University of Delaware)
Alex Culley, Apparel Design (Summer Scholars) (University of Delaware)
Belinda Orzada, Fashion and Apparel Studies
Dilia Lopez-Gydosh, Fashion and Apparel Studies
1920s Digital Twins Recreation

Veepra Mishra, Apparel Design (Summer Scholars) (University of Delaware)
Katya Roelse, Fashion and Apparel Studies
A Study of Sari's: Exploring the Significance & Evolution of the Sari Through Four Generations Against the Backdrop of Change and Inclusivity in the 21st Century

Delaney Slattery, Apparel Design (Summer Scholars) (University of Delaware)
Katya Roelse, Fashion and Apparel Studies
Artisanship Meets Technology: Laser Cutting to Create an Ann Lowe Installation for Winterthur

Casey Tyler, Fashion Merchandising (Summer Scholars) (University of Delaware)
Adriana Gorea, Fashion and Apparel Studies
Eco-Conscious Machine Knitting with Innovative 3D Motifs

WORK AND SOCIETY (ROOM 205)

Moderator: Matthew Robinson

Calista Hill, Psychology (Summer Scholars) (University of Delaware)
Jaehee Jung, Fashion and Social Psychology
The Impact of Social Media on Fashion Trends and Trend Forecasting

Jada Lawrence, Psychology (McNair Scholars Program) (University of Delaware)
Mary Dozier, University of Delaware
DTI review on the riskiness of depression symptoms in adolescents

Claire Kaufmann, Sport Management (Summer Scholars) (University of Delaware)
Matthew Robinson, Hospitality & Sport Management
What's Your Name? Why that Image? Where's Your Likes?: The Future of Name, Image, & Likeness for Collegiate Athletes

Saumya Agrawal, Business Management (Summer Scholars) (University of Delaware)
Stacy Astrove, Business Administration
Managing Employee Movement through Corporate Alumni Programs

Catherine Osinubi, Management Information Systems (Summer Scholars) (University of Delaware)
Edward Hartono, MIS
Utilizing MIS to Revitalize Businesses: A Deep Dive into Foundational Elements

MUSIC EDUCATION & HISTORY (ROOM 207)

Moderator: Aimee Pearsall

Benjamin McMonagle, Music Composition (Summer Scholars) (University of Delaware)
Philip Duker, Music
A Comparative Analysis of Gershwin's "Concerto in F" and Copland's "Concerto for Piano and Orchestra," and Their Use of Jazz Idioms in an Orchestral Setting

Kevin Romano, Music Education (Community Engagement Initiative) (University of Delaware)
Mark Adams, Music Education
Making Music-Making Accessible: A Free, 2-Day Music Festival for Student Musicians

Heather Scott, Music Education (Summer Scholars) (University of Delaware)
Maria Purciello, Musicology
Patronage, Propaganda, & the Intertwining of Sacred and Secular Realms

Amanda Heil, History (Summer Scholars) (University of Delaware)
Michael Frassetto, History
The Literary Portrayals of Female Rulers in 6th Century Europe

ART & HISTORY   (ROOM 302)

Moderator: Jennifer Van Horn

Sarah Lacour, Art (Summer Scholars) (University of Delaware)
Amy Hicks, Art & Design
Tracing Nuclear Landscapes: A Hazardous History of Lewiston, New York

Cara McDonald, Fine Arts (Summer Scholars) (University of Delaware) David Brinley, Art and Design
Exploration of the Human Relationship with Technology Through Storytelling and Book Arts

Lufei Xu, Art (Summer Scholars) (University of Delaware)
David Brinley, Art
The power of color and short animation exercise

Vivian McGinnis-Tingle, Art History (Summer Scholars) (University of Delaware)
Jennifer Van Horn, Art History
Solitude and Solidarity: Exploring the Impact of Non-Indigenous Concepts of Animacy on the Repatriation of Indigenous Belongings

Camille Jeannot, Business Analytics (Cooperative Extension Program) (University of Delaware)
Katie Young, Cooperative Extension
Photography in Storytelling

Oral Session Two 10:00 – 11:15am

THE WORLD OF SCIENCE (ROOM 202)

Moderator: Justin Parreno

Karl Matthew Ebron, Biological Sciences (Summer Fellows) (University of Delaware)

Justin Parreno, Biological Sciences
The regulation of tendinosis-like gene expression by F-actin via MRTF

Bukola Molake, Biology (UD Envision) (University of Maryland-Baltimore County)
Michael Crosley, ENEW
Drivers of darkling beetle burrowing behavior in chicken litter

Jacqueline Rima, Animal Science (UD Envision) (University of Delaware)
Ashley Taylor, Animal and Food Sciences
Kathryn Ellwood, Animal and Food Sciences
Aditya Dutta, Animal and Food Sciences
Identification of master regulators driving chicken follicular development in nine month old layers

James Egnor, Ancient Greek and Roman Studies (Summer Scholars) (University of Delaware)
Jay Custer, Anthropology
On the Half Shell: A Novel Zooarchaeological Approach Utilizing Oyster Shells as a Marker in Determining Socio-Economic Status at Sites in the Chesapeake Bay Region of the 1600-1700's.

Natalie Rivera, Psychology (Summer Scholars) (University of Delaware)
Elina Rodriguez, Psychological & Brain Sciences,
Mary Beth Bielicki-Hall, Psychological & Brain Sciences
Jaclyn Schwarz,Psychological & Brain Sciences
Gene Expression In Pup Placenta Tissue As A Result Of Maternal Immune Activation

THE BRAIN & BODY (ROOM 205)

Moderator: Mary Dozier

Leopold Pullella, Neuroscience (Summer Fellows) (University of Delaware)
Mary Dozier, Psychological and Brain Sciences
Internationally adopted children and their behavioral and psychiatric risks

Rachel Spera, Neuroscience (Graduate College) (High Point University)
Mary Dozier, Psychological & Brain Science
Structures of the Ventral Striatum Influence Adolescent Anxiety and Depression

Sudha Anilkumar, Biomedical Engineering
(Delaware INBRE) (University of Delaware)
Elizabeth Wright-Jin, Neuroscience
Characterization of Cytokine-Mediated Inflammation via Transcriptomics in a Novel Murine Model of Hypoxic Ischemic Encephalopathy

Mark Arranguez, Human Physiology (Summer Fellows) (University of Delaware)
Justin Parreno, Biological Sciences
Regulation of Surface Cell Expression of Lubricating Protein Proteoglycan-4 in Articular Cartilage

Mackenzie Rattigan, Exercise Science, (Summer Fellows) (University of Delaware)
Melissa Witman, KAAP
The Association Between Serum Vitamin D Concentration and Central Blood Pressure in Young Adult Black Women

HEALTH AND WELLBEING (ROOM 207)

Moderator: Jennifer Graber

Julia Nelson, Biology (Graduate College) (University of Delaware)
Elizabeth Fournier, Biden School of Public Policy and Administration
Title The Effects of Health Insurance Type on Prenatal Care

Fahima Chowhurdy, Cognitive Science (Summer Scholars) (University of Delaware)
Giovanna Morini, Communication Sciences and Disorders
Understanding the Role of Physical Activity on Second-language Learning

Marquaya Bennett, Elementary Teacher Education (Summer Scholars) (University of Delaware)
Sara Goldstein, Education & Human Development
Plan A or Plan B: College-attending Emerging Adults' Perceptions of Birth Control Access

Reese Miller, Human Physiology (Dickerson Cooperative Extension Scholar) (University of Delaware)
Gina Crist, Cooperative Extension
Health and Well-being for Delawareans

Gabrielle Jakobsberg, Nutritional Science (Robert Wood Johnson Foundation Well Connected Communities and Cooperative Extension Program) (University of Delaware)
Alyssa Whittaker, Cooperative Extension Health and Wellness
Choose Health, Food, Fun, and Fitness: Engaging Youth in New Castle County

STUDIES IN HEALTHCARE (ROOM 302)

Moderator: Elisabeth Orsega-Smith

Chelsea Cohen, Public Policy (McNair Scholars Program) (University of Delaware)
Elizabeth Fournier, Biden School of Public Policy
Teaching Sex: The Differential Impact of Varying Sex Education on American Teens by Race and Class

Tara Franks, Sociology (Summer Scholars) (University of Delaware)
Victor Perez, Sociology
Community Perceptions of Social and Health Impacts of Green Infrastructure Revitalization in South Wilmington, DE

Qiulin Chen, Health Behavioral Sciences (Community Engagement Initiative) (University of Delaware
Fatou Marong, Health Behavioral Sciences (University of Delaware)
Nicholas Ragan, Health Behavior Sciences (University of Delaware)
Elisabeth Orsega-Smith, Behavioral Health and Nutrition
Feasibility and Implementation of ANEW GOLD In Local Senior Centers

Elena Lynn, Health Behavior Science (Community Engagement Initiative/UDARI) (University of Delaware)
Yendelela Cuffee, Epidemiology
Assessing the Feasibility of Implementing a Storytelling-Based Intervention for Black Adults with Hypertension

Oral Session Three 11:30am – 12:45pm

EDUCATION & HUMAN DEVELOPMENT (ROOM 202)

Moderator: Teresa Hickok

Dat Nguyen, Elementary Teacher Education (Community Engagement Initiative) (University of Delaware)
Teresa Hickok, AA-ETE
STEM Education in the Middle School Classroom: The Effectiveness of the Engineering Design Process

Aaron Wallace, Elementary Teacher Education (McNair Scholars Program) (University of Delaware)
Teresa Hickok, College of Education and Human Development
Arts Integration in the Elementary Classroom: An Approach to Increasing Student Engagement

Erlande Amisal, Elementary Teacher Education (McNair Scholars Program) (University of Delaware)
Brittany Zakszeski, School of Education
School-based Programs/Practices for Promoting Mental Health and Socio-emotional Well-being of Multilingual Learners

Madeline Bendo, Elementary Teacher Education (Community Engagement Initiative) (University of Delaware)
Teresa Hickok, Education
Integrating Technology to Improve Adolescents' Proficiency in the Common Core English Language Arts (ELA) Reading Standards: Key Ideas and Details

Destiny Spivey, Human Services (Summer Scholars) (University of Delaware)
Roderick Carey, Human Development and Family Sciences
The Evolution of Black Masculinity in Televised Media

ISSUES OF HIGHER EDUCATION (ROOM 205)

Moderator: Thomas Maldonado-Reis

Brandon Cangialosi, Political Science (Summer Scholars) (University of Delaware)
Jason Mycoff, Political Science and International Relations
College Students & The Supreme Court of the United States: A Longitudinal Study

Alexis Oppong, Public Policy (Institute for Public Administration, Biden School) (University of Delaware)
Scott Abbott, Biden School
Francis O'Malley, Biden School
Lisa Allred, Biden School
Making Room for Me in Your Curriculum

David Jacobson, Psychology (Graduate College) (University of Minnesota - Twin Cities)
Stephanie Del Tufo, School of Education
We're Here, We're Queer, and We're Tenured: Queerness in post-secondary tenure policy

SD Weldin, Communication (Summer Fellows) (University of Delaware)
Tracey Holden, Communication
A New Era of Firsts: The Support Peer Mentors Give First-Generation College Students

Alya Wallace, International Relations (McNair Scholars Program) (University of Delaware)
Muqtedar Khan, Political Science
China's Rising Influence in Latin America: Implications for U.S. Political Development and Regional Interests

EXPLORING ECONOMICS (ROOM 207)

Moderator: Sean O'Neill

Fanta Barry, Finance (Summer Scholars) (University of Delaware)
Laura Fields, Finance
Acknowledging Student Loan Complexities

Vincent Tucci, Finance (Summer Scholars) (University of Delaware)
James Butkiewicz, Economics
Student-Centered Learning: Leveraging AI TAs for Educational Success

Jack Doolittle, Economics (McNair Scholars Program) (University of Delaware)
Hans Holter, Economics

Welfare State Models and Egalitarianism: an Economic and Philosophical Analysis

Ella Dietz, Mathematics and Economics (University of Delaware)
Sean O'Neill, Institute for Public Administration; Biden School of Public Policy & Administration
Workforce Housing Options for Delaware – A Case Study Analysis

Caleb Mathis, Public Policy (Institute for Public Administration, Biden School) (University of Delaware)
Signe Bell, Joseph R. Biden, Jr. School of Public Policy & Administration
Navigating the Path to Nonprofit Empowerment

STUDIES OF POWER (ROOM 302)

Moderator: Dael Norwood

Amber Kriste, International Relations (McNair Scholars Program) (University of Delaware)
Holly Myers, Languages literatures and Cultures
Stalin's Role in Putin's Russia

Mary Ladely, History (Summer Scholars Program) (University of Delaware)
Dael Norwood, History
How White Fear and Paranoia in 19th Century Delaware Impacted Black Freedom

Anne Hicks, History Education (Summer Scholars Program) (University of Delaware)
Dael Norwood, History
Slavery, Freedom, and Mobility: Black Labor at Cooch's Bridge Historic Site

Brayden Moore, History Education (Summer Scholars) University of Delaware
Dael Norwood, History
Delaware's Freedom Suits: Argument As Agency

Emily Popielec, International Studies (Graduate College) (University of Delaware)
Lindsay Naylor, Geography and Spatial Sciences
Changing Identities: The Impact of Migration on How Migrants View Themselves

Oral Session Four 2:00pm – 3:15pm

VIOLENCE & INJUSTICE IN OUR SOCIETY (ROOM 202)

Moderator: Angelia Hattery

Bailey Blewitt, Psychology (Summer Scholars Program) (University of Delaware)
Angela Hattery, Women and Gender Studies, University of Delaware
Earl Smith, Women & Gender Studies
Betrayed by the Blue: Intimate Partner Violence and Institutional Betrayal by the Criminal Legal System

Zarah Zurita, Sociology (Summer Scholars Program) (University of Delaware)
Angela Hattery, Women and Gender Studies, University of Delaware
Earl Smith, Women & Gender Studies
Institutional Betrayal and Institutional Courage: Intimate Partner Violence Among Hispanic Women and Black Women who are Criminal Legal System Impacted

Jasmine Pennington, Criminal Justice (Summer Scholars Program) (University of Delaware)
Cresean Hughes, Department of Sociology and Criminal Justice
Lack of Structure for Foster Kids during the System and After

Sanjana Vinjamuri, Psychology (Summer Scholars Program) (West Chester University of Pennsylvania)
Morgan Ellathorpe, Communication
What is Hate Speech and How Can We Combat It

Miranda Askay, Public Policy, (Summer Scholars Program) University of Delaware
Jessica Sowa, Biden Institute
Investigating Advocacy Efforts for Missing and Murdered Indigenous Women and Girls

STUDIES IN PSYCHOLOGY (ROOM 205)

Moderator: Jaclyn Schwarz

Jenna Loquercio, Psychology (Summer Scholars Program) (University of Delaware)
Roberta Golinkoff, School of Education
The Impact of Surgical Masks on Children's Gender Classification

Geordan Haynes, Psychology (Graduate College) (University of Chicago)
Mary Dozier, Department of Psychological and Brain Sciences
Early Adversity Effects on Adolescent Depression

Carl Webster, Geography (Graduate College) (Vassar College)
Lindsay Naylor, Geography & Spatial Sciences
Antisocial Development: Exploring the Impacts of Gentrification on Social Cohesion within Marginal Spaces

Kiara Meléndez Rivera, English (Graduate College) (University of Puerto Rico)
Laura Helton, English
Arturo Alfonso Schomburg's Legacy of Alternative Narratives in Contemporary Diasporican Lilliam Rivera's "Never Look Back"

Yasmine Skalli, Societal and Environmental Geology (UD Envision & Ag Extension) (Ohio State University)
Mark Parcells, Animal and Food Studies.
UD Envision, CANR Summer Institute and CANR Unique Strengths Programs - Summer 2023

EARTH & ENVIRONMENT (ROOM 207)

Moderator: Erin Sparks

Michelle Chavanne, Environmental Science (Cooperative Extension Program) (University of Delaware)
Jerri Husch, UD Cooperative Extension
Jennifer Volk, IUD Cooperative Extension
An Overview of the Delaware Extension Climate Change Coordination Initiative (DECCCI)

Sarah Ding, Plant Science, (CANR Unique Strengths) (University of Delaware)
Jung-youn Lee, Plant and Soil Sciences
Generating Transgenic Arabidopsis Expressing Redox-Sensitive Green Fluorescent Protein

Brianna Egan, Landscape Agriculture (Community Engagement Initiative) (University of Delaware)
Madeline Downer, Landscape Agriculture (University of Delaware)
Fiona Gorman, Landscape Agriculture (University of Delaware
Zach Hammaker, Landscape Agriculture
Slaughter Beach Comprehensive Resilience Plan

Abby Haney, Landscape Architecture (ArtsBridge/Community Engagement Initiative) (University of Delaware)
Jennifer Reitz, Biden School for Public Policy & Administration
Eric Bardenhagen, Plant & Soil Sciences
Visualizing the Potential of 2301 N. Market Street

CULTURE, SOCIETY & POLICY (ROOM 302)

Moderator: Laura Helton

Riley Gates, Linguistics (Summer Scholars) (University of Delaware)
Maria Tu, Chinese
Identifying Taiwan's Everyday Efforts Toward a Cleaner Future

Otto Mendez-Castro, Political Science (McNair Scholars Program) (University of Delaware)
Sheldon Rennie, Political Science, University of Delaware
Wayne Batchis, Political Science
Researching Delaware's Recidivism Rate Through The Hope Commission's Achievement Center

Kally Bennett, Political Science (Summer Scholars Program) (University of Delaware)
Anna Squiers, Political Science (Summer Scholars Program) (University of Delaware)
Lindsay Hoffman, Political Communication
The establishment of cross-partisan empathy and openness to diversity and challenge through Braver Angels non-combative debates

Samiyah Sherman, Public Policy and Political Science (Institute for Public Administration, Biden School) (University of Delaware)
Kathy Murphy, Public Administration
Student Food Pantry Inquiry and Recommendation

Dulcine Stephens, Psychology and Africana Studies (McNair Scholars Program) (University of Delaware)
Discourse on Socialization as a Contemporary Colonial Practice

Oral Session Five 3:30pm – 4:45pm

PUBLIC POLICY IN DELAWARE & BEYOND (ROOM 202)

Moderator: Brian Kunkel

Hoda Bazzi, Public Policy (Center for Community Research & Service, Biden School) (University of Delaware)
Stephen Metraux, Biden School of Public Policy and Administration
Erin Nescott, Biden School of Public Policy and Administration
Impacts of Fines and Fees on the City of Wilmington, DE

Lexi Haws, Public Policy (Institute for Public Administration, Biden School) (University of Delaware)
Julia O'Hanlon, Biden School of Public Policy and Administration
Trends, Issues, and Policy Considerations for Infrastructure and the Aging Population in Delaware

Miranda Perez-Rivera, Public Policy (Center for Community Research & Service, Biden School) (University of Delaware)
Janice Barlow, Biden School of Public Policy and Administration
Erin Nescott, Biden School of Public Policy and Administration
Communicating Data to Support Child Well-Being in Delaware

Gianna Richason, Human Services, Organizational and Community Leadership (Institute for Public Administration, Biden School) (University of Delaware)
Julia O'Hanlon, Biden School of Public Policy and Administration
Data and Resource Tracking to Support the Delaware Food Resources Connection

Thomas Kramer, Agriculture and Natural Resources (Lomax Cooperative Extension Scholars Fund) (University of Delaware)
Brian Kunkel, Entomology and Wildlife Ecology
On Wheels: Entomology and Education

VISUAL COMMUNICATION (ROOM 205)

Moderator: Ashley Pigford

Mason Blauch, Visual Communications (Summer Scholars) (University of Delaware)
Katie Leech, Art and Design
The Artistic Expression of London's LGBTQIA+ Community

Jake Cohen, Visual Communications (Summer Scholar) (University of Delaware)
Aaron Terry, Department of Art and Design
Spanish as a Visual Language: Translating Language and Culture through Design + Typograph

Moira Gervay, Visual Communications (Summer Scholars) (University of Delaware)
Katie Leech, Art and Design
Typography Beyond Borders: A Comparison in Design Systems of the United States and the United Kingdom

Maura Kelly, Visual Communications (Summer Scholars) (University of Delaware)
Ashley Pigford, Art & Design
Visualizing my Creative Voice

Autumn Wolinski, Visual Communications (Summer Scholars) (University of Delaware)
David Brinley, Arts and Sciences
Lives Unfolded: Tales of Everyday Mundanity

ARTISTIC EXPRESSION (ROOM 207)

Moderator: TBD

Isabella Cocuzza, Art (Summer Scholars) (University of Delaware)
Aaron Terry, Art
Architecture: A Display of Human Emotions Being Inherently Logical

Alexia Capraiello, Fine Arts (Summer Scholars) (University of Delaware)
David Brinley, Art
Madness in the Cosmos

Janice Castro, Art (Summer Scholars) (University of Delaware)
Gregory Shelnutt, Art & Design
Nuestro Granada

Ryan Morris, Art (Summer Scholars) (University of Delaware)
Aaron Terry, Art
Print and Physicality – A Study of Printmaking Processes

Isabella Lam, English (Summer Scholars) (University of Delaware)
Haihong Yang, Chinese
The World on Stage: Queer Themes in China's Shakespeare

INTERDISCIPLINARY RESEARCH TOPICS (ROOM 302)
Moderator: Rosalie Rolon-Dow

Faiza Saeedi, (Summer Scholars) (University of Delaware)
Georgina Ramsey, Anthropology
Emily Davys, Anthropology
The International Politics Regarding Women's Education

Brishna Nazari, Computer Science (Summer Scholars) (University of Delaware)
Georgina Ramsey, Anthropology
Emily Davys, Anthropology

Zoe Lipkin, Applied Music (Summer Scholars) (University of Delaware)
Elise Ruggiero, Applied Music (Summer Scholars) (University of Delaware)
Malika Iyer, Computer Science (Summer Scholars) (University of Delaware)
Matthew Mauriello, Computer and Information Sciences, University of Delaware
Daniel Stevens, School of Music,
Exploring the Benefit of a Modular Music Listening Device for Children with Autism Spectrum Disorde