Dear Friends of Undergraduate Research and Service Learning:

Welcome to the sixth annual Celebratory Symposium for students in our Summer Scholars program. With more than four hundred presenters, this is our largest event ever, and we are very excited to share their work with you. After several years at Clayton Hall, we are particularly enthusiastic to hold the Symposium at the heart of the main campus in the Patrick T. Harker ISE Lab.

As the Symposium program demonstrates, these students have worked on an extraordinary range of projects in disciplines all across the university as well as in the community. Over the past ten weeks, they have collaborated with their faculty mentors and, in many cases, with other undergraduates and with graduate students, learning how original research takes place and creating new knowledge themselves. Continuing UD’s nature as an engaged campus, many of them have worked with a wide range of external partners, translating research into action that both benefits community agencies and provides the students themselves with deepened understandings of the ways in which they can both contribute and learn from their service. National studies of undergraduate research and experiential learning have shown time and again that these experiences can be the most powerful part of a student’s education, shaping his or her life and career for decades to come.

Both today’s event and the summer program itself would not be possible without the extraordinary support of people and offices across our campus. I particularly want to call out for thanks the staff of the Office of Undergraduate Research and Experiential Learning as well as the members of the faculty and staff throughout UD who volunteer their time and expertise to mentor students in the opportunities and responsibilities that go with conducting original research and service projects.

On behalf of all these members of the UD community, thank you for joining us at today’s program. We hope you will enjoy seeing and hearing the fruits of the students’ work and take away an even deeper appreciation for the intellectual accomplishments, creative achievements, and service contributions they make to the University of Delaware and its wider community.

Sincerely.

Iain Crawford
Faculty Director, Undergraduate Research and Experiential Learning
August 2015

Dear Colleagues and Friends:

Welcome to the University of Delaware’s sixth Annual Undergraduate Research and Service Celebratory Symposium that brings this year’s Summer Scholars program to a conclusion. This event marks the culmination of 10 weeks of full-time research by more than 400 student researchers who have worked with faculty mentors and community partners. During the program, these students have been engaged in projects representing disciplines across the university, discovering the challenges and excitement of creating new knowledge in collaboration with faculty and other researchers.

Our amazing recognition as a 2015 Community Engaged University by the Carnegie Foundation is even greater confirmation of how UD is a place where we dare to be first, dare to be bold, and dare to shine — where faculty and students work together to help address real-world issues.

Studies have shown that these types of experiences are among the most important forms of learning. We know that engaging in mentored research can be a life-changing experience. Some of the students will build from this program as they go on to graduate school; others will find the experience they have gained invaluable as they move into professional careers. All of them will look back on these summer months as some of the most intensive and successful parts of their education.

On behalf of the University, I thank everyone who has made this program possible, including the staff of the Office of Undergraduate Research and Experiential Learning, faculty, mentors and community partners. Being part of a top-flight research university such as Delaware means that every student must possess courage, enthusiasm, and the willingness to push the boundaries of understanding and knowledge. I want to challenge every student to dare to be great. This is what makes Delaware shine.

Go Hens,

Domenico Grasso

provost.udel.edu
Undergraduate Research and Service Celebratory Symposium
Harker Lab
Thursday, August 13, 2015 • 8:30 a.m. - 4:30 p.m.

8:30 – 8:55 Poster Session I Set-up

9:00 – 10:30 Poster Session I
Lobby

9:00 – 10:00 Oral Session 1
1. Arts Education
2. Adolescent Educational Opportunities
3. Psychology
4. Sustainability
Room 202 pg. 21
Room 205 pg. 21
Room 207 pg. 22
Room 222 pg. 22

10:10 – 11:10 Oral Session 2
1. Arts Outreach
2. Cooperative Extension/Business
3. International Relations/Immigration
4. Ese’Eja
Room 202 pg. 22
Room 205 pg. 22
Room 207 pg. 22
Room 222 pg. 23

10:30 – 11:00 Switch posters for Session II
Lobby

11:00 – 12:30 Poster Session II

11:20 – 12:35 Oral Session 3
1. Literature
2. Multi-Disciplinary Creative Research & Scholarship
3. Criminal Justice/Political Science
4. Art History/Music
Room 202 pg. 23
Room 205 pg. 23
Room 207 pg. 23
Room 222 pg. 23

12:30 – 1:00 Switch posters for Session III

12:15 – 1:30 LUNCH
Perkins Student Center

1:30 – 2:30 Oral Session 4
1. Health
2. Women & Gender
3. Leadership, Outreach & Self-Advocacy
4. Art
Room 202 pg. 24
Room 205 pg. 24
Room 207 pg. 24
Room 222 pg. 24

2:40-3:40 Oral Session 5
1. Language/Writing
2. Material Culture
3. Science/Engineering
4. Art (continued from previous session)
Room 202 pg. 25
Room 205 pg. 25
Room 207 pg. 25
Room 222 pg. 24

3:30-4:30 UD Creamery Ice Cream, courtesy of the College of Agriculture and Natural Resources
Harker Lab Walkway
Key to Abbreviations

- **AHSS**: Arts, Humanities, & Social Sciences
- **ArtsBridge**: ArtsBridge America
- **CANR**: College of Agriculture & Natural Resources
- **CBER**: Center for Biomedical Engineering Research
- **CCEI**: Catalysis Center for Energy Innovation
- **CPC**: Center for Political Communications
- **CPWBIO**: Charles Peter White Biology Scholars
- **CRESP**: Center for Research in Education & Social Policy
- **DNREC**: Delaware Department of Natural Resources & Environmental Control
- **DSU**: Delaware State University
- **DTCC**: Delaware Technical Community College
- **EPSCoR**: Experimental Program to Stimulate Competitive Research
- **Heitzer**: David M. Heitzer Award
- **HHMI**: Howard Hughes Medical Institute
- **Hofmann Scholar**: Ethel & Donald Hofmann Scholars
- **INBRE**: IDeA Network of Biomedical Research Excellence
- **IWSTEM**: Inspiring Women in Science, Technology, Engineering & Mathematics
- **McNair**: McNair Scholars Program
- **NECA**: Northeastern Chemical Association
- **NSF REU**: National Science Foundation Research Experiences for Undergraduates
- **Nemours COBRE**: Nemours Center of Biomedical Research Excellence
- **NSURP**: Nemours Summer Undergraduate Research Program
- **OHEI-HESSP**: Office of Health Equities & Inclusion-Health Equities Summer Scholar Program
- **Plastino**: David A. Plastino Scholar Award
- **QUEST**: Quantum Energy & Sustainable Solar Technologies
- **REACT**: Research Experiences to Advance Chemists in Training
- **SE**: Science & Engineering Scholars
- **SF**: Summer Fellowship
- **SL**: Service Learning Scholars
- **Stetson**: Milton H. Stetson Memorial Fellowship
- **USDA APHIS ITRCB**: United States Department of Agriculture, Animal & Plant Health Inspection Service International Technical Regulatory Capacity Building Center
1) Quincy Hardy, Food Science (EPSCoR) (Florida A&M University)
   Rolf Joerger, Animal & Food Sciences
   Comparison between Biofilm Formation of Listeria monocytogenes Isolates

2) Nicole Dowgos, Pre-Veterinary Medicine & Animal Biosciences (USDA APHIS ITRCB)
   Eric Benson & Robert Alphin, Animal & Food Sciences
   Impact of Organic Matter on Foot Bath Efficacy

3) Sarah Morrissey, Pre-Veterinary Medicine & Animal Biosciences (S&E)
   Eric Benson & Robert Alphin, Animal & Food Sciences
   Shedding Some Light on Poultry Production Management: Testing the Efficacy of Various Lighting Technologies in a Poultry House Setting

4) Kimberly Hildreth, Pre-Veterinary Medicine & Animal Biosciences (S&E)
   Robert Dyer, Animal & Food Sciences
   Expression of CD3/CD4 T Lymphocytes in Bovine Mesenteric Adipose Tissue

5) Jenna Wilson, Pre-Veterinary Medicine & Animal Biosciences (S&E)
   Robert Dyer, Animal & Food Sciences
   Expression of CD209 in Bovine Mesenteric Adipose Tissue

6) Annie Choi, Pre-Veterinary Medicine & Animal Biosciences (CANR Summer Institute)
   Tanya Gressley, Animal & Food Sciences
   Leukocyte Isolation from Intestinal Tissue of Cows

7) Kayla Neiderfer, Pre-Veterinary Medicine & Animal Biosciences (S&E)
   Tanya Gressley, Animal & Food Sciences
   Ability of Rumen Protected Methionine Products to Raise Milk Protein in Dairy Cows

8) Albert D’Agostino, Pre-Veterinary Medicine & Animal Biosciences (Allen Family Fellow)
   Calvin Keeler, Animal & Food Sciences
   Determining the Broiler Chicken Microbiome: What is it Composed of?

9) June Teichmann, Food Science (EPSCoR)
    Kalmia Kniel, Animal & Food Sciences
    The Effects of Multiplicity of Infection in Proliferation of Tidane Viruses

10) Paula Thomas, Animal & Food Sciences (McNair/ CANR)
    Kalmia Kniel, Department of Animal & Food Sciences
    Assessing the Application of Bacillus subtilis UD1022 for Reduction of Listeria monocytogenes on Cantaloupe Seeds

11) Abby Laubach, Animal & Food Sciences (Carmean Award)
    Limin Kung, Animal & Food Sciences
    Prevention of Dairy Cattle Feed Spoilage

12) Katherine Pacer, Pre-Veterinary Medicine & Animal Biosciences (S&E)
    Limin Kung, Animal & Food Sciences
    Ruminant Nutrition

13) Brenna Hanratty, Pre-Veterinary Medicine & Animal Biosciences (S&E)
    Carl Schmidt, Animal & Food Sciences
    Modeling the Time Course of a Heat Stress Response

14) Blair Schneider, Biological Sciences (S&E)
    Carl Schmidt, Animal & Food Sciences
    Transcriptome Analysis of Alligator Adipose

    Douglas Tallamy, Entomology & Wildlife Ecology
    The Effects of Roadside Habitat on Insect Traffic Mortality

16) Audrey Smylie, Environmental Science (CANR Summer Institute) (Lincoln University)
    Deborah Delaney, Entomology & Wildlife Ecology
    TBD

17) Shawn DelPercio, (EPSCoR) (DTCC)
    Shreeram Inamdar, Plant & Soil Sciences
    Water Quality of Brandywine Creek and Urban Runoff Sources in Wilmington

18) Sumaiya Ahmed, (EPSCoR) (Cheyney University)
    Angelia Seyfferth, Plant & Soil Sciences
    TBD

19) Jessica Mann, Biochemistry (EPSCoR)
    Angelia Seyfferth, Plant & Soil Sciences
    Arsenic Speciation in Rice: Effect of Soil Silicon Amendments on Arsenic Uptake

20) Samantha Weber, (EPSCoR) (Wesley)
    Stephanie Stotts, Environmental Studies (Wesley)
    The Relationship between Weather and Nutrient Export in the Crawford Treatment Wetland
21) Gina Zhu, (EPSCoR) (Wilmington Charter School)
Donald Sparks, Plant & Soil Sciences
Arsenic Accumulation in Aquatic Marsh Plants: Implications for Water Quality in Delaware

22) Suthep Prasertsanisuk, Biotechnology (EPSCoR) (DTCC)
Harsh Bais, Plant & Soil Sciences
Soil Amendment with Bacillus subtilis for Growth Promotion and Disease Resistance

23) Benjamin Wendt, Neuroscience (EPSCoR)
Donald Sparks, Plant & Soil Sciences
Arsenic Speciation According to Varying Reductive and Oxidative Electrochemical Levels

24) Savannah Stark, (National Science Foundation) (Warren Wilson College)
Harsh Bais, Plant & Soil Sciences
Insecticidal Activity of Cyanide-Producing Pseudomonas chlororaphis using the Model Host Galleria mellonella

25) Prian Vidal, (EPSCoR) (Florida A&M)
Donald Sparks, Plant & Soil Sciences
TBD

26) Liza Henowitz, Biological Sciences (National Science Foundation)
Janine Sherrier, Plant & Soil Sciences
The Phenotypic Analysis of Mutagenized Medicago truncatula Root Nodules

27) Simone Jimenez, Biological Sciences (CANR Summer Institute) (Florida International University)
Janine Sherrier, Plant & Soil Sciences
Identification of a Rhizobia Strain Efficient Enough to be Marketed as an Inoculant

28) Julia Winkeler, Plant Science (Allen Family Fellow)
Randall Wisser, Plant & Soil Sciences
A Study of Allelic Variation within an F2 Population of Maize using Genotyping by Sequencing Techniques

29) Anderson Watson, (EPSCoR) (Cheney University)
Eric Wommack, Plant & Soil Sciences
TBD

30) Nicole Place, (EPSCoR) (Cheney University)
Eric Wommack, Plant & Soil Sciences
The Complete Genomes of Two Novel Bradyrhizobium spp. and their Viruses using Single Molecule Real-time Sequencing

BIOLOGICAL SCIENCES

31) Nicolette Ioele, Computer Science (S&E)
Zohra Ali-Khan Catts, Biological Sciences
Coordinating Care for a Family with Familial Adenomatous Polyposis and Limited Access to Health and Preventative Resources

32) Christine Keywan, Biological Sciences (CPW BIO)
Zohra Ali-Khan Catts, Biological Sciences
Effectiveness of Universal Screening for Lynch Syndrome on Colorectal and Endometrial Patients

33) Erin Wadman, Biological Sciences (CPW BIO)
Zohra Ali-Khan Catts, Biological Sciences
Cancer Gene Panel Assessment

34) Priyha Mahesh, Biological Sciences (HHMI)
Melinda Duncan, Biological Sciences
Novel Markers in Lens Fibrosis

35) Troy Rubenstein, Biological Sciences (Stetson Award)
Melinda Duncan, Biological Sciences
Microtubule Associated Proteins Involvement in Lens Fiber Cell Elongation

36) Michael Wilson, Biological Sciences (Delaware INBRE)
Randall Duncan, Biological Sciences
Bone Pain from Metastatic Prostate Cancer May Be Mediated Through Purinergic Signaling

37) Usamah Ahmed (EPSCoR) (DSU)
Michael Gitcho, Biology (DSU)
The Myelination Protein, CNPase Interacts in Complex with TDP-43

38) Josh Barton, Biological Sciences/Neuroscience (Governor’s Biotech Award)
Salil Lachke, Biological Sciences
Molecular Characterization of Human Lens Epithelial Cell Lines and their Suitability to Study RNA Granules

39) Nathaniel Borders, Biological Sciences (CPW BIO)
Salil Lachke, Biological Sciences
A Novel BTB/POZ Domain Zinc Finger Transcription Factor Zbtb8b Functions in Lens Development

40) Brandon Baker (EPSCoR) (DSU)
Karl Miletti, Biology, (DSU)
RNA Interference to Study PDPN Regulation by CD44

41) Nazanin Sarpoulaki, Neuroscience (HHMI)
Robin Morgan, Biological Sciences
Expression of IFN Genes in Chicken Embryo Fibroblasts Infected with Herpes Virus of the Turkey Recombinants

42) Kaitlyn Duong, Biological Sciences (Delaware INBRE)
Anja Nohe, Biological Sciences
The Effects of Turmeric Extract on PC12 Cell Differentiation

43) Lauren Harper, Biological Sciences (HHMI)
Anja Nohe, Biological Sciences
Role of BMP in Stem Cell Differentiation

44) Prashanth Moku, Biological Sciences (CPW BIO)
Anja Nohe, Biological Sciences
Determining the Effects of FBS vs. Non-FBS Media in CK2.2 and CK2.3 Peptide Treatments
45) John Nixon, Biological Sciences (CPW BIO)  
Erica Selva, Biological Sciences  
Examining O-xylosyltrasferase Shedding and Extracellular Activity in Drosophila

46) Morgan Thomas, Biological Sciences/Neuroscience (S&E)  
Erica Selva, Biological Sciences  
The Role of N-linked Glycosylation in Drosophila Development

47) Seth Yauchuczek, Biological Sciences (CPW/S&E BIO)  
Jia Song, Biological Sciences  
Investigating Role of miR-31 in the ncWnt Pathway and the Displacement of Fz 5/8, 9/10 Receptors in S. purpuratus

48) David Chiat, Biological Sciences (HHMI)  
Anne Terrell, Interdisciplinary Science Learning Labs & Alenka Hlousek-Radojcic, Biological Sciences  
Say "Bye-O" to Fossil Fuels and Hello to Biofuels: Exploring the Production of Cellulosic Ethanol to Fuel Machinery and Student's Learning in the Integrated Undergraduate Laboratory

49) Laeyonna Blackstone, Engineering Physics/Biological Sciences (Delaware INBRE) (DSU)  
Melissa Harrington, Biology (DSU)  
An Investigation of How Low Expression of SMN Changes the Electrophysiological Properties of Motor Neurons in Motor Neuron Model

50) Young Lee, Biotechnology & Biological Sciences (Delaware INBRE) (DTCC)  
Y. Hwan Kim, Biology (DSU)  
Synergistic Damage of Commercially Available Environmental Toxins in Parkinson's Disease Models

51) Mika Heredia, Biology (Delaware INBRE) (DSU)  
Hakeem Lawal, Biology (DSU)  
Pharmacological Rescue of Mutations in the Vascular Acetylcholine Transporter in Drosophila

52) Mohana Gadde, Nursing (Delaware INBRE)  
Karl Miletti, Biology (DSU)  
The Effect of CD44-ICD Serine 291 and 325 Phosphorylation on CD44 Cell Signaling

53) Sai Kodali, Nursing (Delaware INBRE)  
Murali Temburni, Biology (DSU)  
Ratiometric Calcium Imaging in Chick Optic Tectum Astrocyte Cultures

54) Cannon Giglio, Chemistry (Plastino)  
Steven Brown, Chemistry & Biochemistry  
Outer Product Analysis for Calibration Transfer

55) Riza Bautista, Mathematics (Delaware INBRE) (Wesley College)  
Malcolm D'Souza, Chemistry (Wesley)  
Dying in Delaware – Impact of Obesity, County of Residence, Income, Gender, Education, and Race

56) Ariel Bilbrough, Biological Chemistry (Delaware INBRE) (Wesley College)  
Malcolm D'Souza, Chemistry (Wesley)  
Kinetic Analyses of Reaction Progress for Substituted Ethyl Chloroformates - Common Derivatization Reagents

57) Jasbir Deol, Biological Chemistry (Delaware INBRE) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Kinetics and Small-Molecule Synthesis using Chloroformate Esters

58) Robert Dina, Biological Chemistry (Delaware INBRE) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Comparative Analyses of the Reaction Rates of Seven Alkyl Chloroformates

59) Catherine Gross, Biochemistry (Delaware INBRE) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Obesity Trends - Nationally and in Delaware: GIS and SAS Analyses

60) Andreanna Jeffries, Biological Chemistry (Delaware INBRE/EPSCoR) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Mechanistic Studies of Decyl Chloroformate

61) Katrina Mitchell, Chemistry (EPSCoR) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Prudent Practices in the Storage, Handling and Disposal of Laboratory Chemicals

62) Momina Toseef, Biochemistry (Delaware INBRE/EPSCoR) (Wesley College)  
Malcolm D’Souza, Chemistry (Wesley)  
Analysis of the Alcoholyis of Lauryl Chloroformate

63) Nikifar Lazouski, Chemical Engineering/Chemistry (Plastino)  
Joseph Fox, Chemistry & Biochemistry  
Enzymatic Turn-on of Tetrazine Ligation

64) Hannah Wästyk, Biochemistry/Neuroscience (Hofmann Scholar/HHMI)  
Catherine Grimes, Chemistry & Biochemistry  
Biochemical Characterization of the Interaction between an Innate Immune Receptor Nod2 and its Chaperones

65) Gabriel Gregorzak, Chemistry (HHMI)  
Catherine Grimes, Chemistry & Biochemistry  
Synthesis of Artificial Bacterial Cell Wall Fragments as Tools to Study the Innate Immune System

66) Tyler Heiss, Biochemistry (HHMI)  
Catherine Grimes, Chemistry & Biochemistry  
Synthesis of Bacterial Cell Wall Fragment Derivatives in Order to Investigate the Promiscuity of the Mur Enzymes
67) Shelby Roseman, Chemistry (Plastino)
John Koh, Chemistry & Biochemistry
AF4–AF9 Protein-Protein Interaction Inhibitor: Synthesis and Biological Evaluation

68) Kurt Deixler, (EPSCoR) (DSU)
Dula Man, Chemistry (DSU)
Fabrication of a Core-Sheath Nanofiber Mesh Using PCL and PEO-PEG Composite Polymers

69) Sarah Wong, Medical Diagnostics (IWSTEM/Delaware INBRE/Siemens)
Dara Morey, Analytical Services (Siemens Healthcare Diagnostics)
Test Method Characterization of Metrohm 905 Titroline Automated Titration System for Analysis of Nitric Acid and Sodium Hydroxide

70) Alexander Northrup, Chemistry (HHMI)
Tatyana Polenova, Chemistry & Biochemistry
Protein Structure Refinement Using DFT Calculated Chemical Shift Tensors

71) Thomas Keane, Chemistry (HHMI)
Joel Rosenthal, Chemistry & Biochemistry
Electrochemical Conversion of CO2 to CO

72) Taylor Paskey, Chemistry (Plastino)
Joel Rosenthal, Chemistry & Biochemistry
The Synthesis of Cobalt Tetrapyrrole Macrocycles and Activity for Dioxygen Reduction to Water or Hydrogen Peroxide

73) Brian Tran, Chemistry (Heitzer/Chemisty S&E)
Klaus Theopold, Chemistry & Biochemistry
Attempts at Reducing [Cp*Cr(μ-Cl)]2

74) Ryan Kozlowski, Chemistry (REACT)
Donald Watson, Chemistry & Biochemistry
Towards the Formation of a-Chiral Amides via Palladium-Catalyzed Decarboxylation of O-Acyl Hydroxamates

75) Alex Manders, Chemistry (Plastino)
Mary Watson, Chemistry & Biochemistry
Enantiospecific Allylic Arylations to form Quaternary Stereocenters

76) Jacob Piane, Chemistry (S&E)
Mary Watson, Chemistry & Biochemistry
Development of a Nickel Catalyzed Cross Coupling between Benzylidene Pyridinium Salts and Aryl Boronic Acids

77) Jesse Spillane, Biochemistry (S&E)
Donald Watson, Chemistry & Biochemistry
The Boryl-Heck Reaction: A Novel Route to Vinyl Boronic Esters

78) Caroline Vesper, Chemistry (Plastino)
Donald Watson, Chemistry & Biochemistry
Synthesis and Development of the Aza-Heck Reaction

79) Nicole Wenzell, Biochemistry (Plastino)
Neal Zondlo, Chemistry & Biochemistry
Tuning π–π* Interaction in Designed Peptides

80) Jennifer Cederberg, (National Science Foundation) (Millersville University)
Klaus Theopold, Chemistry & Biochemistry
Chromium Complex of a Tris(pyrazolyl)borate Ligand

81) Marvel Davis, (National Science Foundation) (Western Oregon University)
Thomas Beebe, Chemistry & Biochemistry
Tempera Degradation in Varied Environments

82) Andrew Jemas, (National Science Foundation) (Rider University)
Brian Bahnson, Chemistry & Biochemistry
Biochemical Characterization of Neutral Cholesterol Ester Hydrolase 1, NCEH1, A Membrane Bound Serine Hydrolase

83) Bryce Lipinski, (National Science Foundation) (Siena College)
John Koh, Chemistry & Biochemistry
Design and Synthesis of 2,4-DiPAM Sugar to Combat Organophosphorus Compounds

84) Elliott Purdie, (National Science Foundation) (Ursinus College)
Karl Booksh, Chemistry & Biochemistry
Identifying the Characteristics of Thin Films through Raman and Infrared Spectroscopy

85) Dana Reigner, (National Science Foundation) (Arcadia University)
Neal Zondlo, Chemistry & Biochemistry
Using C-H/pi Interactions for the Synthesis of Dipeptide-Based Hydrogels

86) Melissa Rifkin, (National Science Foundation) (Dickinson College)
Sharon Neal, Chemistry & Biochemistry
Singlet Oxygen Production of Polycyclic Aromatic Hydrocarbons in Octanol

87) Mathilda Willoughby, (National Science Foundation) (Westminster College)
Sharon Rozovsky, Chemistry & Biochemistry
Cloning and Site Directed Mutagenesis of Human Selenoprotein T for Expression in E. coli

88) Dominic Santoleri, Biochemistry/Quantitative Biology (HHMI)
Sharon Rozovsky, Chemistry & Biochemistry
Analyzing the Structure/Function Relationship between Different Thioredoxin Mutants

89) Jay Subramoney, Biochemistry (HHMI)
Sharon Rozovsky, Chemistry & Biochemistry
Development of Activity Assays for Selenocysteine-Containing Thioredoxins
90) Clarke Snell, Biochemistry (S&E/NUCLEUS)  
Zhihao Zhuang, Chemistry & Biochemistry  
*Imidazole Purified Ubiquitin Assays Increasing Protease Degradation*

91) Jessica Bursler, Biological Sciences (HHMI)  
Trevor Daly, Interdisciplinary Science Learning Labs & Mark Baillie, Chemistry & Biochemistry  
*Carbon Dioxide Cycles: Exploring and Integrating the Significance of CO2 in the Undergraduate Laboratory*

### GEOLOGICAL SCIENCES

92) Kara Hoppes, Environmental Science/Geology (EPSCoR)  
Clara Chan, Geological Sciences  
*Biomineralization of Iron-Oxide Sand Coatings within Groundwater Systems; Quantification and Required Environmental Conditions*

### MARINE SCIENCE & POLICY

93) Patrick Duffy, Marine Science (S&E)  
Jonathan Cohen, Marine Science & Policy  
*The Role of Fish Kairomones in Zooplankton Predator Avoidance*

94) Haley Glos, Marine Science (S&E)  
Jonathan Cohen, Marine Science & Policy  
*Seasonal Patterns of Zooplankton Biomass in the Delaware Bay*

95) Alexa Bennett, Marine Science (EPSCoR)  
Thomas Hanson, Marine Science & Policy  
*Rapid Characterization and Nitrogen Fixation Potential Screening of Relevant Alaskan Tundra Soil Microbes*

96) Leah Morgan, Marine Science (S&E)  
Douglas Miller, Marine Science & Policy  
*Effect of Incidental Mortality of Sea Scallop of the Western Atlantic Ocean on its Predator/Prey Relationships*

97) Ella Rothermel, Marine Science (S&E)  
Douglas Miller, Marine Science & Policy  
*Analysis of Historical Benthic Survey Data in the Delaware Bay using Modern Multivariate Statistical Techniques*

### ENVIRONMENTAL SCIENCE

98) Katie Bielicki, (EPSCoR) (DSU)  
Kevina Vulinec, Agriculture & Natural Resources (DSU)  
*Bat Activity and Insect Biomass: A Study at the Aquaculture Facility using Acoustic Detectors*

99) Peter DeMarreau, (EPSCoR) (DSU)  
Gulnihal Ozbay, Agriculture & Natural Resources, (DSU)  
*Validation of Sample Processing Techniques Used to Determine the Microbiological Quality of Eastern Oysters (Crassostrea virginica)*

100) Ashley Denny, (EPSCoR) (DTCC)  
Environmental Science, (DNREC)  
*TBD*

101) Izzaak Donohoe, (EPSCoR) (DTCC)  
Environmental Science, (DNREC)  
*Invasive Species of Delaware’s Southern State Parks*

102) Sharon Dutton, (EPSCoR) (DTCC)  
Environmental Science, (DNREC)  
*Delaware’s 2015 National Coastal Condition Assessment*

103) Joseph Hec, (EPSCoR) (DSU)  
Gulnihal Ozbay, Agriculture & Natural Resources (DSU)  
*The Effects of Spay-Neuter Release Programs on Feral Cat Populations in Delaware City*

104) Adrienne Holliday, (EPSCoR) (DSU)  
Karuna Chintapenta, Agriculture & Natural Resources (DSU)  
*Comparison and Validation of Two Popular Commercial Genomic DNA Isolation Kits*

105) Benjamin Jenkins, (EPSCoR) (DSU)  
Gulnihal Ozbay, Agriculture & Natural Resources (DSU)  
*Investigating the Influence of Barometric Pressure on the Feeding Activity of Blue Crabs (Callinectes sapidus) in Blackbird Creek, Delaware*

106) Omolade Oludare, (EPSCoR) (DSU)  
Kalpalatha Melmaiee, Agriculture & Natural Resources (DSU)  
*The Comparative Analysis between the Varieties of Organic Blueberry*

107) Anne Thomas, Food Science (EPSCoR) (DSU)  
Brigid McCrea, Agriculture & Natural Resources (DSU)  
*The Effects of LuvNest® on Egg Quality*

108) John Dougherty, (EPSCoR) (Wesley College)  
Stephanie Stotts, Environmental Studies (Wesley)  
*Delaware Wetland Restoration Strategies: Does Planting Make a Difference after 15 Years*

109) Lihoshimar Gonzalez, (EPSCoR) (Wesley College)  
Stephanie Stotts, Environmental Studies (Wesley)  
*Master Chronology of Juniperus virginiana at the St. Jones River, Dover De*

110) Savanah Love, Chemical Engineering (EPSCoR) (Wesley College)  
Stephanie Stotts, Environmental Studies (Wesley)  
*Tree Inventory on Wesley College Campus*

111) Michael Skivers, (EPSCoR) (Wesley College)  
Jennifer DeMooy, DNREC (Wesley)  
*Increasing the Accessibility of Green Infrastructure Design to Businesses in Delaware*

112) Brooke Thompson, (EPSCoR) (Wesley College)  
Stephanie Stotts, Environmental Studies (Wesley)  
*Water Quality Comparison between Input and Output of Silver Lake*
POSTER SESSION II

(Christiana Care, Nemours Biomedical Research, Medical Laboratory Sciences, Neuroscience, Psychology, Delaware Rehabilitation Institute, Kinesiology & Applied Physiology, Physical Therapy, Nursing, Behavioral Health & Nutrition, Cooperative Extension, Center for Research in Education & Social Policy, Analytics, Anthropology, Economics, Education & Human Development, Linguistics & Cognitive Science, Sociology & Criminal Justice, Policy, ArtsBridge)

CHRISTIANA CARE

1) Kyle Plusch, Biological Sciences (Delaware INBRE)
Andrew Doorey, Cardiology (Christiana Care)
Assessment of Radiation Safety Techniques in the Cardiac Catheterization Lab

2) Andre Jones, Medical Technology (Delaware INBRE)
(Wesley College)
Leroi Hicks, Research, Family & Community Medicine (Christiana Care)
U.S. News and World Report's Ranking: Validating the Top 17 Honor Roll List

3) Elyse Andrews, Exercise Science (Delaware INBRE)
Kristopher Fayock, Sports Medicine (Christiana Care)
Concussion Clinic Chart Review for Patients Over 40 Years Old

4) Rebecca Kowalski, Biomedical Engineering (Delaware INBRE)
Ryan Arnold, Surgical Critical Care (Christiana Care)
Compliance with Plasma and Platelet Transfusion Guidelines in Patients with Gun Shot Wounds

5) Dionne Williams, Biological Chemistry (Delaware INBRE)
(Lewis College)
Luis Cardenas, Surgical Critical Care (Christiana Care)
Risk Stratification using GCS and Head CT in Patient with Traumatic Brain Injury on Dabigatran and Rivaroxaban

6) Jillian Buck, Nursing (Delaware INBRE)
Sandra Medinilla, Surgical Critical Care (Christiana Care)
A Silent Cry for Help: The Need for a Hospital-Based Gun Violence Program

7) Megan Durrant, Medical Technology (Delaware INBRE)
(Wesley College)
Timothy Manzone, Nuclear Medicine (Christiana Care)

8) Carla Miguel, Biological Sciences/Neuroscience (Delaware INBRE)
Sherry Sixta, Family Medicine (Christiana Care)
Transfusion Protocol Non-compliance May Result in Greater Deaths in Trauma Patients

9) Dunia Tonob, Anthropology (Delaware INBRE)
Roshni Guerry, Hospice & Palliative Medicine (Christiana Care)
Capturing the Value of Palliative Medicine in the Medical Intensive Care Unit

10) Sarah Pingar, Neuroscience (Delaware INBRE)
John Deutsch, CRNA & Dmitry Gorelik, Anesthesiology (Christiana Care)
Peripheral Nerve Block Catheters versus Single Shot Nerve Blocks for Post-Operative Pain Control

NEMOURS BIOMEDICAL RESEARCH

11) Michael Foster, Biomedical Science (Nemours) (University of Rochester)
Robert Akins, Nemours Biomedical Research (Nemours) TBD

12) Jason Liu, Biomedical Science (NSURP) (Duke University)
Robert Akins, Nemours Biomedical Research (Nemours) TBD

13) Madison Lodge, Biomedical Science (Nemours) (Claremont McKenna College)
Robert Akins, Nemours Biomedical Research (Nemours) TBD

14) Aneesha Cheedalla, Biomedical Science (NSURP) (Rutgers University)
Deepthi Alapati, Nemours Biomedical Research (Nemours) TBD

15) Erin Healey, Biomedical Science (NSURP) (Villanova University)
Arabinda Choudhary, Nemours Biomedical Research (Nemours)
MR Imaging Features and Incidence of Ischiofemoral Impingement in Children

16) Johanna Taylor, Biomedical Science (OHEI-HESSP)
Kirk Dabney, Nemours Biomedical Research (Nemours)
Clinical Epidemiologic Characterization of Pediatric Cerebral Palsies: Race and Comorbidities Assessment
17) Lacey Perdue, Biomedical Science (Nemours)
Matt DiGuglielmo, Nemours Biomedical Research (Nemours)
The Human Guanylyl Cyclase C Signaling Pathway: A Study in Satiety Regulation in Pediatric Obesity by Comparing Tissue Expression in Average and Overweight Children Using Immunohistochemistry

18) Christine Bowen, Biomedical Science (NSURP) (Appalachian State University)
Vicky Fananje & Susan Kirwin, Nemours Biomedical Research (Nemours)
The Effect of TRPV4 Channel Mutations on RNA Splicing and Cellular Localization

19) Emily Bollinger, Biology (Delaware INBRE) (Bucknell University)
Anil Gopalakrishnapillai, Nemours Biomedical Research (Nemours)
Dorsomorphin Inhibits Extracellular Signal-Regulated Kinase 1/2 and Suppresses the Viability of Pediatric Acute Myeloid Leukemic Cell Lines

20) Joseph Casini, Biomedical Science (OHEI-HESSP) (Villanova University)
Laurens Holmes, Nemours Biomedical Research (Nemours)

21) Alyssa Lattomus, Biomedical Science (Delaware INBRE) (Washington College)
Anne Kazak, Nemours Biomedical Research (Nemours)
Screening for Family Psychosocial Risk in Pediatrics: The Psychosocial Assessment Tool (PAT)

22) Emily Min, Biomedical Science (NSURP) (Georgetown University)
Katherine King, Nemours Biomedical Research (Nemours)
Impact of Environmental Pollution and Geography on Pediatric Respiratory-Related Hospitalization Rate in Delaware from 2010-2012: A Retrospective Study

23) Ryan Alton, Biological Sciences (Delaware INBRE) (DTCC)
Freeman Miller & Chris Church, Nemours Biomedical Research (Nemours)
Longitudinal Change in Foot Posture in Children with Cerebral Palsy

24) Jacqueline Tucker, Biomedical Engineering (NSURP) (Penn State)
Joseph Piatt, Nemours Biomedical Research (Nemours)
Benign Enlargement of the Subarachnoid Spaces: A Complicating Factor in Child Abuse Evaluations

25) Jennifer Rutishauser, Biomedical Science (NSURP) (Fordham University)
Julia Sees & Nancy Lennon, Nemours Biomedical Research (Nemours)
TBD

26) Martha Lopez, Neuroscience (NSURP)
Mary Theroux, Nemours Biomedical Research (Nemours)
Metatropic Dysplasia: Small Patients that Present a Large Anesthetic Challenge

27) Laura Chadsey, Biomedical Science (NSURP)
Shunji Tomatsu, Nemours Biomedical Research (Nemours)
TBD

MEDICAL LABORATORY SCIENCES

28) Caitlin Blades, Foreign Languages & Literature (McNair)
Arun Kumar, Medical Laboratory Sciences
Nanoparticle Treatment to Inflammatory Breast Cancer Cells

29) Diamond Higgin, Neuroscience (McNair)
Arun Kumar, Medical Laboratory Sciences
Topographical Changes of Bone Marrow Stem Cells Differentiating into Cardiac Cells on Nanoscaffolds

30) Shannon Marshall, Physics (McNair)
Arun Kumar, Medical Laboratory Sciences
Time Lapse Assessment of the ANP Production of BMSCs Differentiated on Nanofiber Scaffolding

31) Nrupa Patel, Medical Laboratory Science (NUCLEUS)
Arun Kumar, Medical Laboratory Sciences
The Effects of Nano Curcumin Treatment on Inflammatory Breast Cells

32) Nicholas Chubbs, Biological Sciences (CPW BIO)
Jennifer Sims-Mourtada, Medical Laboratory Sciences
Effect of IL-6-STAT3 Pathway Inhibition on Breast Cancer Cells

NEUROSCIENCE

33) Margaret Donahue, Neuroscience (S&E)
Amy Griffin, Psychological & Brain Sciences
Investigating the Role of the Thalamic Nucleus Reuniens in Spatial Working Memory

34) Shaqran Shareeq, Neuroscience (S&E)
Anna Klintsova, Psychological & Brain Sciences
Apoptosis in the Prefrontal Cortex following One-day Binge Ethanol Exposure

35) Thomas DePietro, Neuroscience/Philosophy (S&E)
Dayan Knox, Psychological & Brain Sciences
The Role of the PI3K Signaling Pathway in SPS Extinction Deficits

36) Jennifer Staib, Neuroscience (S&E)
Dayan Knox, Psychological & Brain Sciences
The Role of Cholinergic Input to the Hippocampus in Contextual and Extinction Memory

37) Dan Sangiamo, Neuroscience/Psychology (S&E)
Joshua Neunuebel, Psychological & Brain Sciences
Investigating the Relationship between Ultrasonic Vocalizations and Aggressive Behavior
38) Xiaxin Zhong, Neuroscience/Psychology (S&E)  
Joshua Neunuebel, Psychological & Brain Sciences  
Examining the Role of Mouse Ultrasonic Vocalizations during Exploration in a Novel Environment

39) Adam Draper, Neuroscience (S&E)  
Jeffery Rosen, Psychological & Brain Sciences  
Optogenetic Inhibition of Corticotropin-releasing Factor Neurons in the Central Nucleus of the Amygdala during Contextual Fear Conditioning

40) Azeem Saheb, (National Science Foundation) (Georgia State University)  
Jeffrey Rosen, Psychological & Brain Sciences  
An egr-1 (zif268) Anti-Sense Oligodeoxynucleotide Infused into the Prefrontal Cortex and the Disruption of Fear Conditioning

41) Angela Maggio, Neuroscience (Delaware INBRE)  
Tania Roth, Psychological & Brain Sciences  
Characterizing Bdnf Methylation in the Adult Insula after Early-life Maltreatment in Rats

42) Alyssa Ohara, Biological Sciences (S&E)  
Tania Roth, Psychological & Brain Sciences  
Influence of a Histone Deacetylase Inhibitor on DNA Methylation of Bdnf within the Infant Prefrontal Cortex

43) Lauren Webb, Neuroscience (S&E)  
Tania Roth, Psychological & Brain Sciences  
Attachment-Based Learning and BDNF Gene Expression in the Infant Rat Olfactory Bulb

44) Rachel Metzgar, Biological Sciences/Neuroscience (S&E)  
Jaclyn Schwarz, Psychological & Brain Sciences  
Impact of Sex and Neonatal Infection on Neuroimmune and Peripheral Immune Responses in the Juvenile Rat

45) Samantha Solomotis, Psychology (S&E)  
Jaclyn Schwarz, Psychological & Brain Sciences  
Impact of Neonatal Neuroimmune Activation on Learning and Memory in Juvenile Rats

46) Laurne Terasaki, Neuroscience (S&E)  
Jaclyn Schwarz, Psychological & Brain Sciences  
The Impact of Moderate Prenatal Alcohol Exposure on the Peripheral Immune System and Cognition in Adult Rat Offspring

47) Julie Gomez, Neuroscience (McNair)  
Jaclyn Schwarz, Psychological & Brain Sciences  
Impact of Neonatal Infection on Juvenile Immune and Brain Function

PSYCHOLOGY

48) Alexa Meinhardt, Biological Sciences (S&E)  
Timothy Fowles, Psychological & Brain Sciences  
A Preliminary Study of Early Intervention on Incidence of Hospitalization, Attitudes, and Outcome of Individuals Identified as at-risk for Psychosis

49) Sara Fields, Psychology (S&E)  
Jean-Philippe Laurenceau, Psychological & Brain Sciences  
Fear of Cancer Recurrence in Couples coping with Breast Cancer

50) Michael Grzenda, Neuroscience (Delaware INBRE)  
Jared Medina, Psychological & Brain Sciences  
Location Dependent Differences in the Hand Representations of Stroke Patients

51) Hannah Schwartz, Linguistics (S&E)  
Anna Papafragou, Psychological & Brain Sciences  
Cross-Linguistic Variation and the Learnability of Semantic Systems

52) Sarah Sweigart, Economics/Psychology (S&E)  
Timothy Vickery, Psychological & Brain Sciences  
Perception of Patterns in Humans, Computers, and Nature

53) Chau Nguyen, Psychology (McNair)  
Chad Forbes, Psychological & Brain Sciences  
BDNF Polymorphisms Bias Encoding of Negative Information Received in Stereotype Threatening Contexts

54) Michael Harvey, Psychology (S&E)  
Lisa Jaremka, Psychological & Brain Sciences  
TBD

DELAWARE REHABILITATION INSTITUTE

55) William Justice, Movement Science (Delaware INBRE) (DSU)  
Brian Knarr, Delaware Rehabilitation Institute  
Which Partial Weight Bearing Percentage Will be Easiest for Patients to Comply With?

56) Gillian McCarren, Athletic Training (Delaware INBRE) (Towson University)  
Brian Knarr, Delaware Rehabilitation Institute  
Reducing Torque on the Low Back of Golfers

KINESIOLOGY & APPLIED PHYSIOLOGY

57) Amy Bednarek, Athletic Training (S&E)  
Thomas Buckley, Kinesiology & Applied Physiology  
A Comparison of Clinical Reaction Time (CRT): Dominant vs. Non-Dominant Hand

58) Dana Coyle, Exercise Science (S&E)  
William Farquhar, Kinesiology & Applied Physiology  
Acute and Chronic Increases in Serum Sodium and Blood Pressure Variability in Normotensive Humans

59) Ameg Dalpiaz, Exercise Science  
William Farquhar, Kinesiology & Applied Physiology  
Nocturnal Blood Pressure Dipping Responses in Males and Females during Low Salt and High Salt Diets
60) Emily Wunsch, Exercise Science (S&E)
Nancy Getchell, Kinesiology & Applied Physiology
Near-Infrared Spectroscopic Analysis of Retention and Transfer: Random Practice vs. Blocked Practice

61) Michael Stant, Athletic Training (S&E)
Thomas Kaminski, Kinesiology & Applied Physiology
Investigation of Ankle Sprain Rehabilitation Contrasting RICE versus Micro-Mobile Compression

62) Andrew Kuczmarski, Exercise Science (S&E)
Meghan Wenner, Kinesiology & Applied Physiology
Role of Endothelin-1 in Regulating Vascular Function in Young Men and Women

63) Paula-Marie Ferrara, Exercise Science (Delaware INBRE)
Elisa Arch, Kinesiology & Applied Physiology
The Influence of Passive-Dynamic Ankle-Foot Orthosis Bending Stiffness on the Metabolic Cost of Walking: A Case Study

64) Bretta Fylstra, Biomedical Engineering (Delaware INBRE)
Elisa Arch, Kinesiology & Applied Physiology
Evaluating the Conservation of Ankle-Foot Power Paradigm Using Custom 3D-printed Footplates

65) David Rathmanner, Biomedical Engineering (Delaware INBRE)
Elisa Arch, Kinesiology & Applied Physiology
A Comparison of the Kinematics and Energies of Shank Progression for Different Prosthetic Ankle-Foot Systems during Gait

66) Kimberly Rowe, Biomedical Engineering (Delaware INBRE)
Elisa Arch, Kinesiology & Applied Physiology
Design and Testing of a Novel Device to Quantify Plantar Flexor Muscle Function

67) Devon Grant Jr., Medical Laboratory Sciences/Medical Diagnostics (Delaware INBRE)
Rhonda Prisby, Kinesiology & Applied Physiology
Utilizing Animal Models to Study Bone Vascular Physiology and Morphology

PHYSICAL THERAPY

68) Proggya Gupta, Biological Sciences (NUCLEUS) & Susanna Trost, Biological Sciences (S&E)
Anjana Bhat, Physical Therapy
Effects of Yoga-Based Interventions on School-going Children with Autism Spectrum Disorder

69) Lieke O'Regan, Cognitive Science (Delaware INBRE)
Anjana Bhat, Physical Therapy
Needs Assessment for Individuals with Autism Spectrum Disorder

70) Thomas Zabielski, Exercise Science (Delaware INBRE)
Stuart Binder-Macleod, Physical Therapy
Validity of Measurements of Peak vs Impulse in Anterior Ground Reaction Forces during Gait in Individuals Poststroke

71) Chloe Gordon, Exercise Science (S&E)
Stuart Binder-Macleod, Physical Therapy
The Role of Cortical Inhibition in Walking Function in Individuals with Chronic Stroke

72) Kaleigh Prendergast, Exercise Science (S&E)
Cole Galloway, Physical Therapy
Harnessing the Power to Explore: Effects of an Open Area, Body Weight Support System

73) Marjelle Scheffers, Biomedical Engineering (S&E)
Michele Lobo, Physical Therapy
Assisting Elbow Flexion in Children with Arthrogryposis through a Wearable Device that Complements the Current PlaySkin Lift™ Exoskeletal Garment

74) Naimisha Movva, Biological Sciences/Psychology (Delaware INBRE)
Michele Lobo, Physical Therapy
Reaching New Levels with the PlaySkin Lift™ Exoskeletal Garment for Pre-term Infants

75) Menki Chen, Exercise Science (McNair)
Susanne Morton, Physical Therapy
Noninvasive Brain Stimulation and Physical Therapy for Rehabilitation for Chronic Stroke

76) Justin Pepper, Biomedical Engineering (Delaware Rehabilitation Institute)
Darcy Reisman, Physical Therapy
Learning a Novel Walking Task Post Stroke

77) Christina Rodriguez, Exercise Science (Delaware INBRE)
Megan Sions, Physical Therapy
Inter-examiner Measurement Reliability for Structural Canal Assessment in Older Adults with Chronic Low Back Pain

NURSING

78) Carly Piel, Medical Diagnostics (Hofmann Scholar)
Ingrid Pretzer-Aboff, Nursing
Parkinson’s Disease and Caregiver Stress

79) Brittany Porter, Exercise Science (S&E)
Ingrid Pretzer-Aboff, Nursing
Effect of Exercise in Parkinson’s Disease Motor and Non-motor Symptoms

BEHAVIORAL HEALTH & NUTRITION

80) Mackenzie Perkett, Health Behavior Science (Helen Pattison)
Mia Papas, Behavioral Health & Nutrition
The Prevalence of Limited Health Literacy in Low-Income Latina Women

81) Christina Wysota, Health Behavior Science (Helen Pattison)
Mia Papas, Behavioral Health & Nutrition
Applying the Transtheoretical Model to Health Behaviors of Latina Mothers
**COOPERATIVE EXTENSION**

82) Madeline Rouviere, Health Sciences (Extension Scholars)  
Sue Snider, Cooperative Extension Nutrition  
*Work with New Castle County EFNEP and 4-H Staff with Summer Nutrition Programs*

83) Megan O’Day, Agriculture & Natural Resources (Extension Scholars)  
Sue Snider, Cooperative Extension Nutrition  
*Work with Kent and Sussex County EFNEP and 4-H Staff with Summer Nutrition Programs*

**CENTER FOR RESEARCH IN EDUCATION & SOCIAL POLICY**

84) Nicole Filion, (CRESPP)  
Allison Karpyn, Center for Research in Education & Social Policy  
*Bringing Urban Agriculture to Wilmington: A Case Study Approach*

85) Samantha Marks, (CRESPP)  
Allison Karpyn, Center for Research in Education & Social Policy  
*Tastimals - Animal Advertising and Children's Dietary Choices*

86) Spencer Hoernes, Food Science (SL Fellow)  
Allison Karpyn, Center for Research in Education and Social Policy  
Community Partner: Lutheran Community Services  
*Plant Power*

**ANTHROPOLOGY**

87) Monique Robinson, Animal & Food Sciences (McNair)  
Karen Rosenberg, Anthropology  
*Sexing Based on Fragmentary Bone Material*

**ECONOMICS**

88) Cory Cutsail, Mathematics/Economics (McNair)  
Jorge Soares, Economics  
*Estate Taxation and Human Capital Investment*

**EDUCATION & HUMAN DEVELOPMENT**

89) Emily Horwitz, Neuroscience (Delaware INBRE) (Amherst College)  
Roberta Golinkoff, School of Education  
*Statistical Learning across Categories*

**LINGUISTICS & COGNITIVE SCIENCE**

90) Naiim Mason, Cognitive Science/Linguistics (NUCLEUS)  
Peter Cole, Linguistics & Cognitive Science  
*Linguistic Framing: How Path and Manner are Expressed in Eastern Javanese*

**SOCIODEMOCRACY & CRIMINAL JUSTICE**

91) Eluamuno Enenmo, Computer Science (McNair)  
Benigno Aguirre, Sociology & Criminal Justice  
*Dynamic Model of Leadership in Groups*

92) Hugh Bayard, Psychology (McNair)  
Benjamin Fleury-Steiner, Sociology & Criminal Justice  
*Ex-offenders and the Pardon Process*

93) Brandon Bristor & Megan Hewitt, Criminal Justice/ Sociology (SL Fellow)  
Patricia Young & Tricia Wachtendorf, Disaster Research Center  
Community Partner: Delaware Disaster Assistance Team  
*Preservation Planning Alliance (PPA)*

**POLICY**

94) Gnanadesikan Somasundaram, Energy & Environmental Policy (EPSCoR)  
Lawrence Agbenabiese, Energy & Environmental Policy  
*The 2015 Heatwaves in India: A Review of Responses and Lessons for Developing Countries*

95) Ahmad Abdullah, Energy & Environmental Policy (EPSCoR)  
John Bryne, Energy & Environmental Policy  
*Implementation of the Sustainable Energy Utility (SEU) Model in Pennsylvania*

**ARTSBRIDGE**

96) Jenna Sbraccia, Cognitive Science (ArtsBridge)  
Lynnette Overby, Theatre  
*Alphabet Boogie: Speech, Communication, and Movement*

97) Ikira Peace, Communication (ArtsBridge)  
Lynnette Overby, Theatre  
"Take Physical Therapy by the Hand and Dance": A Play Intervention Study on Children with Autism
POSTER SESSION III
(Mathematical Sciences, Physics & Astronomy; Engineering: Biomedical, Mechanical, Chemical & Biomolecular, Civil & Environmental, Materials Science, Computer & Information Sciences, Electrical & Computer, Catalysis Center for Energy Innovation, Center for Composite Materials)

MATHMATICAL SCIENCES

1) Felix Ackon, Statistics (SF)
   Nayantara Bhatnagar, Mathematical Sciences
   Biased Shuffling Markov Chains

2) Laura Cahill, Quantitative Biology (NSF-REU)
   Richard Braun, Mathematical Sciences
   Building up to Numerical Solution of PDEs for the Tear Film

3) Spencer Walker, Mathematical Sciences/Physics
   Richard Braun, Mathematical Sciences
   Mechanics of Ionomer Fuel Cell Membrane

4) Briana Lamet, Mathematical Sciences/Computer Science (S&E)
   Sebastian Cioaba, Mathematical Sciences
   Intersecting Family of Triangulations

5) Yi Zhang, Mathematical Sciences/Economics (S&E)
   Sebastian Cioaba, Mathematical Sciences
   How to Disconnect Graphs Efficiently

6) Joseph Brosch, Mathematical Sciences/Physics (NSF-REU)
   Tobin Driscoll & Richard Braun, Mathematical Sciences
   Blink Characterization using Curve Fitting and Clustering Algorithms

7) Wenbin Li, Mathematical Sciences (NSF)
   David A. Edwards, Mathematical Sciences
   Estimating Rate Constant for a Multicomponent Reaction

8) Jinjibang Wang, Mathematical Sciences/Economics (S&E)
   Pak-Wing Fok, Mathematical Sciences
   Numerical Method for Valuing Information in the Newsvendor Model

9) Jaspal Nijjar, Mathematical Sciences (S&E)
   Francisco Sayas, Mathematical Sciences
   Modeling the Effect of Seismic Waves on Rigid and Soft Bodies through Elasticity Theory and the Finite Element Method

PHYSICS & ASTRONOMY

10) Cristina Padovani, Medical Laboratory Science (HHMI)
    Christina Wesolek, Interdisciplinary Science Learning Labs & Adebanjo Oriade, Physics & Astronomy
    Rectangular Room Acoustics: How Loud is Too Loud?
    “Redesigning” the PBL Room

BIOMEDICAL ENGINEERING

11) Courtney Cox, Biomedical Engineering (S&E)
    Daniel Cortes Correales, Biomedical Engineering
    Novel Method of Evaluating Viscoelastic Properties of Patellar Tendon

12) Margaret Billingsley, Biomedical Engineering (S&E)
    Emily Day, Biomedical Engineering
    EGFR-Targeted Nanoparticles to Improve the Detection Limit of Circulating Tumor Cells

13) Zakary Chiaradia, Biomedical Engineering (S&E)
    Emily Day, Biomedical Engineering
    Evaluating the Role of Gli1 in Inflammatory Breast Cancer Chemosensitivity

14) Nichol Reisher, Biomedical Engineering (S&E)
    Dawn Elliott, Biomedical Engineering
    Comparison of Animal Discs Used in Disc Research to Human Lumbar Disc: Collagen Fiber Angle and Lamellar Thickness

15) Julia Pezick, Biomedical Engineering (S&E)
    Dawn Elliott, Biomedical Engineering
    Comparing the Failure Modes of Bovine Menisci with and without Notches

16) Erica Comber, Biomedical Engineering (S&E)
    Jason Gleghorn, Biomedical Engineering
    Generating Self-Assembled In-Vitro Endothelial Networks

17) Peter Sariano, Biomedical Engineering (S&E)
    Jason Gleghorn, Biomedical Engineering
    High Resolution Spatiotemporal Imaging of Embryonic Lungs and Kidneys

18) Cedric Whitney, Biomedical Engineering/Neuroscience (Delaware INBRE)
    Jason Gleghorn, Biomedical Engineering
    Analysis of 3D Cellular Traction Forces

19) Stephen Buchanan, Mechanical Engineering (S&E)
    Jill Higginson, Biomedical Engineering
    Testing of a Human-exoskeleton Hybrid Walking Model Designed to Produce Stable Gait

20) Maria Nicholson, Biomedical Engineering (S&E)
    Jill Higginson, Biomedical Engineering
    Knee Contact Forces and Cost of Locomotion in Constant Stride Length Walking Cases

21) Collin Patterson, Biomedical Engineering (S&E)
    Jill Higginson, Biomedical Engineering
    Development and Validation of the SmartBoot: A Biofeedback Device for Partial Weight Bearing Rehabilitation
22) Michaela Schulman, Biomedical Engineering (Delaware Rehabilitation Institute)
Jill Higginson, Biomedical Engineering
Knee Joint Loading Cost of Locomotion with Changing Stride Length at a Normal Speed

23) Lydia Zakutney, Biomedical Engineering (S&E)
Jill Higginson, Biomedical Engineering
Knee Joint Loading Cost of Locomotion in Response to Varying Stride Lengths at a Slow Speed

24) Kyle Bennett, Biomedical Engineering (S&E)
Christopher Price, Biomedical Engineering
Optogenetics: A Novel Tool for Controlling Chondrocyte Mechanotransduction

25) Neil Mathur, Biomedical Engineering (S&E)
Christopher Price, Biomedical Engineering
Osteocyte Optogenetics: Controlling Bone Cell Mechanotransduction with Light

26) Rachael Pilachowski, Biomedical Engineering (Delaware Rehabilitation Institute)
Christopher Price, Biomedical Engineering
Post-Traumatic Osteoarthritis: A Histological and Immunohistochemical Analysis of Cartilage Degeneration

27) Daniel Charytonowicz, Biomedical Engineering (S&E)
Abhyudai Singh, Biomedical Engineering
Mathematical Modelling and Computational Analysis of Mammalian Cell Heat-Shock Response

28) Markia Smith, Biochemistry/Neuroscience (Delaware INBRE)
John H. Slater, Biomedical Engineering
Creation of a Human Adipose-Derived Mesenchymal Stem Cell Line that Stably Expresses a FRET-based Vinculin Tension Sensor

MECHANICAL ENGINEERING

29) Caroline Koriakin, Biomedical Engineering (Delaware Rehabilitation Institute)
Thomas Buchanan, Mechanical Engineering
Do ACL Tears Affect the Control of Forces Produced by the Legs?

30) Cindy Weng, Mechanical Engineering (Delaware Rehabilitation Institute)
Thomas Buchanan, Mechanical Engineering
Biomechanical Variables that Influence Performance and Self-perceived Difficulty during a Sit-to-stand Transition in Knee OA

31) Matthew Elizardo, Mechanical Engineering (Delaware INBRE)
Jennifer Buckley, Mechanical Engineering
SimuCath Refinements

32) Wyatt Grant, Mechanical Engineering (Delaware INBRE)
Jennifer Buckley, Mechanical Engineering
SimuStick Systems Refinement

33) Manuela Restrepo-Parra, Biomedical Engineering (CBER/Perry Initiative)
Jennifer Buckley, Mechanical Engineering
TBD

34) Jay Bhatt, Mechanical Engineering (McNair)
David Burris, Mechanical Engineering
Blue Hen Wind

35) Eduardo Queiroz, Mechanical Engineering/Biomedical Engineering (S&E)
Joseph Feser, Mechanical Engineering
Characterization of Thermal Conductivity of SiGe Thin Films

36) Patrick Geneva, Mechanical Engineering (S&E)
Guoquan Huang, Mechanical Engineering
Submap-Based Large-Scale Visual SLAM

37) Carolyn Hall, Mechanical Engineering (S&E)
Lucas Lu, Mechanical Engineering
The Zoledronic Acid Rescue of Articular Cartilage from Trauma Damage

38) Robert Loesch, Mechanical Engineering (S&E)
Lucas Lu, Mechanical Engineering
Boundary Lubrication on TMJ Disc and Condylar Cartilage

39) Luyu Jin, Mechanical Engineering (S&E)
Ajay Prasad, Mechanical Engineering
Electrochemical Compression of Hydrogen using Fuel Cell Technology

40) Frances Orella, Mechanical Engineering (S&E)
Ajay Prasad, Mechanical Engineering
TBD

41) Seth Rose, Mechanical Engineering (S&E)
Dustyn Roberts, Mechanical Engineering
TBD

42) Lucas Serge, Mechanical Engineering (S&E)
Dustyn Roberts, Mechanical Engineering
Smart Green Roof

43) Thomas Walker, Mechanical Engineering (S&E)
Michael Santare, Mechanical Engineering
Mechanics of Ionomer Fuel Cell Membrane

44) Jennifer Koffenberger, Mechanical Engineering (S&E)
Herbert Tanner, Mechanical Engineering
Improving Quadrotor Attitude State Estimation and Characterizing the Collision Event

45) Gaoxiang Chen, Mechanical Engineering (S&E)
Erik Thostenson, Mechanical Engineering
TBD

46) Nicholas Geneva, Mechanical Engineering (S&E)
Lian-Ping Wang, Mechanical Engineering
Comparing Different Parallel Implementations of Collision and Propagation in the Lattice-Boltzmann Approach for Complex Fluid Flow Simulations
47) Danielle Gerstman, Mechanical Engineering (S&E)  
Liyun Wang, Mechanical Engineering  
SimUThor Refinement: Thoracic Simulation System

48) Robert Morgan, Mechanical Engineering (S&E)  
Liyun Wang, Mechanical Engineering  
The Effects of Perlecan Deficiency on the Mechanical Properties of an Aging Spine

49) Boxue Zhang, Mechanical Engineering (S&E)  
Liyun Wang, Mechanical Engineering  
Histology of Intervertebral Disc

50) Nolan Kinslow, Mechanical Engineering (S&E)  
Bingqing Wei, Mechanical Engineering  
Facial Electrodeposition of MWNT and its Application for Supercapacitors

CHEMICAL & BIOMOLECULAR ENGINEERING

51) Quentin Dubroff, Chemical Engineering (HHMI)  
David Colby, Chemical & Biomolecular Engineering  
A Fluorescent Barcoding System for Multiplexed, Single-Cell Analysis of Protein-Protein Interactions

52) Pragyan Khanal, Biological Sciences (McNair/INBRE)  
Eleftherios Papoutsakis, Chemical & Biomolecular Engineering  
Examining the Role of Extracellular Matrix Elasticity on Megakaryocytic Differentiation of Hematopoietic Stem Cells

53) Robert Cipolla, Chemical Engineering (HHMI)  
Maciej Antoniewicz, Chemical & Biomolecular Engineering  
Metabolic Flux Analysis of Thermophiles

54) John Fillenwarth, Chemical Engineering (S&E)  
Antony Beris, Chemical & Biomolecular Engineering  
Modeling Blood Flow within the Cerebral Arterial Network

55) Sumeet Kothare, Chemical Engineering (NECA)  
Douglas Buttrey, Chemical & Biomolecular Engineering  
Investigation of the Factors that Affect the Morphology and Size of Molybdenum based Mixed Metal Oxide Catalyst Crystals during Synthesis

56) Allison Lisberg, Biomedical Engineering (S&E)  
Prasad Dhurjati, Chemical & Biomolecular Engineering  
Mathematical Modeling of Bone Mineralization in Osteoporotic Bone

57) Dakota Hanemann-Rawlings, Chemical Engineering (S&E)  
Thomas Epps, Chemical & Biomolecular Engineering  
An Investigation of the Effects of Stereoisomerism and Polymerization Parameters on the Thermomechanical Properties of BGF Derived Polymers

58) Bonnie Limpawuchara, Chemical Engineering (NECA)  
Thomas Epps, Chemical & Biomolecular Engineering  
Block Copolymers for Lithium-Ion Battery Applications

59) John Saltwick, Chemical Engineering (S&E)  
Thomas Epps, Chemical & Biomolecular Engineering  
Stabilization of a Gyroid Morphology in a Poly(isoprene-b-styrene) Thin Film

60) Cody Reeves, Chemical Engineering (S&E)  
April Kloxin, Chemical & Biomolecular Engineering  
Degradable Hydrogels for the Controlled Release of Therapeutics

61) Morgan Dezendorf, Chemical Engineering (S&E)  
April Kloxin, Chemical & Biomolecular Engineering  
Engineering Strategies for Local Control of Protein Release and Production for Regenerative Medicine Applications

62) Benjamin Carberry, Chemical Engineering (S&E)  
Christopher Kloxin, Chemical & Biomolecular Engineering  
Surface Functionalization of Thiol-ene Elastomers

63) Laura Mumper, Civil Engineering (S&E)  
Christopher Kloxin, Chemical & Biomolecular Engineering  
Kinetic Study of Reactions Involving Thiol and Allylic Cationic Monomers

64) Justin Paloni, Chemical Engineering (HHMI)  
Christopher Kloxin, Chemical & Biomolecular Engineering  
Click Nucleic Acid (CNA) Hydrogels for Targeted Drug Delivery

65) Lindsay Kelly, Chemical Engineering (S&E)  
Raul Lobo, Chemical & Biomolecular Engineering  
Friedel-Crafts Acylation of Furans over Zeolites

66) Michael Palmer, Chemical Engineering (S&E)  
Terry Papoutsakis, Chemical & Biomolecular Engineering  
Kinetic Characterization of Growth in Escherichia coli Expressing Methylotrophic Genes

67) Alexander Hillsley, Chemical Engineering (S&E)  
Christopher Roberts, Chemical & Biomolecular Engineering  
Investigating the Specific Ion Effects of Citrate and Acetate on AS-IgG1 using Static Light Scattering

68) Matthew Weber, Chemical Engineering (S&E)  
Christopher Roberts, Chemical & Biomolecular Engineering  
Exploring the Effects of Heavy Water on Protein Stabilization

69) Jason Andrechak, Chemical Engineering/Neuroscience (S&E)  
Millicent Sullivan, Chemical & Biomolecular Engineering  
Improving Efficiency of Therapeutic Delivery of Nucleic Acids using a Tunable Nano-scale Polypelex System

70) Seth Brynien, Chemical Engineering (S&E)  
Millicent Sullivan, Chemical & Biomolecular Engineering  
A Versatile, Biomimetic Approach for Controlling Therapeutic Delivery from Collagen Scaffolds

71) Kelsey Harrison, Chemical Engineering (S&E)  
Norman Wagner, Chemical & Biomolecular Engineering  
Suspension Rheology of Cubic Particles in Newtonian and non-Newtonian Fluids
## CIVIL & ENVIRONMENTAL ENGINEERING

72) Sarah Hartman, Environmental Engineering (EPSCoR)  
Paul Imhoff, Civil & Environmental Engineering  
*Design and Construction of Eco-Vapor Toilet: Laboratory Testing (Bill and Melinda Gates Foundation Project)*

73) Scott Forsythe, Civil Engineering (S&E)  
Chris Meehan, Civil & Environmental Engineering  
*Structural Health Monitoring of a Geosynthetic Reinforced Soil Integrated Bridge System*

74) Katherine Dillon, Biological Sciences/Neuroscience (HHMI)  
Julie Maresca, Civil & Environmental Engineering  
*Insights into 7TM Helix Protein Function: Biophysical Simulation and Biochemical Experiments*

75) Dianna Kitt, Environmental Engineering (EPSCoR)  
Julie Maresca, Civil & Environmental Engineering  
*Microbial Utilization of Mineral Associated Phosphate and Organophosphate Esters*

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## MATERIALS SCIENCE

76) Jamie Beshore, Materials Science & Engineering (NSF)  
(Cornell)  
Matthew Doty, Materials Science & Engineering  
*Exploring the Properties of Nanostructured Semiconductors using Photoluminescence Spectroscopy*

77) Nile Bunce, Computer Science (McNair)  
Kristi Kiick, Materials Science & Engineering  
*A Study of the Interaction Between Macrophages and Degradable Hydrogel*

78) Dina Collins, Medical Laboratory Science (McNair)  
Kristi Kiick, Materials Science & Engineering  
*Expression of Temperature Response Behavior of Resilin-Like Polypeptide*

79) Christian Harris, Biology/Physics (UD)  
(Shawn Polson, Computer & Information Sciences)  
Stephanie Law, Materials Science & Engineering  
*Infrared Optical Measurements of Hyperbolic Metamaterials*

80) Colin Davis, Chemistry (QESST)  
Robert Opila, Materials Science & Engineering  
*Silicon Anodization Analysis for Solar Cell Applications*

81) Casey Forman, Materials Science & Engineering (QESST)  
(Univ. of Maryland)  
Robert Opila, Materials Science & Engineering  
*Silicon Anodization Analysis for Solar Cell Applications*

82) Zachary Sheffield, Chemical Engineering (NSF)  
Darrin Pochan, Materials Science & Engineering  
*Nanomaterials through Peptide Design and Solution Assembly*

83) Nathan Hamilton, Chemical Engineering (NSF)  
John Rabolt, Materials Science & Engineering  
*High Throughput Electrospinning Using AFM Tip Arrays*

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## COMPUTER & INFORMATION SCIENCES

86) Courtney Shatley, Biological Sciences (Delaware Governor’s Bioscience Fellowship)  
(DTCC)  
Shawn Polson, Computer & Information Sciences  
*Examining the Accuracy of Recruitment Based Abundance Estimation in Metagenomes*

87) Karla Miletti, Computer Science (Delaware INBRE)  
(Tomasz Smolinski, Computer & Information Sciences)  
(DSU)  
*Analyzing Adaptive Modulation in Spinal Motor Neurons Using Multi-Objective Evolutionary Algorithms*

88) Zachary Senzer, Computer Science (S&E)  
Lori Pollock, Computer & Information Sciences  
*Automatically Classifying Software Developer Questions in Online Forums*

89) Connor Zanin, Computer Science (S&E)  
Michela Taufer, Computer & Information Sciences  
*Capturing the MapReduce Performance Landscape with Surrogate-Based Modeling*

---

## ELECTRICAL & COMPUTER ENGINEERING

90) Alex George, Computer Engineering (S&E)  
Fouad Kiamilev, Electrical & Computer Engineering  
*Initial Explorations on No Reference Image Quality Assessment*

91) Rebekah Houser, Electrical Engineering (S&E)  
Fouad Kiamilev, Electrical & Computer Engineering  
*Fingerprinting Electric Vehicles: Identifying Vehicle Type from State Transition Characteristics*

92) Kevin Jones, Computer Science (S&E)  
Fouad Kiamilev, Electrical & Computer Engineering  
*GPU Acceleration of the Lucky Region Fusion Algorithm for Atmospheric Turbulence Mitigation*

93) Benjamin Mazur, Electrical Engineering (S&E)  
Fouad Kiamilev, Electrical & Computer Engineering  
*Software Framework for Developing Optimization Algorithms for Phase-Coherent Fiber Laser Array*

94) Jeffrey Volz, Computer Engineering (S&E)  
Fouad Kiamilev, Electrical & Computer Engineering  
*Hardware Acceleration of Non-Uniformity Correction for High-Performance Real-Time IR Scene Projector*
95) David Eldridge, Electrical Engineering (S&E)
   James Kolodziey, Electrical & Computer Engineering
   *Wavelength Transmission Testing in Opaque Environments*
96) James Knoll & Justin Phillips, Electrical Engineering (S&E)
   Dennis Prather, Electrical & Computer Engineering
   *Fabrication of 2-Dimensional Fiber Optic Cable Array in Hexagonal Close Packed Pattern*
97) Carl Agbemabiese, Electrical Engineering (Delaware INBRE)
    Abhyudai Singh, Electrical & Computer Engineering
    *Optimal Adsorption Rate*
98) Kaleb Tesema, Electrical/Computer Engineering (McNair)
     Adhyudai Singh, Electrical & Computer Engineering
     *Modeling the Effect of Bacterial Response Memory*
99) Patrick Cronin, Computer Engineering (S&E)
    Chengmo Yang, Electrical & Computer Engineering
    *Mutual Auditing Framework to Prevent Hardware Trojans in the Internet of Things*
100) Yifeng Liu, Electrical Engineering (S&E)
     Chengmo Yang, Electrical & Computer Engineering
     *Using LLVM to Extract Control Flow Graph and Data Flow Graph*

### CATALYSIS CENTER FOR ENERGY INNOVATION

101) Brian Dinkelacker, Chemical Engineering (CCEI)
     Dion Vlachos, Catalysis Center for Energy Innovation
     *Partition Coefficient of 5-hydroxymethylfurfural in Its Extraction from Aqueous to Organic Solvents*
102) Joseph Hasse, Chemical Engineering (CCEI)
     Dion Vlachos, Catalysis Center for Energy Innovation
     *Catalysis of Electrophilic Aromatic Substitution of Furans by Brønsted or Lewis Acidic Zeolites*
103) James Kennedy, Chemical Engineering (CCEI)
     Dion Vlachos, Catalysis Center for Energy Innovation
     *Cellulose Hydrolysis in Acidified Molten Salt Hydrate Media (AMSH)*
104) Rachel Muzzelo, Chemical Engineering (CCEI)
     Dion Vlachos, Catalysis Center for Energy Innovation
     *On The Reversal of Electron Demand in Diels-Alder Cycloaddition of Non-Nucleophilic Furans Using Nucleophilic Modifiers: A Theoretical Study*
105) Brittany Wiebe, Chemical Engineering (CCEI)
     Dion Vlachos, Catalysis Center for Energy Innovation
     *TBD*
106) Leearang Yang, Chemical Engineering (CCEI) (Columbia University)
     Bingjun Xu, Catalysis Center for Energy Innovation
     *Product Selectivity of 2,5-dimethylfuran Hydrogenation and Hydrogenolysis Over Supported Noble Metal Catalysts*

### CENTER FOR COMPOSITE MATERIALS

107) Michael Carroll, Mechanical Engineering (S&E)
     John Gillespie, Center for Composite Materials
     *Single Kevlar Fiber: Transverse Compression and Tensile Strength*

## ORAL PRESENTATIONS

### ARTS EDUCATION (ROOM 202)

**Moderator: Suzanne Burton, Music**

Emily Smith, Music Education (AHSS)
Suzanne Burton, Music
*Music Literacy: A Look inside the Elementary Music Classroom*
Stephanie Espie, Music Education (AHSS)
Suzanne Burton, Music
*Pon De Dance Floor: Jamaican Dancehall in the 21st Century*

Lucas Schurman, Music Education (SL)
Suzanne Burton, Music
Community Partners: Erta Wilson Elementary School, Christina School District; Richardson Park Elementary School, Red Clay School District
ProjectMUSIC
Victoria Snare, English/Spanish (ArtsBridge)
Lynnette Overby, Theatre
*Inspiration through Arts Integration: Enhancing 3rd Graders’ Learning Experiencing through a Visual Arts Integrated English Language Arts Curriculum*

### ADOLESCENT EDUCATIONAL OPPORTUNITIES (ROOM 205)

**Moderator: Jenni Buckley, Mechanical Engineering & Amy Trauth-Nare, Delaware Center for Teacher Education**

Gemma Ciabattoni, Engineering & Julia Paganucci, Mechanical Engineering (SL)
Jennifer Buckle, Mechanical Engineering
Community Partner: The Perry Initiative
*Orthopaedics In Action (OIA)*
Rosymar Magana & Vanessa Santiago, Health Behavior Science (SL)
Mia Papas, Behavioral Health & Nutrition
Community Partner: Christiana High School ASPIRA Program
*Una Vida Saludable: A Photovoice Project among Adolescents*
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<td>Olivia-Jane Haslam &amp; Alexander Tewnion, Art Conservation (SL)</td>
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<td>Vicki Cassman, Art Conservation</td>
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<td>Community Partners: Winterthur Museum, Garden and Library; Salvation Army</td>
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<tr>
<td>Terrific Tuesday at Winterthur Museum and the Salvation Army Summer Camp</td>
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<td>Lucy Font, Elementary Education (SL)</td>
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<td>Lynnette Overby, Theatre</td>
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<td>Community Partner: Salvation Army</td>
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<td>Andrea Davis, Health Sciences (Extension Scholars)</td>
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<td>Mallory Vogl, New Castle County Cooperative Extension</td>
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<td>4-H Youth Development</td>
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<td>4-H Summer Day Camps</td>
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<td>Jackie Arpie, (Extension Scholars)</td>
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<td>Michele Walfred, Cooperative Extension</td>
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<td>Cooperative Extension: Communications, Social Media</td>
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<td>Alexander Daniels, Physics (McNair)</td>
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<td>Adam Fleischhacker, Business Administration</td>
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<td>Forecasting Demand, Maximizing Entropy</td>
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<td>Jasmine Anthony, Political Science/Black American Studies (McNair)</td>
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<td>Theodore Davis, Political Science &amp; International Relations</td>
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<td>HIV the Silent Killer among African American Women</td>
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<td>Alessandra Chapman, International Relations (AHSS)</td>
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<td>Gretchen Bauer, Political Science &amp; International Relations</td>
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<tr>
<td>The Progression and Improvement of Legislation Against Gender Based Discrimination through Gendering Executive Governance in Sub-Saharan Africa</td>
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</table>
Julian Lang, International Relations (AHSS)
Ikram Masmoudi, Foreign Languages & Literatures
*The Legacy of Empire: Imperialism's Lasting Effects on Modern Human Rights Abuses*
Kimani DeShields, Three Languages (SL Fellow)
Gladys Illaregui, Foreign Languages & Literatures
Community Partner: International Rescue Committee
*Working for a New Future*

**ESE’EJA (ROOM 222)**

**Moderator: Jon Cox, Art**

Kate Huffman, Art (AHSS)
Jon Cox, Art
*A Visual Voice: Giving Illustrative Life to the Ese’Eja*

Cori Burcham, English (AHSS)
Siobhan Carroll, English
*The Ese’Eja Project: The Amazonian Worldview Adapted into Comics*

Alexander Stubbolo, Biological Sciences (AHSS)
Siobhan Carroll, English
*Ese’Eja Cultural Mapping Project*

**11:20 – 12:35 Oral Session 3**

**LITERATURE (ROOM 202)**

**Moderator: John Montaño, History**

Kristen Todd, English Education (AHSS)
Kristen Poole, English
*Yes, Dear: An Examination of the Elizabethan Marital Conflict as Presented in A Midsummer Night’s Dream*

Sarah Craster, English (AHSS)
Heyward Brock, English
*The Bard’s Fairy Theft: Welsh Folklore in Shakespeare*

Caroline Beston, English (AHSS)
Siobhan Carroll, English
*Women Writers and Cerebral Science Fiction in the 1930’s*

Julia Snider, English/History (AHSS)
John Montaño, History
*Sustaining Cultural Identity in Early Twentieth Century Irish America*

**MULTI-DISCIPLINARY CREATIVE RESEARCH & SCHOLARSHIP (ROOM 205)**

**Moderator: Lynnette Overby, Theatre**

Kelsey Daniels, International Relations (AHSS)
Lynnette Overby, Theatre
*Education under Legal Segregation: A Comparison in the United States and South Africa*

Dominique Oppenheimer, English/International Relations (AHSS)
Lynnette Overby, Theatre
*The Rock of Resistance: Women's Activism in the US and South Africa*

Nicodemus Williams, Marketing (AHSS)
Lynnette Overby, Theatre
*A Change is Gonna Come, Exploration of the Impact of South African Apartheid Music, and the United States Civil Rights Music*

Kaitlyn Naismyth, Neuroscience (AHSS)
Lynnette Overby, Theatre
*Examining the Role of Religion in Promoting Resilience during Racial Segregation*

Perilla Lauren Mpasi, Chemical Engineering (AHSS)
Lynnette Overby, Theatre
*Beyond Facts and Figures: Mothers and Resilience during Times of Oppression*

**CRIMINAL JUSTICE/POLITICAL SCIENCE (ROOM 207)**

**Moderator: Ronet Bachman, Sociology & Criminal Justice**

Aleksandra Abramova, Criminal Justice (AHSS)
Ben Fleury-Steiner, Sociology & Criminal Justice
*Juvenile Expungement Law: Why America Should Protect Its Youth*

Eli Webster, Sociology (McNair)
Aaron Kupchik, Sociology & Criminal Justice
*From the Outside Looking In*

Haley Magwood, Political Science (McNair)
Ruth Fleury, Human Development & Family Studies
*Battered Women’s Experiences: Protection Orders, Race and Severity of Violence*

Benjamin Carlton, Political Science/Sociology (AHSS)
Ronet Bachman, Sociology & Criminal Justice
*A Cross-National Comparison of Police Reporting Behavior by Victims of Assault*

Tia Hill, Communication/Political Science (AHSS/CPC)
Lindsay Hoffman, Communication
*Stereotype Threat: Television and Its Effects on African American Self Image*

**ART HISTORY/MUSIC (ROOM 222)**

**Moderator: Philip Duker, Music**

Bryce Gates, Art History (AHSS)
Monica Dominguez Torres, Art History
*Baptista Boazio’s Engravings: Depictions of Sir Francis Drake’s Great Voyage, English Law and Conquest in the Atlantic World*
Caroline Aylward, Music Education (AHSS)
Maria Anne Purciello, Music
The Impact of Image: The Iconographic Celebrity of the Musician
Megan Lyons, Music Education/Music Theory (AHSS)
Philip Duker, Music
Double Entendre: A Neo-Riemannian and Schenkerian Analysis of Schubert’s Der Doppelgänger
Jessica Volpe, Music Education (AHSS)
Philip Duker, Music
Fooled You!: Chopin’s Manipulation of Musical Expectations

1:30 – 2:30 Oral Session 4

HEALTH (ROOM 202)

Moderator: Mia Papas, Behavioral Health & Nutrition

Jacqueline Bavaro, Dietetics (Extension Scholars)
Sue Snider, Cooperative Extension
Work with New Castle County EFNEP and 4-H Staff with Summer Nutrition Programs
Kathryn Russel, Dietetics (Extension Scholars)
Sue Snider, Cooperative Extension
Nutrition Communications: Expanding the Reach of Nutrition Programs at the University of Delaware Cooperative Extension
Ann Fadden & Chante’ Vann, Health and Physical Education (SL)
Karen Edwards, Behavioral Health & Nutrition
Community Partner: Girls Inc.
Will Integrating World Cup Information into Daily Physical Activity Increase Geography Knowledge?
Amefika Sababu, Human Behavioral Science (McNair)
Mia Papas, Behavioral Health & Nutrition
Food Insecurities at the University of Delaware

WOMEN & GENDER (ROOM 205)

Moderator: Claire Rasmussen, Political Science & International Relations

Anissa Speakman, Anthropology (AHSS)
Karen Rosenberg, Anthropology
An Investigation into the Cause of Sex Differences in Health Patterns in a Prehistoric Society
Catherine Molloy, Anthropology/Human Services (NUCLEUS)
Melissa Melby, Anthropology
Perceptions, Prevention and Stress of Sexual Assault on Campus
Sage Carson, Anthropology/Music (AHSS)
Marie Laberge, Women & Gender Studies
Sexual Misconduct in Greek Organizations: How the University of Delaware can Reduce and Prevent Gender-Based Violence

LEADERSHIP, OUTREACH & SELF-ADVOCACY (ROOM 207)

Moderator: Michele Lobo, Physical Therapy

Emma Zuckerman, Apparel Design (AHSS)
Michele Lobo, Physical Therapy
Fashion Design for Mobility: Creating Garments as Alternatives to Traditional Rehabilitative Devices
Julianne Emory & Taylor Ryan, Human Services (SL)
Nancy Weiss, Human Development & Family Studies
Community Partner: National Leadership Consortium on Developmental Disabilities
Leadership, Advocacy, and Policy in the Disabilities Field
Lindsey Benatti & Lindsey Root, Health Behavior Science (SL)
Elizabeth Orsega-Smith, Behavioral Health & Nutrition
Community Partners: Claymore Senior Center; Howard Weston Senior Center
Worldwide Aging, Lessons Learned: International and Intergenerational Activities in New Castle County Senior Centers
Maggie McCaughey, Human Services/Health Behavior Science (SL)
Steven Eidelman, Human Development & Family Studies
Community Partner: Family Promise of Northern Delaware
Community Based Solutions to Affordable Housing: Integrating Families that have Overcome Homelessness into New Castle County Neighborhoods

ART (ROOM 222)

Moderator: Rene Marquez, Art

Hannah Zimmerman, Art (AHSS)
Abigail Donovan, Art
Medieval Art with a Twist
Cristian Vitale, Art (AHSS)
David Meyer, Art
Sacred Space; Expressions and Changes in Spiritualism
Ana Jackson-Chaves, Art (Hofmann Scholar)
Abigail Donovan, Art
Measuring Time with Sculptural Mechanisms
Sanjay Pelinski, Art (AHSS)
Abigail Donovan, Art
Moving Reality: An Exploration of Volume
Emily Arnot, Art (AHSS)
Lance Winn, Art
Exploring Emotions Affects On Our Perceptions
2:40 – 3:55  Oral Session 5

LANGUAGE/Writing  (Room 202)

Moderator: William Lewis, School of Education

- Samuel Katz, Cognitive Science/Psychology (AHSS)
- Roberta Golinkoff, School of Education
  
  Semantic Reorganization: Does Language Teach Infants How to Think?

- Kevin Mascitelli, International Relations (AHSS)
- Hans-Joerg Busch, Foreign Languages & Literature
  
  Motivation through Experience: Bringing Authenticity into the Spanish Classroom

- Sean Krazit, English Education (AHSS)
- William Lewis, School of Education
  
  Adolescent Literacy, Argumentative Writing

- Nicole Lund, English (AHSS)
- Candice Welhausen, English
  
  Effective Cross-Cultural Communication in Professional Writing

Material Culture  (Room 205)

Moderator: Jay Custer, Anthropology

- Stephanie Restifo, Anthropology/History (AHSS)
- Jay Custer, Anthropology
  
  Queenstown Archaeology and Ceramics

- Claire Martin, Art Conservation/Art History & Elizabeth Van Winkle, Art Conservation/Chemistry (AHSS)
- Vicki Cassman, Art Conservation
  
  Conserving Metal Objects: A Survey of Copper Alloy Coatings at Winterthur Museum

- Laura Mosco, Art Conservation (AHSS)
- Vicki Cassman, Art Conservation
  
  Photographic Preservation

Science & Engineering  (Room 207)

Moderator: Christopher Kloxin, Chemical & Biomolecular Engineering

- Golden Rockefeller, Mechanical Engineering (McNair)
- Herbert Tanner, Mechanical Engineering
  
  Programming and Control for Miniature Legged Robots

- Jonathan Galarraga, Chemical Engineering (McNair)
- Christopher Kloxin, Chemical & Biomolecular Engineering
  
  Small Molecule Delivery using Novel Hydrogel System with Controlled Degradation Kinetics

- Victoria Muir, Chemical Engineering (Delaware INBRE)
- Thomas Epps, Chemical & Biomolecular Engineering
  
  Optimizing Gene Silencing Capabilities of Light-Responsive siRNA Polyplexes by Varying Polymer Block Lengths
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Delaware Division of Family Services
Family Promise of Northern New Castle County
Gateway Charter School
Girls, Inc. of Delaware
Howard Weston Senior Center
Latin American Community Center
Lutheran Community Services
National Leadership Consortium on Developmental Disabilities
Nemours/Alfred I. duPont Hospital for Children
Perry Initiative
Red Clay School District: Richardson Park Elementary School
Salvation Army
Winterthur Museum, Garden and Library
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Joellen Rathbun, Copy Center Supervisor, University Printing
Crystal Felty, Composer, University Printing

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