POSTER PRESENTATIONS

Session I  9:00- 10:30am
(Agriculture & Natural Resources, Animal & Food Sciences, Entomology & Wildlife Ecology, Plant & Soil Sciences, Biological Sciences, Chemistry & Biochemistry, Geography, Marine Science & Policy, Environmental Science)

AGRICULTURE & NATURAL RESOURCES
Frances Blake, Pre-Veterinary Science (EPSCoR) (DSU)
Brigid McCrea, Agriculture & Natural Resources (DSU)
TBA

Jordan Brockwell, Biological Chemistry (EPSCoR) (Wesley College)
Brigid McCrea, Agriculture & Natural Resources (DSU)
TBA

Inh Ngo, Biological Chemistry (EPSCoR) (Wesley College)
Brigid McCrea, Agriculture & Natural Resources (DSU)
TBA

Omolade Oludare, (EPSCoR) (DSU)
Kalpalatha Melmaiee, Agriculture & Natural Resources (DSU)
TBA

Tabitha Edwards, Environmental Science (EPSCoR) (DSU)
Gulnihal Ozbay, Agriculture & Natural Resources (DSU)
TBA

ANIMAL & FOOD SCIENCES
Andrew Mason, Pre-Veterinary Medicine & Animal Biosciences (SE)
Ryan Arsenault, Animal & Food Sciences
Comparison of Immunometabolic Response in Macrophages Infected with Salmonella Enteritidis or Salmonella Heidelberg

Joey Rea, Pre-Veterinary Medicine & Animal Biosciences (SE)
Ryan Arsenault, Animal & Food Sciences
Kinome Profiling of Gene Knockout Mutants of Salmonella Typhimurium

Justin Berg, Pre-Veterinary Medicine & Animal Biosciences (SE)
Amy Biddle, Animal & Food Sciences
The Equine Microbiome Project
Brian Chambers, Pre-Veterinary Medicine & Animal Bio-Sciences (SE)
Amy Biddle, Animal & Food Sciences
Resistance of Strongylus Equinus to Dewormers and its Relation to Horse Age, Gender and Breed

James Madlock, Biology (EPSCoR) (Cheyney University)
Amy Biddle, Animal & Food Sciences
TBA

Gregory Patterson, Biology (EPSCoR) (Cheyney University)
Amy Biddle, Animal & Food Sciences
TBA

Natalie Zelenky, Pre-Veterinary Medicine & Animal Biosciences (Carmean)
Robert Dyer, Animal & Food Sciences
The Effect of Adipocyte Size on Macrophage Infiltration

Kassandra Moyer, Animal & Food Sciences (Carmean)
Tanya Gressley, Animal & Food Sciences
Degradation of Slow-Release Urea in the Rumen of Dairy Cattle

Kayla Neiderfer, Pre-Veterinary Medicine & Animal Biosciences (Carmean)
Tanya Gressley, Animal & Food Sciences
Affects of Buffers in the Bovine Gastrointestinal Tract

Alexis Trench, Pre-Veterinary Medicine & Animal Biosciences (CANR)
Tanya Gressley, Animal & Food Sciences
Effect of Carbon Dioxide and Pore Size on in vitro Measurements of Bovine Neutrophil Chemotaxis

Phania Alcena, Food Science (EPSCoR) (Florida A&M University)
Kali Kniel, Animal & Food Sciences
TBA

Lakshmi Sastry, Pre-Veterinary Medicine & Animal Biosciences (SE)
Mark Parcells, Animal & Food Sciences
Understanding How Up-regulation of Protein EZH2 can be Linked to Marek's Disease Tumors and Hodgkin's Lymphoma

Louis Colaruotolo, Food Science (SE)
Changqing Wu, Animal & Food Sciences
Exploratory Research on Chemical Structures and Functionalities of Plant Phenolic Compounds

ENTOMOLOGY & WILDLIFE ECOLOGY
Daniel Day, Environmental Science (CANR) (Dickinson College)
Jeff Buler, Entomology & Wildlife Ecology
Mapping Winter Waterfowl Using Radar in Delaware
William Keilsohn, Entomology (SE)
Doug Tallamy, Entomology & Wildlife Ecology
*The Effects of Roadside Habitat on Traffic Insect Mortality*

**PLANT & SOIL SCIENCES**
Jarrett Talley, Agronomy (EPSCoR) (Florida A & M University)
Harsh Bais, Plant and Social Sciences
*TBA*

Ryan Johnson, Medical Diagnostics (EPSCoR/Hofmann Scholar)
Pamela Green, Plant and Social Sciences
*TBA*

John Dougherty, Environmental Sciences (EPSCoR) (Wesley College)
Shreeram Inamdar, Plant and Social Sciences
*TBA*

Jack Protokowicz, Biochemistry (EPSCoR)
Shreeram Inamdar, Plant & Soil Sciences
*TBA*

Tristum Williams, Agronomy (EPSCoR) (Florida A&M University)
Deb Jaisi, Plant and Social Sciences
*TBA*

Alesia Hunter, Environmental Biology (McNair) (Beloit College)
Angelia Seyfferth, Plant & Soil Sciences
*TBA*

Erica Loudermilk, Environmental Engineering (EPSCoR)
Angelia Seyfferth, Plant and Social Sciences
*TBA*

Kaitlyn Markey, Plant & Soil Science (CANR) (North Carolina State University)
Amy Shober, Plant & Soil Sciences
*Nutrient Management (agronomy)*

Gina Zhu, Environmental Engineering (EPSCoR) (Yale University)
Donald Sparks, Plant & Social Sciences
*TBA*

Tessa Jarvis, Biological Sciences (EPSCoR/NUCLEUS)
Eric Wommack, Plant and Social Sciences
*TBA*
BIOLOGICAL SCIENCES

Maria Limmina, Biological Sciences (Governor Biotech Award)  
Ethna Fidelma Boyd, Biological Sciences  
*Decoration of the Bacterial Outer Membrane with Nonulosonic Acid Affects Serum Resistance*

Priyha Mahesh, Biological Sciences (CPWBIO/Hofmann Scholar)  
Melinda Duncan, Biological Sciences  
*Developmental Expression of β-catenin in Reporter Mice*

Branden Bateman, Biomedical Engineering (SE)  
Randall Duncan, Biological Sciences  
*Effects of IGF-1 on Chondrocyte Morphology in Three-dimensions*

Elijah Ikhumhen, Biomedical Sciences (McNair) (Marquette University)  
Randall Duncan, Biological Sciences  
*TBA*

Shannon Marshall, Biological Sciences (McNair)  
Randall Duncan, Biological Sciences  
*Gain Protection through Legal and Political Avenues*

Michael Wilson, Biological Sciences (CPW)  
Randall Duncan, Biological Sciences  
*NGF Regulation of Bone-Derived Prostate Cancer Cell Proliferation and Response to ATP and Mechanical Load*

Kyle Plusch, Biological Sciences (CPWBIO)  
Deni Galileo, Biological Sciences  
*How Does Modulation of L1CAM Affect the Brain Tissue Invasiveness of Glioblastoma Stem Cells?*

Alexander Stubbolo, Biological Sciences (CPWBIO)  
Deni Galileo, Biological Sciences  
*Understanding L1CAM in Glioblastoma Stem Cells*

Austin Luna, Biology (INBRE) (Wesley College)  
Fdy Gerges, (Green Clinics Laboratory)  
*TBA*

Sydney Gualtieri, Neuroscience (DDOE MSP)  
John Jungck, Biological Sciences & Mathematical Sciences  
*Cancerous Tumor Growth Models*

Sundus Ahmed, Biology (INBRE) (DSU)  
Hwan Kim, Biology (DSU)  
*TBA*
Joseph Katz, Nurtitional Sciences (INBRE)
Hwan Kim, Biology (DSU)
TBA

Nathaniel Borders, Biological Sciences (Stetson)
Salil Lachke, Biological Sciences
*Functional Characterization of Caprin2 in Mouse Eye Development and its Associated Developmental Defect Peters Anomaly*

Opeyemi Akinrinso, Biology (EPSCoR) (DSU)
Hakeem Lawal, Biology (DSU)
TBA

Mara Baker, Biological Sciences (Delaware Governor's Bioscience Fellowship) (DTCC)
John McCdowell, Biology & Chemistry (DTCC)
*Analysis of Plasmid Maintenance Mechanisms in Lyme Borrelia*

Stephanie Anyika, Biology (EPSCoR) (DSU)
Karl Miletti, Biology (DSU)
TBA

Teshress Chandradat, Biotechnology (EPSCoR) (DTCC)
Karl Miletti, Biology (DSU)
TBA

Jan Parson, Pre-Professional Chemistry (INBRE) (DSU)
Karl Miletti, Biology (DSU)
TBA

Sean Lein, Biochemistry (CPWBIO)
Ramona Neunuebel, Biological Sciences
*Developing Pathogen-derived Lipid Biosensors for Monitoring Eukaryotic Vesicular Trafficking*

Nicollette Uhde, Biological Sciences (INBRE) (DTCC)
Ramona Neunuebel, Biological Science
TBA

Kaitlyn Duong, Biological Sciences (CPWBIO)
Anja Nohe, Biological Sciences
*Effects of Turmeric Extract on PC12 Cell Differentiation*

Lauren Harper, Biological Sciences (CPWBIO)
Anja Nohe, Biological Sciences
*Effects of CK2 Blocking Peptides on C2C12 Cell Differentiation*

John Nixon, Biomedical Engineering (SE)
Erica Selva, Biological Sciences
*Examining Catalytic Activity and Shedding of O-Xylosyltransferase in Drosophila*
CHEMISTRY & BIOCHEMISTRY

Cannon Giglio, Chemistry (SE)
Steven Brown, Chemistry & Biochemistry
Selection of Important Variables for Chemical and Spectroscopic Data

Griffen Desroches, Chemistry (Plastino)
Svilen Bobev, Chemistry & Biochemistry
Synthesis and Characterization of New Rare Earth Intermetallics

Ariel Bilbrough, Biological Chemistry (INBRE) (Wesley College)
Malcolm D'Souza, Chemistry (Wesley College)
TBA

Edward Brandenburg, Biochemistry (EPSCoR) (Wesley College)
Malcom D'Souza, Chemistry (Wesley College)
TBA

Andreanna Jeffries, Biological Chemistry (EPSCoR) (Wesley College)
Malcom D'Souza, Chemistry (Wesley College)
TBA

Austin Lonski, Biological Chemistry (INBRE) (Wesley College)
Malcolm D'Souza, Chemistry (Wesley College)
TBA

Michael Skivers, Environmental Studies (EPSCoR) (Wesley College)
Malcom D'Souza, Chemistry (Wesley College)
TBA

Jeremy Wirick, Biological Chemistry (INBRE) (Wesley College)
Malcolm D'Souza, Chemistry (Wesley College)
TBA

Matthew Hurlock, Biochemistry (Plastino)
Catherine Grimes, Chemistry & Biochemistry
Investigation of ATPase Activity in Nod2 and Nod2 Walker Mutants

Zachary Jones, Chemistry (Plastino)
Catherine Grimes, Chemistry & Biochemistry
Chemoenzymatic Synthesis of Bioorthogonal UDP N-acetylmuramic Acid Derivatives to Label the Peptidoglycans of S. aureus and B. subtilis
Hannah Wastyk, Biochemistry (Plastino)
Catherine Grimes, Chemistry & Biochemistry
*Biochemical Characterization of Innate Immune Receptor, Nod2 and its Chaperone, Hsp70*

Shelby Roseman, Chemistry (SE)
John Koh, Chemistry & Biochemistry
*AF4-AF9 Protein-Protein Interaction Inhibitor: Synthesis and Biological Evaluation*

Junius Thomas, Biochemistry (NUCLEUS)
John Koh, Chemistry & Biochemistry
*Design of Hormone Analogs for Genetic Mutations*

Lucas Onisk, Chemistry (Plastino)
Tatyana Polenova, Chemistry & Biochemistry
*TBA*

Dominic Santoleri, Biochemistry (SE)
Sharon Rozovsky, Chemistry & Biochemistry
*Expressing Selenoproteins through Chemical Ligation*

Evan Horowitz, Chemistry (Heitzer)
Klaus Theopold, Chemistry & Biochemistry
*Synthesis and Study of Chromium (VI) Complexes*

Igbal Attaelmanan, Biochemistry (REACT)
Mary Watson, Chemistry & Biochemistry
*TBA*

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

Jacob Piane, Chemistry (Plastino)
Mary Watson, Chemistry & Biochemistry
*Late-Stage Functionalization via Suzuki Cross Couplings of Un-activated Amines*

Arvind Annamalai, Chemistry (Plastino)
Neal Zondlo, Chemistry & Biochemistry
*Structural Contexts of Phosphorylation and OGlcnAcylation*

Nicole Wenzell, Biochemistry (SE)
Neal Zondlo, Chemistry & Biochemistry
*Understanding a Fundamental Force in Protein Folding: Tuning the N → Pi* Interaction via Designed Peptides*
GEOGRAPHY
Haley Stanko, Geography (EPSCoR)
Lindsay Naylor, Geography
TBA

MARINE SCIENCE & POLICY
Melanie Brennan, Marine Science (SE)
Danielle Dixson, Marine Biosciences
Effects of Ocean Acidification on Locating Mates in Caribbean Reef Fish
Megan Cain, Environmental Science (SE)
Danielle Dixson, Marine Biosciences
The Effects of Suncreen on the Development and Behavior of the Atlantic Horshoe Crab, Limulus polyphemus
Lucas Pensinger, Marine Science (SE)
Danielle Dixson, Marine Biosciences
Understanding the Effects of Climate Change on Horseshoe Crab Development
Alexandra Matarcchieri, Marine Science (SE)
Pat Gaffney, Marine Biosciences
The Connection between the Genotype of the Eastern Oyster, Crassostrea virginica, and its Microbial Communities, in Determining their Health and Fitness
Nicole Coffey, Marine Science/Chemistry (SE)
George Luther, Oceanography
Dissolved Mn Speciation in Delaware Waterways
Robert Jaquette, Physics (Hofmann Scholar)
Fabrice Veron, Physical Ocean Science & Engineering
TBA

ENVIRONMENTAL SCIENCE
Mary Williams, Biological Sciences (EPSCoR) (DTCC)
Kari St. Laurent, Environmental Science (DNERR)
TBA
Savanah Love, Environmental Sciences (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
TBA
Jose Santana, Environmental Studies (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
TBA
Brooke Thompson, Environmental Sciences (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
TBA
Session II 10:45-12:15pm
(Christiana Care Hospital, Nemours Biomedical Research, Medical Laboratory Sciences, Psychological & Brain Sciences, Kinesiology & Applied Physiology, Physical Therapy, Nursing)

CHRISTIANA CARE HOSPITAL
Destiny Hollis, Biology (INBRE) (Wesley College)
LeRoi Hicks, Department of Medicine (Christiana Care Hospital)
TBA

Kristen Pisarcik, Biotechnology (INBRE) (DTCC)
Eric Kmiec, Gene Editing Institute (Christiana Care Hospital)
*Gene Editing in Saccharomyces cerevisae using CRISPR/Cas9*

NEMOURS BIOMEDICAL RESEARCH
Alyssa Lattomus, Chemistry (NIH) (Washington College)
Robert Akins, Nemours Biomedical Research (Nemours)
*Cell Instructive Materials for Engineering Vascular Grafts*

Margaret Mahoney, Neuroscience (NSURP) (Dartmouth College)
Melissa Alderfer, Nemours Biomedical Research (Nemours)
*Development of a Screening Module to Assess Sibling-related Psychosocial Risk in Families of Children with Cancer*

Kyle Hinkle, Biological Sciences (NUCLEUS)
Matthew Butchbach, Nemours Biomedical Research (Nemours)
*Regulation of SMN2 Expression by Novel Small Molecules*

Stephanie Masters, Biology (NSURP) (James Madison University)
Matthew Butchbach, Nemours Biomedical Research (Nemours)
*Molecular Modifiers of Disease in Spinal Muscular Atrophy: EPHA4*

Meghan Brumbley, Neuroscience (NSURP) (Temple University)
Esther Chung, Nemours Biomedical Research (Jefferson)
*Using Practice-based Quality Improvement to Reduce the Risk for Child Abuse and Neglect*

Robert Abishek, Neuroscience (INBRE) (Swarthmore College)
Jane Crowley & Gray Vargas, Nemours Biomedical Research (Nemours)
*Examination of Demographic Factors as Predictive of Cognitive Testing Scores and Recovery in Pediatric Concussion*

Andrew Doran, Histology (INBRE) (DTCC)
Paul Fawcett & Carrie Paquette-Straub, Nemours Biomedical Research (Nemours)
*Assessment of Clinical Value of Cytokines*
Melchizedek Myers, Chemistry (INBRE)
Rochelle Haas, Nemours Biomedical Research (Nemours)
Occulomotor Dysfunction in Concussion: a Predictor of Protracted Recovery

Colton Takata, Biomedical Engineering (NSURP) (Johns Hopkins University)
John Henley, Nemours Biomedical Research (Nemours)
Comparison of Intrisic Kinematic Foot Models

Camille Elliott, Biology (OHEI-HESSP) (Rowan University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
Racial and Ethnic Heterogeneity in the Association between Inflammatory Cytokines (IL-4, IL-10, IL-2, IL-6), IgG4, Interferon Gamma and Childhood Asthma Severity

Anthony Filippini, Nursing (OHEI-HESSP) (West Chester University)
Laurens Holmes, Nemours Biomedical Research (Nemours)

Melissa Gray, Biology (OHEI-HESSP) (James Madison University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
Temporal and Racial Trends in Childhood Acute Myloid Leukemia: Analysis using SEER Data

Andre Jones, Biology (INBRE) (Wesley College)
Laurens Holmes, Nemours Biomedical Research (Nemours)
Racial Variability in the Association between Dental Caries and Dental Care Utilization among Children: Multi-level Analysis using NCHS Dataset, 2012

Linda Nguyen, Biology (OHEI-HESSP) (Villanova University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
Racial and Sex Variability in Major Pediatric Cancer Survival: Experience of Delaware Largest Childhood Tumor Cohort, 2004-2014

Eunice Shin, Biology (NSURP) (Villanova University)
Lauren Hurd & Vicky Funanage, Nemours Biomedical Research (Nemours)
Delineating Genotype-Phenotype Correlations in Diastrophic Dysplasia

Halley Donlin, Psychology (NSURP) (Elizabethtown College)
Jing Jin, Nemours Biomedical Research (Nemours)
Optical Cooccurrence Tomography (OCT) Study of Fixation Pattern, Macular Structure and Ocular Dominance in Normal and Amblyopic Eyes

Alyssa Givens, Biomedical Engineering (INBRE)
Heidi Kecskemethy, Nemours Biomedical Research (Nemours)
The Natural History of Bone Density in Children with Disabilities: A Longitudinal Examination

Lucy Sullivan, Molecular Cell Biology (NSURP) (University of California)
Sigrid Langhans, Nemours Biomedical Research (Nemours)
Development of Tools for High-throughput Drug Discovery in Drug-resistant Medulloblastoma
Robert Dina, Biological Chemistry (INBRE) (Wesley College)
Freeman Miller & Chris Church, Nemours Biomedical Research (Nemours)
*The Long-term Outcome of Asymmetry during Gait in Children with CP*

Samantha Weiss, Biochemistry (NSURP) (Rowan University)
Andrew Napper, Nemours Biomedical Research (Nemours)
*High-throughput Screen to Discover Compounds that Sensitize Bone Marrow Localized AAL to Chemotherapy*

Celina Santiago, Chemistry (NSURP) (Villanova University)
Reid Nichols & Chris Church, Nemours Biomedical Research (Nemours)
*Gait and Foot Deformity in Children with Arthrogryposis*

Catherine Dolan, Biological Sciences Education (INBRE)
Laura Owens, Kristen Nicholson & Nancy Lennon, Nemours Biomedical Research (Nemours)
*The Impact of Surgical and Physical Therapy Dose on Recovery in Children and Youth with CP*

Nicholas Imperato, Neuroscience (INBRE)
Joe Piatt, Nemours Biomedical Research (Nemours)
*Epidemiology of Spinal Injury in Childhood in the United States: 1997 to 2012*

Myranda Steingraeber, Neuroscience (NSURP) (University of Rochester)
Judith Ross, Nemours Biomedical Research (Jefferson)
*The Duplicate Y Chromosome that Occurs in 47,XY Syndrome Contributes to Autism Spectrum Disorder*

Abigail Bisesi, Biology (ACCEL CTR) (Oberlin College)
Valerie Sampson, Nemours Biomedical Research (Nemours)
*Preclinical Testing of Targeted Therapies in Combination with Eribulin in Osteosarcoma*

Hannah Chidekel, Health: Science, Society, & Policy (Dr. Aaron Chidekel) (Brandeis University)
Ambika Shenoy & Kathleen Peeke, Nemours Biomedical Research (Nemours)
*Are you Immune?*

Aniah Coley, Public Health (ACCEL CTR) (DSU)
Krishna White, Nemours Biomedical Research (Nemours)
*Long Acting Reversible Contraception (LARC) Participatory Action Research (PAR)*

**MEDICAL LABORATORY SCIENCES**
Caitlin Blades, Foreign Language & Literature (McNair)
Michelle Parent, Medical Laboratory Sciences
*Nanoparticle Treatment to Inflammatory Breast Cancer Cells*

Diamond Higgin, Neuroscience (McNair)
Arun Kumar, Medical Laboratory Sciences
*Topographical Changes of Bone Marrow Stem Cells Differentiating into Cardiac Cells on Nanoscaffolds*
PSYCHOLOGICAL & BRAIN SCIENCES
Christina Woodson, Psychology (McNair) (Marquette University)
Mary Dozier, Psychological & Brain Sciences
TBA

Rachel Metzgar, Neuroscience (SE)
James Hoffman, Psychological & Brain Sciences
*Semantic Processing and the N400 Component in the Emotion Induced Blindness Paradigm*

Lizzy Marano, Psychology (SE)
Julie Hubbard, Psychological & Brain Sciences
*Aggression in Children*

Arthur Currier, Neuroscience (McNair)
Helen Intraub, Psychological & Brain Sciences
*Boundary Extension in Older Adults*

Marisa Chamness, Neuroscience (SE)
Dayan Knox, Psychological & Brain Sciences
*GR Functionality in Single-prolonged Stress Model*

Emily Moulton, Neuroscience (SE)
Dayan Knox, Psychological & Brain Sciences
*The Role GR Internalization in the mPFC in the SPS Model*

Stephanie Rodgers, Neuroscience (INBRE)
Jared Medina, Psychological & Brain Sciences
TBA

Xiaxin Zhong, Psychology (SE)
Beth Morling, Psychological & Brain Sciences
*How Relational Mobility Affects the Valance of Emoji used in Cyber Communication*

Morgan Spurrier, Cognitive Science (SE)
Joshua Neunuebel, Psychological & Brain Sciences
*Effect of Estrus States on Female Mice Vocalizations*

Dan Sangiamo, Neuroscience (SE)
Josh Neunuebel, Psychological & Brain Sciences
*Investigating the Relationship Between Ultrasonic Vocalizations and Aggressive Behaviors*

Victor Ike, Psychology (McNair) (Marquette University)
Anna Papafragou, Psychological & Brain Sciences
TBA
Raevyn Johnson, Psychology (McNair) (Bloomfield College)
Anna Papafragou, Psychological & Brain Sciences
*The Development of Children's Communication Abilities*

Malak Kawan, Neuroscience (SE)
Jeffrey Rosen, Psychological & Brain Sciences
*Differential Expression of Immediate Early Genes in Prefrontal Cortex of Juvenile Rats After Contextual Fear Conditioning*

Johanna Chajes, Neuroscience (SE)
Tania Roth, Psychological & Brain Sciences
*Using HDAC Inhibitors to Prevent Maltreated-induced Brain DNA Methylation*

Simran Kaur, Neuroscience (SE)
Tania Roth, Psychological & Brain Sciences
*The Effect of Zebularine on Rodents Exposed to Various Maternal Caregiving Techniques*

Sarah Beamish, Neuroscience (NUCLEUS)
Jaclyn Schwarz, Psychological & Brain Sciences
*The Effects of Immune Activation on Brain Development*

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

Pragyan Khanal, Neuroscience (McNair)
Jaclyn Schwarz, Psychological & Brain Sciences
*Impact of Prenatal Zika Virus on Maternal/Fetal Inflammatory Response & Fetal Brain Development*

Jennifer Lawrence, Neuroscience (SE)
Jaclyn Schwarz, Psychological & Brain Sciences
*An Investigation of Sex Difference in Microglia Morphology and Function*

Hallye Rosenbloom, Biological Sciences (SE)
Jaclyn Schwarz, Psychological & Brain Sciences
*How Early Life Immune Activation Influences Development*

Lauren Miller, Neuroscience (SE)
Mark Stanton, Psychological & Brain Sciences
*Brain Mechanisms of Context Learning in the Developing Rat*

Corey Beinhart, Cognitive Science (SE)
Timothy Vickery, Psychological & Brain Sciences
*A Computational, Statistical, and Neurological Examination of Contextual Cueing in Visual Scenes*

Adrienne Kim, Biological Sciences (INBRE)
Timothy Vickery, Psychological & Brain Sciences
*TBA*
KINESIOLOGY & APPLIED PHYSIOLOGY
Cory Cacciola, Mechanical Engineering (INBRE)
Elisa Arch, Kinesiology & Applied Physiology
TBA

Daniel Courtney, Exercise Science (INBRE)
Elisa Arch, Kinesiology & Applied Physiology
TBA

Amy Bednarek, Athletic Training (SE)
Thomas Buckley, Kinesiology & Applied Physiology
NCAA-DoD Concussion Assessment, Research, and Education Consortium

Michael Christensen, Exercise Science & Dietetics (INBRE)
Anahid Ebrahimi, Kinesiology & Applied Physiology
TBA

Teresa Ferrara, Biological Sciences (INBRE)
Anahid Ebrahimi, Kinesiology & Applied Physiology
TBA

Amy Trask, Exercise Science (SE)
Nancy Getchell, Kinesiology & Applied Physiology
Examining Executive Function Development in Children

Emily Wunsch, Exercise Science (NUCLEUS)
Nancy Getchell, Kinesiology & Applied Physiology
Prefrontal Cortex Activity of Random vs. Blocked Learning in an Adolescent Population

Eduardo Arocha, Exercise Science (NUCLEUS)
Thomas Kaminski, Kinesiology & Applied Physiology
NCAA/DoD Grand Alliance: Concussion Assessment, Research and Education (CARE) Consortium –
Longitudinal Clinical Study Core

Peter Spurrell, Biological Sciences (SE)
Thomas Kaminski, Kinesiology & Applied Physiology
NCAA/DOD Concussion Assessment, Research and Education Consortium, (CARE) University of Delaware
Site Project

Daniela Davison, Biomedical Engineering (CBER NSF REU) (NJ Institute of Technology)
Chris Modlesky, Kinesiology & Applied Physiology
Portable and MRI compatible Plantar Flexion and Dorsiflexion Dynamometer

Juan Ruiz, Biochemistry (INBRE)
Rhonda Prisby, Kinesiology & Applied Physiology
TBA
**PHYSICAL THERAPY**

Michael Hoffman, Biological Sciences (INBRE)
Anjana Bhat, Physical Therapy
TBA

Ikira Peace, Communication (INBRE) & Jessica Gibbons, Exercise Science (CPW)
Anjana Bhat, Physical Therapy
*Take Physical Therapy by the Hand and Dance: A Play Intervention Study on Children with Autism*

Susanna Trost, Biological Sciences (SE)
Anjana Bhat, Physical Therapy
*fNIRS-related Neuroimaging for Individuals with Autism Spectrum Disorder*

Daria Collins, Cognitive Science (McNair)
Cole Galloway, Physical Therapy
*The Effects of Body-Weight Supported Activity on the Development of Infants With and Without Down Syndrome*

Nisha George, Biological Sciences (INBRE)
Cole Galloway, Physical Therapy
TBA

Katie Holland, Biological Sciences (NUCLEUS)
Michele Lobo, Physical Therapy
TBA

Katelyn Klimowich, Biological Sciences (INBRE)
Michele Lobo, Physical Therapy
TBA

Casey Polasko, Exercise Science (INBRE)
Michele Lobo, Physical Therapy
TBA

Nicholas Rattenni, Biomedical Engineering (CPW)
Michele Lobo, Physical Therapy
TBA

Kendal Simmons, Exercise Science (McNair)
Michele Lobo, Physical Therapy
*Testing the Effectiveness of Hard Pediatric Wilmington Robotic Exoskeleton (P-WREX) vs. Soft Garment-based Playskin Lift on Exoskeleton in Improving Upper-Extremity Mobility, Reaching and Object Exploration in a Child with Arthrogryposis*
Emily Smith, Biological Sciences (NUCLEUS)
Michele Lobo, Physical Therapy
*Studying Self-Feeding Behavior in Typically Developing Children and Those With Arm Movement Impairments*

Ania Lipat, Applied Physiology & Kinesiology (CBER NSF REU) (University of Florida)
Darcy Reisman, Physical Therapy
*Neurophysiologic and Behavioral Mechanisms of Post-Stroke Locomotion Learning*

Logan Girton, Exercise Science (INBRE) (Slippery Rock University)
Karin Silbernagel, Physical Therapy
*Short-Term Effects of Low Level Laser Therapy on the Achilles Tendon*

Nia Powell, Athletic Training (ADaPT)
Karin Silbernagel, Physical Therapy
*Use of Extended Field of View Ultrasound Imaging to Evaluate Patella Tendon Structure: A Feasibility and Reliability Study*

Tyler Tice, Athletic Training (CPW)
Karin Silbernagel, Physical Therapy
*TBA*

Georgia Gagianas, Exercise Science (DRI)
Lynn Snyder-Mackler, Physical Therapy
*TBA*

**NURSING**

Kelly Chen, Nursing (SE)
Ingrid Pretzer-Aboff, School of Nursing
*The Psychosocial Effects of Parkinson’s Disease on Patients and their Family Caregivers*

Amoni Knight, Movement Science (INBRE) (DSU)
Ingrid Pretzer-Aboff, School of Nursing
*TBA*

Carly Piel, Medical Diagnostics (INBRE /NUCLEUS)
Ingrid Pretzer-Aboff, School of Nursing
*TBA*

Akila Coleman, Spanish for the Health Professions (McNair) (Marquette University)
Regina Wright, School of Nursing
*TBA*
SESSION III 1:15-2:45pm

BEHAVIORAL HEALTH & NUTRITION
Karlee Stritzinger & Heather Latchford, Exercise Science (INBRE) (DTCC)
Mark Lafferty, Allied Health & Carol Malkin, Exercise Science (DTCC)
*Thermic Effect of Digestion using Various Fasting Protocols*

Krystal Lee, Dietetics (SE)
Sheau Ching Chai, Behavioral Health & Nutrition
*Antioxidant Effects on Bone Mineral Density and Body Composition in Adults Aged 65-80*

Jing Luo, Dietetics (Pattison)
Sheau Ching Chai, Behavioral Health & Nutrition
*The Effects of Dietary Fats on Cognitive Function and Emotional Status in Older Individuals*

Rosymar Magana, Health Behavioral Science (McNair)
Elizabeth Orsega-Smith, Behavioral Health & Nutrition
*The Factors Influencing Cognitive Ability in Older Adults*

Peter Chappell, Health Behavior Science (SL Fellow)
Mia Papas, Behavioral Health & Nutrition
*Implementation of a Food Pantry at the University of Delaware*

Varsha Kripalu & Alyssa Tate Biological Sciences (SE & SL Fellow)
Mia Papas, Behavioral Health & Nutrition
*Smoking Cessation Programs and their Effectiveness in Mobile Food Pantries*

Tyler Myers, Health Behavior Science (Pattison)
Mia Papas, Behavioral Health & Nutrition
*Harmful Coping Mechanisms among Adolescents with and without Disabilities*

Vanessa Santiago, Health Behavioral Science (McNair)
Mia Papas, Behavioral Health & Nutrition
*Understanding Adverse Health Behaviors on Delawereans*

Chelsea Adebiyi, Health Behavior Science (McNair/Pattison)
Kelebogile Setiloane, Behavioral Health & Nutrition
*Child Rearing Practices of African Immigrant Women*
Julia Katcher, Health Sciences (Extension Scholars)
Sue Snider & Kathleen Splane, New Castle County Cooperative Extension-Nutrition
*Work with Kent/Sussex County EFNEP and non-EFNEP Audiences to Support Nutrition Initiatives*

Emily Merklen, Dietetics (Extension Scholars)
Sue Snider & Kathleen Splane, New Castle County Cooperative Extension-Nutrition
*Extension Nutrition “Up for the Challenge” Summer Camp Programming and Experience*

**MANAGEMENT INFORMATION SYSTEMS**
Anyelo Almonte, Management Information Systems (McNair) (Bloomfield College)
Gang Wang & Nerissa Brown, Accounting & MIS
*TBA*

**EDUCATION & HUMAN DEVELOPMENT**
Alexis Paller, Psychology (INBRE)
Roberta Golinkoff, School of Education
*TBA*

Spencer Hoernes, Food Science (SL Fellow)
Allison Karpyn, Center for Research in Education & Social Policy
*Green Inclusion*

Nadisha Downs, Human Services (McNair)
Rob Palkovitz, Human Development & Family Studies
*Father Involvement of Young African American Men Ages 18-25 in Urban Contexts*

**LINGUISTICS & COGNITIVE SCIENCE**
Naiim Mason, Linguistics (Hofmann Scholar)
Irene Vogel, Linguistics & Cognitive Science
*Sociolinguistic Motivations for Language/Dialect Differentiations*

**ENERGY & ENVIRONMENTAL POLICY**
Abigail Vanover, Energy & Environmental Policy (SE)
John Byrne, Center for Energy & Environmental Policy
*Mobility and Sustainability in Latin American Cities*

**FASHION & APPAREL STUDIES**
Danielle Dubay-Betters, Apparel Design (AHSS)
Kelly Cobb, Fashion & Apparel Studies
*Rethinking Solutions for Reducing Textile Waste in Landfills*

**ARTSBRIDGE**
Rachel Austin, Quantitative Biology (ArtsBridge)
Lynnette Overby, Theatre
*Building Demand for the Arts: A Qualitative Analysis of Arts Access in Wilmington, DE*
**PHILOSOPHY**
Wylie Darden, Philosophy (EPSCoR) (Howard University)
Stephen Taylor, History, Political Science & Philosophy (DSU)
TBA

**MATHEMATICAL SCIENCES**
Chris Cornwell, Mathematical Sciences (NSF REU)
Richard Braun, Mathematical Sciences
*Similarity Solutions and Tear Film Thinning*

Spencer Walker, Applied Mathematics (NSF REU)
Richard Braun, Mathematical Sciences
*Models for Tear Film Evaporation and the Corneal Epithelium*

Stephanie Clampitt, Mathematical Sciences (SE)
Sebastian Cioaba, Mathematical Sciences
*Applications of Mathematics to Economics*

Cory Cutsail, Mathematical Sciences (McNair)
Sebastian Cioaba, Mathematical Sciences
*Applications of Mathematical Programming Methods in Economics*

Nicole DiPasquale, Statistics (SE)
Sebastian Cioaba, Mathematical Sciences
*Investigations in Network Medicine*

Pasquale Zingo, Applied Mathematics (SF)
Sebastian Cioaba, Mathematical Sciences
*Data Analysis with Spectral Graph Theory*

Amanda Seiwell & Erin Tellup, Secondary Mathematics Education (SE & AHSS)
Michelle Cirillo, Mathematical Sciences
*Scaffolding the Introduction to Mathematical Proof*

Christopher Beam, Applied Mathematics (SE)
Tobin Driscoll, Mathematical Sciences
*Automatic Differentiation as a Tool to Enhance Numerical Differentiation*

Jennifer Fanelle, Applied Mathematics (SF)
Tobin Driscoll, Mathematical Sciences
*Dimension Reduction for Neonatal Arterial Pressure Waveforms*

Matthew Meyers, Applied Mathematics (SF/Mathematical Sciences)
Tobin Driscoll, Mathematical Sciences
*Dimension Reduction for Neonatal Arterial Pressure Waveforms*
Joshua Sporre, Mathematical Sciences (SE)  
Tobin Driscoll, Mathematical Sciences  
*Dimension Reduction for Stochastic ODEs using Active Subspaces*

Wenbin Li, Mathematical Sciences (NSF)  
David A. Edwards, Mathematical Sciences  
*Mathematical Extensions for Optical Biosensors*

Nathaniel Kim, Mathematical Sciences (SE)  
Mahya Ghandehari, Mathematical Sciences  
*Wavelet Theory*

Qile Wang, Mathematical Sciences (SE)  
Dominique Guillot, Mathematical Sciences  
*Paleoclimate Reconstructions via Modern Data Science*

Tina Torkaman, (Sharif Institute of Technology)  
Dominique Guillot & Mayha Ghandehari, Mathematical Sciences  
*Critical Exponents of Graphs*

Russell Harris, University Studies (EPSCoR)  
John Jungck, Biological Sciences & Mathematical Sciences  
*Evolutionary Game Theory for Optimizing Cancer Multi-drug Chemotherapy*

Guanyu Hou, Mathematical Sciences (SE)  
Francisco Javier Sayas, Mathematical Sciences  
*Numerical Simulation of Waves in Viscoelastic Media*

Sammy Eyong, Mathematics (INBRE) (DSU)  
Sokratis Makrogiannis, Mathematics (DSU)  
*TBA*

Kaitlyn Thomesen, Quantitative Biology (SE)  
Gilberto Schleiniger, Mathematical Sciences  
*Mathematical Model of Oxygen Delivery for HLHS Anatomy*

Riza Bautista, Mathematics (INBRE) (Wesley College)  
Derald Wentzien, Mathematics &Malcolm D’Souza, Chemistry (Wesley College)  
*TBA*

**PHYSICS & ASTRONOMY**  
Kanisha Blake, Biology (INBRE) (Wesley College)  
Hacene Boukari, Physics (DSU)  
*TBA*
Jaspal Nijjar, Physics (SE)
John Clem, Physics & Astronomy
Radio JOVE Project

Nasiru Abdullah, Information Technology (INBRE) (DSU)
Mohammad Khan, Physics & Pre-Engineering (DSU)
TBA

Seth Fair, Engineering Physics (INBRE) (DSU)
Mohammad Khan, Physics & Pre-Engineering (DSU)
TBA

Eric Rouviere, Physics (SE)
Edward Lyman, Physics & Astronomy
Pinpointing the Main Phase Transition Temperature of DPPC Bilayer with Membrane Proteins and Cholesterol

Alexis Webb, Physics (SE)
Edward Lyman, Physics & Astronomy
Computational Calorimetry

MATERIALS SCIENCE
Beshore, Jamie, Materials Science & Engineering (NSF-REU)( Cornell University)
Matthew Doty, Materials Science & Engineering
TBA

Marc Christian, Mechanical Engineering (SE)
Xinqiao Jia, Materials Science & Engineering
Vocal Fold Bioreactor Fabrication and Characterization

Mark Kai Leung Ho, Chemical Engineering (SE)
Xinqiao Jia, Materials Science & Engineering
TBA

Christian Harris, Biology, (SE) (Lincoln University)
Stephanie Law, Materials Science & Engineering
TBA

Dan Ferraro, Chemical Engineering (SE)
William Shafarman, Materials Science & Engineering
Effect of Different Surface Treatments on Cu(InGa)Se2 Solar Cells

Isaac King, Chemical Engineering (SE)
Joshua Zide, Materials Science & Engineering
TBA
Lisa Mwanza, Biochemistry (NSF-REU) (Lincoln University)
Joshua Zide, Materials Science & Engineering
*Thermoelectrics in Time Varying Environments*

**COMPUTER & INFORMATION SCIENCES**
Ryan Beneck, Electrical Engineering (SE)
Sunita Chandrasekaran, Computer & Information Sciences
*Bridging the Gap Between Existing Software and Emerging Hardware for Exascale Computing*

Collin Clark, Computer Engineering (SE)
Sunita Chandrasekaran, Computer & Information Sciences
*Image Processing with Neural Networks*

Daniel Liang, Computer Science (SE)
Sunita Chandrasekaran, Computer & Information Sciences
*Bridging the Gap Between Existing Software and Emerging Hardware for Exascale Computing*

Eluamuno Enenmo, Computer Science (McNair)
James Clause, Computer & Information Sciences
*Dynamic Model of Leadership in Groups*

Casey Campbell, Electrical Engineering (SE)
Fouad Kiamilev, Computer & Information Sciences
*Stochastic Parallel Gradient Descent*

Benjamin Steenkamer, Computer Engineering (SE)
Fouad Kiamilev, Computer & Information Sciences
*Designing a New SLEDs Amplification Circuit Board*

Matthew Schmittle, Computer & Information Sciences (SE)
Chris Rasmussen, Computer & Information Sciences
*Quadcopter Obstacle Avoidance via Audio Navigation*

John Bounds, Mechanical Engineering (SE)
Michela Taufer, Computer & Information Sciences
*From HPC Performance to Climate Modeling: Transforming Methods for HPC Predictions Into Models of Extreme Climate Conditions*

Teague Forren, Computer Science (SE)
Haining Wang, Computer & Information Sciences
*C Program Vulnerability Detection*

Yifeng Liu, Computer Engineering (SE)
Chengmo Yang, Computer & Information Sciences
*Code Analysis with LLVM*
Abraham McIlvaine, Computer Science (SE)
Chengmo Yang, Computer & Information Sciences
Efficient and Adaptive Fault Resilience

ELECTRICAL & COMPUTER ENGINEERING
Andrew Kacmarcik, Electrical Engineering (SE)
Dennis Prather, Electrical & Computer Engineering
Millimeter Waves

Jesse Semmel, Electrical Engineering (SE)
Dennis Prather Electrical & Computer Engineering
Silicon Photonics
SESSION IV 3:00-4:30pm
(Engineering: Biomedical, Mechanical, Chemical & Biomolecular, Civil & Environmental)

BIOMEDICAL ENGINEERING
Dina Collins, Neuroscience (McNair)
Danielle Benoit, Biomedical Engineering (University of Rochester)
_Nanoparticle-mediated Delivery of miRNA-140 to Drive Chondrogenesis in Human Mesenchymal Stem Cells_

Margaret Billingsley, Biomedical Engineering (SE)
Emily Day, Biomedical Engineering
_Enhanced Detection of Circulating Tumor Cells Using EGFR-Targeted Nanoshells_

Nicole Kreuzberger, Biomedical Engineering (SE)
Emily Day, Biomedical Engineering
_Synthesis of Polyethylenimine (PEI) Coated Spherical Nucleic Acids for Enhanced siRNA Delivery_

Christian Montero, Biomedical Engineering (CBER NSF REU) (Boston University)
Dawn Elliott, Biomedical Engineering
_Effect of Age on Tendon Mechanical Damage_

Erica Comber, Biomedical Engineering (INBRE)
Jason Gleghorn, Biomedical Engineering
_Hypoxia Signaling in Mouse Lung Development_

Elizabeth Marcin, Biomedical Engineering (SE)
Jason Gleghorn, Biomedical Engineering
_Expression of Myosin Isoforms in Fetal Lungs_

Peter Sariano, Biomedical Engineering (INBRE)
Jason Gleghorn, Biomedical Engineering
_Toward a 3D Cell Culture Model of an Airway with Contractile Smooth Muscle_

Zachary Sexton, Biomedical Engineering (UDRF REU)
Jason Gleghorn, Biomedical Engineering
_Developing Microfluidic Models for Fluid Stresses in Complex Epithelial Networks_

Alexander Kulyk, Biomedical Engineering (SE)
Curtis Johnson, Biomedical Engineering
_Quantification of Brain Tumor Stiffness and Heterogeneity from MRE Images_

Grace McIlvain, Biomedical Engineering (SE)
Curtis Johnson, Biomedical Engineering
_Elastography of the Hippocampus as it Relates to Memory Performance in Children_
Christian Thompson, Biomedical Engineering (SE)  
Curtis Johnson, Biomedical Engineering  
*Quantification of Mechanical Properties of Brain Tissue in MS Patients*

Patrick Canning, Biomedical Engineering (SE)  
Megan Killian, Biomedical Engineering  
*Inhibiting Chondrogenesis in Human Mesenchymal Stem-cells Through the Knockdown of Gli1*

Lindsay Erndwein, Materials Science and Engineering (CBER NSF REU) (Pennsylvania State University)  
Megan Killian, Biomedical Engineering  
*Second Harmonic Generation Microscopy Generates Collagen Fiber Alignment of the Achilles Tendon-Bone Interface*

Emily Hudson, Pre-Veterinary Medicine & Animal Biosciences (INBRE)  
Megan Killian, Biomedical Engineering  
*TBA*

Julia Paganucci, Mechanical Engineering (CBER NSF REU & BMEG)  
Megan Killian, Biomedical Engineering  
*Hip Joint Laxity on Ex Vivo Mouse Hip Joints*

David Sun, Biomedical Engineering (UD Dare to Be FIRST REU) (Washington University)  
Christopher Price, Biomedical Engineering  
*Mechanobiology of Tribological Rehydration in Cartilage*

Natalie Muneses, Biomedical Engineering (SE)  
Chandran Sabanayagam, Biomedical Engineering  
*Developing a Micro-fraction Collector using Fluorescence Microscopy*

Gemma Ciabattoni, Mechanical Engineering (DRI)  
Fabrizio Sergi, Biomedical Engineering  
*TBA*

Elspeth Grasso, Biomedical Engineering (SE)  
Fabrizio Sergi, Biomedical Engineering  
*MR-SoftWrist: A Haptic Device for Investigating Wrist Pointing under Force Feedback during fMRI*

Margaret Pires-Fernandes, Biomedical Engineering (CBER NSF REU) (University of Florida)  
Fabrizio Sergi, Biomedical Engineering  
*Effects of Speed and Stride Length on Joint Torque Distribution in Normal Gait*

Takunda Masike, Engineering (CBER NSF REU) (Clark College)  
John Slater, Biomedical Engineering  
*A Finite Element Model to Predict Strain Fields in Hydrogels Resulting From Cell-Generated Forces Using An Embedded Fiducial Marker Array*
Laura Sturgill, Biomedical Engineering (SE)
John Slater, Biomedical Engineering
*Treating Cardiovascular Endothelial Cells to Prevent Extravasation and Halt Metastasis*

Matthew Scott, Mathematical Sciences (NIH)
Ryan Zurakowski, Biomedical Engineering
*TBA*

**MECHANICAL ENGINEERING**
Kanak Chattopadhyay, Mechanical Engineering (SE)
Suresh Advani, Mechanical Engineering
*TBA*

Tess Carella, Mechanical Engineering (SE)
Suresh Advani, Mechanical Engineering
*Fabric and Textile 3D Permeability Characterization Work-Station*

Jacob Fish, Biomedical Engineering (DRI)
Tom Buchanan, Mechanical Engineering
*Generation of Subject-specific Knee Finite Element Models using Magnetic Resonance Imaging*

Oluwajomiloju Olaode, Biomedical Engineering (CBER NSF REU) (Worcester Polytechnic Institute)
Thomas Buchanan, Mechanical Engineering
*Establishing a Mathematical Model to Estimate Knee Joint Loading during Gait Cycling*

Sarah Leung, Biomedical Engineering (SE)
Dave Burris, Mechanical Engineering
*Self-Lubricating Scaffold Reinforced Polyvinyl Alcohol Hydrogels*

Michael Whiting, Mechanical Engineering (CBER & MEEG)
David Burris, Mechanical Engineering
*Tribologically Induced Articulate Cartilage Recovery*

Nicole Moylett, Mechanical Engineering (SE)
Joseph Feser, Mechanical Engineering
*Thermoreflectance Expansion and Laser Properties*

Eryn Gerber, Biomedical Engineering (DRI)
Jill Higginson & Ana Ebrahimi, Mechanical & Biomedical Engineering
*A Novel Design for a Garment-based Body-weight Support Harness*

Daniel Grindle, Mechanical Engineering (DRI)
Jill Higginson, Mechanical & Biomedical Engineering
*Passive Support System's Effect on Walking Kinematics and Kinetics*
Kelley Kempski, Biomedical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
Validation of SmartBoot: Real-Time Visual Biofeedback for Partial Weight-Bearing

Andrew Whitford, Mechanical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
Redistribution of Backpack Load

Tash Zunaid, Biomedical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
Effects of the Passive Support System on Lower Back Forces

Jesse Bloecker, Mechanical Engineering (SE)
Guoquan Huang, Mechanical Engineering
Development of Navigation and Mapping Algorithms using Simultaneous Localization and Mapping (SLAM)

Patrick Geneva, Mechanical Engineering (SE)
Guoquan Huang, Mechanical Engineering
Real-time Visual-Inertial Navigation on Mobile Devices

Marisa Bisram, Mechanical Engineering (CBER NSF REU & MEEG)
X. Lucas Lu, Mechanical Engineering
The Role of ZA in Calcium Signaling during Long and Short Term Culture

Jessica Kerns, Biology (CBER NSF REU) (Saint Joseph's University)
X. Lucas Lu, Mechanical Engineering
Repair of Cartilage in Temporomandibular Joint

Kelsey Jordan, Bioengineering (CBER NSF REU) (University of Pennsylvania)
Kurt Manal, Mechanical Engineering
Measuring Brake Reaction Times in ACL Reconstruction Patients

Dillon Elliott, Mechanical Engineering (CBER NSF REU) (University of Colorado)
Debora Massouda, Mechanical Engineering
3D Printing and Characterization of Cellular Material

Christopher Kitson, Mechanical Engineering (SE)
Ajay Prasad, Mechanical Engineering
Study of New Shell Materials of Microcapsules for Self-healing Composite Fuel Cell Membranes

Elizabeth Racca, Mechanical Engineering (CBER & MEEG)
Dustyn Roberts, Mechanical Engineering
Drones, Mazes, and Algorithmic Learning

Jason Stevens, Mechanical Engineering (CBER & MEEG)
Dustyn Roberts, Mechanical Engineering
This Machine Kills Fascists: A Robotic Guitar
EJ Carron, Mechanical Engineering (SE)  
Valery Roy, Mechanical Engineering  
*Experimental Demonstration of Energy Harvesting by Flow-Induced Vibrations*

John Pfreundschuh, Mechanical Engineering (SE)  
Valery Roy, Mechanical Engineering  
*Numerical Simulation of Flow-Induced Oscillations at Large Reynolds Numbers*

Michael DiMercurio, Mechanical Engineering (SE)  
Herbert Tanner, Mechanical Engineering  
*UAV Gamma Radiation Detection*

Aris Mardirossian, Mechanical Engineering (SE)  
Erik Thostenson, Mechanical Engineering  
*Alternating Current Electrophoretic Deposition of Nanomaterials*

Nicholas Geneva, Mechanical Engineering (SE)  
Lian-Ping Wang, Mechanical Engineering  
*Implementing Particle-Laden Lattice Boltzmann Simulations on GPU Architectures*

Danielle Gerstman, Mechanical Engineering (SE)  
Liyun Wang, Mechanical Engineering  
*SimULine*

Kevin Hrubik, Mechanical Engineering (CBER NSF REU & MEEG)  
Liyun Wang, Mechanical Engineering  
*Unconfined Compression Testing of Intervertebral Discs*

**CHEMICAL & BIOMOLECULAR ENGINEERING**  
Robert Cipolla, Chemical & Biomolecular Engineering (NSF CBET)  
Maciek Antoniewicz, Chemical & Biomolecular Engineering  
*Elucidating the Metabolism of the Extremely Thermophilic Archaeon Sulfolobus with 13C Tracers and Flux Analysis*

Ryan McNulty, Chemical & Biomolecular Engineering (NSF CBET)  
Maciek Antoniewicz, Chemical & Biomolecular Engineering  
*Synergistic Interactions between Auxotrophic E. coli Knockout Strains*

Wenxin Wang, Chemical Engineering (Plastino)  
Douglas Buttrey, Chemical & Biomolecular Engineering  
*Synthesis and Characterization of Advanced Materials for Catalysis*

Christine Mourafetis, Chemical Engineering (NSF-REU) (New York University)  
Wilfred Chen & April Kloxin, Chemical & Biomolecular Engineering  
*Site-specific Bio-conjugation of Azide-modified Proteins to PEG Hydrogels*
Justin Terr, Chemical Engineering (SE)
Wilfred Chen, Chemical & Biomolecular Engineering
Development of Protein Nano Particles for Antibody Purification

Austin Roadarmel, Biological Sciences (COBRE, NIH)
David Colby, Chemical & Biomolecular Engineering
Implications of Pathological Tau Protein Conformation in Neurodegenerative Disease

Jacob Shapiro, Chemical Engineering (SE)
David Colby, Chemical & Biomolecular Engineering
Creation of cDNA Libraries to Find Protein-Protein Interaction Partners

Sean Daniels, Chemical Engineering (CCEI)
Vlachos Dion, Chemical & Biomolecular Engineering
One Pot Reductive Etherification of 5-hydroxymethyl Furfural to Fuels using Homogeneous Metal Salts

Tobias Mazal, Chemical Engineering (CCEI)
Vlachos Dion, Chemical & Biomolecular Engineering
Hydrodeoxygenation of Furfural over Ruthenium-Based Catalysts

Spencer Burton, Polymer Science & Engineering (NSF REU) (Case Western Reserve University)
Thomas Epps, Chemical & Biomolecular Engineering

John Saltwick, Chemical Engineering (SE)
Thomas Epps, Chemical & Biomolecular Engineering
Stabilizing Long-Range Morphologies in Block Copolymer Thin Films

George Wieber, Chemical Engineering (Plastino)
Thomas Epps, Chemical & Biomolecular Engineering
Renewable Polymer Synthesis and Characterization

Ian Heffner, Chemical Engineering (Plastino)
Eric Furst, Chemical & Biomolecular Engineering
TBA

Paul Blanchard, Chemical Engineering (NSF REU) (Pennsylvania State University)
Arthi Jayaraman, Chemical & Biomolecular Engineering
Coarsened-grained Simulation Studies of Polymer Nanocomposites

Charles Collins, Chemical Engineering (SE)
Feng Jiao, Chemical & Biomolecular Engineering
Electrocatalytic Reduction of Dinitrogen at Low Temperatures and Pressures

Benjamin Kelly, Chemical Engineering (SE)
Michael Klein, Chemical & Biomolecular Engineering
Methods for Creating Advanced Modeling of Petroleum Reaction Kinetics
Mark LaRue, Biomedical Engineering (NSF CAREER Award)
April Kloxin, Chemical & Biomolecular Engineering
*Mimicking the Fibrillar Structure of the Extracellular Matrix using Collagen Mimetic Peptides*

Joseph Spohn, Biomedical Engineering (Pew Charitable Trusts)
April Kloxin, Chemical & Biomolecular Engineering
*Understanding Fibroblast Response to Cell Polarization using Layered Hydrogels*

Shea Cole, Chemical Engineering (SE)
Christopher Kloxin, Chemical & Biomolecular Engineering
*Novel Restorative Dental Materials Using Copper(I)-Catalyzed-Azide-Alkyne Cycloaddition (CuAAC) Reaction*

Grant Knappe, Chemical Engineering (SE)
Christopher Kloxin, Chemical & Biomolecular Engineering
*Self-Healing Materials*

Laura Mumper, Chemical Engineering (SE)
Christopher Kloxin, Chemical & Biomolecular Engineering
*Kinetic Analysis of Thiol-Ene Photo-Polymerization Reactions Incorporating Charged Monomers*

Clare Wunder, Chemical Engineering (CCEI)
Raul Lobo, Chemical & Biomolecular Engineering
*Producing Industrially Important Chemicals via Heterogeneously Catalyzed Formaldehyde-Olefin Condensation Reaction*

Kevin Schmalbach, Chemical Engineering (NSF) (Rowan University)
Michael Mackay, Chemical & Biomolecular Engineering
*Development and Characterization of Novel 3D-Printable Thermoplastic Materials*

Carly Battistoni, Chemical Engineering (SE)
Christopher Roberts, Chemical & Biomolecular Engineering
*Using Bio-layer Interferometry to Measure the Effectiveness of Refolding Solutions to Refold Granulocyte-Colony Stimulating Factor*

Gabrielle Parker, Chemical Engineering (MedImmune)
Christopher Roberts, Chemical & Biomolecular Engineering
*TBA*

Curtis Strab, Chemical Engineering (NIH, NSF)
Christopher Roberts, Chemical & Biomolecular Engineering
*TBA*

Connor Shannon, Biomedical Engineering (SE)
Millicent Sullivan, Chemical & Biomolecular Engineering
*Stabilizing pDNA polyplexes through Covalent Crosslinking of H3 tails and PEI*
Shuzhen Chen, Chemical & Biomolecular Engineering (NSF-REU) (New York University)
Norman Wagner, Chemical & Biomolecular Engineering
Low Viscosity High Conductivity High Storage Capacity Nanoparticle Suspensions for Flow Batteries via Nanoscale Engineering

Cameron Mertz, Chemical Engineering (NSF-REU)
Norman Wagner, Chemical & Biomolecular Engineering
A Systematic Study of the Viscosities of Polydisperse Suspensions; Experiments and Modeling

David Brown, Chemical Engineering (NSF-REU) (Columbia University)
Yushan Yan, Chemical & Biomolecular Engineering
Membrane-less Redox Flow Batteries Based on Hydrophobic Ferrocenes

CIVIL & ENVIRONMENTAL ENGINEERING
Minghan Xian, Chemical Engineering (SE)
Pei Chiu, Civil & Environmental Engineering
Development of a Redox Titration Method for a Wood Derived Black Carbon on its Electrochemical Behavior

Celine Robinson, Environmental Engineering (SE)
Rachel Davidson, Civil & Environmental Engineering
Christchurch 2010/2011 Earthquake Insurance Analysis

Zachary Merritt, Computer Engineering (SL Fellow)
Ardeshir Faghri, Civil & Environmental Engineering
DELDOT GIS Software Development

Tyler Seidel, Chemical Engineering (SE)
Paul Imhoff, Civil & Environmental Engineering
Addition of Biochar Modifications to Increase Soil Aggregation in Green Stormwater Management Systems

Alison Treglia, Environmental Engineering (SE)
Julia Maresca, Civil & Environmental Engineering
Role of Carotenoid Compounds in Oxidative Stress Response in Bacteria Isolated from Concrete
ORAL PRESENTATIONS

9:00-10:00 SESSION ONE

EDUCATIONAL ENRICHMENT (ROOM 110)

Moderator: Jenni Buckley, Mechanical Engineering

Taylor Tewksbury, Marine Biology (SL)
Jacqueline Fajardo, Chemistry & Biochemistry
Community Partner: Delaware Nature Society
Improving Educational Accessibility of Water Quality Data

Srinivasa Gajjala, Biomedical Engineering & Grace Ruiz Cooper, Mechanical Engineering (SL)
Jenni Buckley, Mechanical Engineering
Community Partner: The Perry Initiative and Orthotics in Action
OIA Development and Perry Initiative

Marielle Kraft, Elementary Teacher Education (ArtsBridge)
Lynnette Overby, Theatre
South African and United States History: A Middle School Curriculum to Teach the Art of Understanding Culture

Rebecca Jewell, Human Services (SL)
Brian Freedman, Center for Disability Studies
Community Partner: UD Career and Life Studies Certificate Program
CLSC Residential Experience

CRIMINAL JUSTICE REFORM (ROOM 215)

Grace Wood, Criminal Justice (AHSS)
Aaron Kupchik, Sociology & Criminal Justice
Inequality and Counseling

Lauren McCrea, Political Science (McNair)
Chrysanthi Leon, Sociology & Criminal Justice
The Reentry of Black Americans Into Society

Stan Cuff, Human Services (McNair)
Christy Visher, Sociology & Criminal Justice
Recidivism Prevention Programs

Hugh Bayard, Psychology (McNair)
Benjamin Fleury-Steiner, Sociology & Criminal Justice
Ex-offenders and the Pardon Process
SUSTAINABLE APPAREL  (ROOM 322)
Moderator: Kelly Cobb, Fashion & Apparel Studies

Isabella Aswad, Fashion Merchandising (NUCLEUS/AHSS)
Abigail Clarke-Sather, Fashion & Apparel Studies
Geotextiles Research

Mikayla DuBreuil, Apparel Design, Fashion Merchandising (AHSS)
Kelly Cobb, Fashion & Apparel Studies
Sustainability Impacts of Local vs. Global Sourcing

Jennifer Saunders, Fashion Merchandising (AHSS)
Sheng Lu, Fashion & Apparel Studies
Artisan Trade: Unseen Impact

10:10-11:10  SESSION 2

CAMP  (ROOM 110)
Moderator: Suzanne Burton, Music

Chu Zhou, Dietetics (Extension Scholars)
Karen Johnston, 4-H Youth Development
Teen Leadership Development

Ali Keith, Plant Science (Extension Scholars)
Kaitlin Klair, 4-H Youth Development
4-H Summer Day Camps and Delaware State Fair

Christina Conlin, Anthropology; Greta Sweeney, Art Conservation; & Elizabeth Van Winkle, Art Conservation (SL)
Vicki Cassman, Art Conservation
Community Partner: Winterthur Museum, Garden & Library; Salvation Army Summer Camp
Terrific Tuesdays at Winterthur Museum and Salvation Army Summer Camp

Meaghan Anderson & Olivia Giglio, Music Education (SL)
Suzanne Burton, Music
Community Partner: Salvation Army Summer Camp
Beat Goes On
AGRICULTURE & FOOD  
(Room 215)

Amanda O’Keeffe, Public Policy (SL)
Mia Papas, Behavioral Health & Nutrition
Community Partner: Bright Spot Ventures

Expanding Food Accessibility

Jayme Soyak, Geography (SL Scholars)
Lindsay Naylor, Geography
Community Partner: Bright Spot Ventures

Bright Spot Ventures

Alexis Omar, Animal & Food Science (Extension Scholars)
Michelle Rodgers, Cooperative Extension

Beyond Fork to Table Summer EDGE program

Jackie Arpie, Agriculture & Natural Resources (Extension Scholars)
Jennifer Volk, Plant & Soil Sciences

Documenting Climate Adaptations in Agriculture

FASHION & DYE  
(Room 322)

Moderator: Jocelyn Alacantara-Garcia, Art Conservation

Taylor Pearlstein, Art Conservation (AHSS)
Jocelyn Alacantara-Garcia, Art Conservation

The Analysis of Norwich Wool Dyes

Riley Thomas, Art Conservation (AHSS)
Jocelyn Alacantara-Garcia, Art Conservation

Lichen Dye Color Component Extraction and Analysis

Ariana Bishop, Fashion Merchandising (AHSS)
Belinda Orzada, Fashion & Apparel Studies

Fashion on All Fronts
**POLITICS & POLICY** (ROOM 417)

Kristina Demou, Communication Interest (CPC / AHSS)
Lindsay Hoffman, Communication
*#Politics: Social Media and the Presidential Race*

Julian Jackson, Communication (McNair)
Jennifer Lambe, Communication
*The Tensions Between Free Speech and Hate Speech*

Benjamin Carleton, Sociology (AHSS)
Ronet Bachman, Sociology & Criminal Justice
*A Cross-National Examination of Citizen Trust in the Police*

Nicole Carmichael & Tyler Shade, Public Policy (SL)
Steven Peuquet, Public Policy & Administration
Community Partner: Community Legal Aid Society, Inc.
*Fair Housing for CLASI*

11:20-12:20  **SESSION 3**

**WOMEN'S STUDIES & SOCIAL JUSTICE** (ROOM 215)

Moderator: Lynnette Overby, Theatre

Sarah Mayo & Maria Rizzo, Criminal Justice (AHSS)
Susan Miller, Sociology & Criminal Justice
*Trauma-Informed Courts in Relation to Prostitution*

Rebecca Glinn, Woman & Gender Studies (AHSS)
Jennifer Naccarelli, Women & Gender Studies
*Examining the Relationship Between Pornography and Consent*

Haley Magwood, Political Science (McNair)
Leslye Orloff, The National Immigration Women's Advocacy Project (American University)
*U-Visas: Helping Immigrant Women Gain Protection Through Legal and Political Avenues*

Dominique Oppenheimer, International Relations (ArtsBridge)
Lynnette Overby, Theatre
*Art and Activism: Women's Use of Poetry for Change in the US and South Africa*
MATERIAL CULTURE (ROOM 322)

Moderator: Vicki Cassman, Art Conservation

Eva Allison, Anthropology (AHSS)
Jay Custer, Anthropology
Inventory and Cultural Analysis of Nanticoke Basketry

Alaina Smith, Anthropology (AHSS)
Jessica Horton, Art History
Yupik Masks: Past and Present

Amanda Kasman & Karissa Muratore, Art Conservation (AHSS)
Vicki Cassman, Art Conservation
Nancy's Dollhouse

ENGLISH EDUCATION (ROOM 417)

Moderator: Melissa Ianetta, English

Lisa Pham, History Education (McNair)
Robert Hampel, Education
School Teachers and the Community

Kristen Todd, English Education (AHSS)
William Lewis, Education
Teaching Independent Reading Habits using Graphic Novels

Claire Armann, English (NUCLEUS)
Melissa Ianetta, English
Difference in Writing Practices among University of Delaware Students
1:30-2:30  

SESSION 4

WELL-BEING  

Moderator: Karen Edwards, Behavioral Health & Nutrition

Juliana Mbakwe, Exercise Science & Chante’ Vann, Health & Physical Education (SL)
Karen Edwards, Behavioral Health & Nutrition
Community Partner: Girls, Inc.

Does Using a Fitness Game Format Increase Summer Campers Fitness Levels?

Dominique Carpio, Health Behavior Science & Justin Mitchell, Exercise Science (SL)
Iva Obrusnikova, Behavioral Health & Nutrition
Community Partner: EPIC & Bear/Glasgow YMCA

Using Video Prompting to Promote the Acquisition of Fitness Tasks in Adults with Developmental Disabilities

Erica Rathie, Health Behavior Science (SL)
Elizabeth Orsega-Smith, Behavioral Health & Nutrition
Community Partner: Howard Weston Senior Center; Claymore Center; Rockland Place

Happiness Project

Amanda Raker, Apparel Design (SL)
Kelly Cobb, Fashion & Apparel Studies
Community Partner: Newark Senior Center

Wearing Well-Being

ANTHROPOLOGY  

Moderator: Patricia Sloane-White, Anthropology

Kayla Morrell, Biological Sciences (NUCLEUS)
Melissa Melby, Anthropology

Celiac Disease: Twenty Centuries Old or New Fad?

Emaline Reyes, Undeclared (AHSS)
Karen Rosenberg, Anthropology

The Obstetrical Dilemma’s Dilemma

Darian Lawrence, Political Science (McNair)
Patricia Sloane-White, Anthropology

Blackness and Race in Japan
ART (ROOM 322)

Moderator: Amy Hicks, Art

Madison Bacon, Fine Arts (AHSS)
Abigail Donovan, Art & Design
The Art of Storytelling

Stefanie Hamill, Fine Arts (AHSS)
Amy Hicks & Abigail Donovan, Art & Design
Forgiving Mediums, Forgiving Myself: Healing Through Multimedia Storytelling

Joseph Gardner, Fine Arts (AHSS)
Abigail Donovan, Art & Design
Humans: A New Breed

Iliana Burgos, Comparative Literature (McNair)
Martha Carothers, Art & Design
Radioactive Reactors

ECONOMICS & STATISTICS (ROOM 417)

Paul Mooney, Economics (AHSS)
Farley Grubb, Economics
A Quantitative View of Chandler's Thesis

Xingguo Wang, Economics (AHSS)
Joshua Duke, Applied Economics & Statistics
Evidence on the Success of Land Value Taxation: A Synthesis and Preliminary Model

Mengzheng Yao, Sociology (AHSS)
Alan Fox, Philosophy
Applying Statistical Methods to the Study of Classical Chinese Philosophy
SESSION 5
HEALTHY COMMUNITIES (ROOM 110)
Moderator: Mia Papas, Behavioral Health & Nutrition

Taylor Ryan, Human Services (SL)
Steve Eidelman, Human Development & Family Studies
Community Partner: National Leadership Consortium on Developmental Disabilities
Dual Diagnosis: How to Best Support Individuals with both a Disability and Mental Illness

Alexa Meinhardt & Jaclyn Natalone, Biological Sciences (SL Scholars)
Mia Papas, Behavioral Health & Nutrition
Community Partner: Westside Family Healthcare
Understanding the Social Determinants of Health in Underserved Communities: A Partnership with Westside Family Healthcare

Catie Cottrell, & Felicia Kriner, Psychology; Jessica Prucha, Neuroscience; & Jillian Solomon, Early Childhood Education (SL)
Mary Dozier, Psychology & Brain Sciences
Community Partner: tba
Providing Support to High-Risk Families in the Community

Selina Delgado & Victoria Kager, Psychology (SL)
Mary Dozier, Psychology & Brain Sciences
Community Partner: tba
Enhancing Fidelity Among Parent Coaches

Kadisha Mack, Psychology (McNair)
Mary Dozier, Psychological & Brain Sciences
An Exploratory Analysis of Cumulative Risk Factors and Maternal Sensitivity
**PSYCHOLOGY & DIVERSITY (ROOM 215)**

**Moderator: James Jones, Psychological & Brain Sciences**

Vanessa Hatton, Black American Studies (CSD /AHSS)
James Jones, Psychological & Brain Sciences
*Personalizing the IAT to Measure Attitudes about Diversity*

Rosmeiry Valera, Psychology (McNair) (Bloomfield College)
Jean-Phillipe Laurenceau, Psychological & Brain Sciences
*TBA*

Greg Sieber, Cognitive Science (NUCLEUS/ AHSS)
Beth Morling, Psychological & Brain Sciences
*The Impact of Empathy on Design Idea Generation*

Season Cooper, English & Branham Menard, Political Science/Black American Studies (CSD/McNair)
Rosalie Rolon Dow, School of Education & James Jones, Psychological & Brain Sciences
*Tell it Like it Is: Race Stories at UD*

Sarah Wong, Medical Diagnostics (Siemens Healthineers / INBRE / IWSTEM)
Dara Morey, (Siemens Healthineers)
*TBA*

**ENGLISH & MUSIC (ROOM 322)**

**Moderator: Daniel Stevens, Music**

Cherie Larkin, English (AHSS)
Siobhan Carroll, English
*Researching Materials for: Circulating Nature: Planetary Politics in the Transatlantic Imagination, 1791-1914*

Diane Wade, English (McNair) (Southern Nazarene University)
Siobhan Carroll, English
*TBA*

Katherine Navarro, English (AHSS)
George Miller, English
*Adam's Lament: An Exploration of Lament Tradition in Literature*

Jonathan Bergh, Music Composition (AHSS)
Jennifer Barker, Music
*The Performance Practice of Percussive Acoustic Guitar*

Elizabeth Bellotti, Music Education (AHSS)
Daniel Stevens, Music
*Analysis of and Connections in Brahms’ Gesänge für Frauenchor mit Begleitung von 2 Hörnern und Harfe, Op. 17*