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Planning Committee

Liljana Babinkostova, associate professor
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Boise State University

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Membership Coordinator

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Manager for Student Programs
2017 REU Symposium Schedule
Westin Alexandria—October 22–23, 2017

Sunday, October 22

11:00am-1:00pm  Registration and Check-in
                    Location: Edison D

1:00 pm-3:00 pm  Welcome Lunch and Keynote Panel
                    Location: Edison D

                    Elizabeth L. Ambos, PhD, Executive Officer, Council on Undergraduate Research
                    Keynote Panel:
                    DaNa L. Carlis, PhD, National Oceanic and Atmospheric Administration Research, Meteorologist / Weather Portfolio Advisor
                    Nadeene Riddick, PhD, Science Technology and Policy Fellowship, Executive Branch, National Science Foundation
                    Shermaine Mitchell-Ryan, PhD, Science Technology and Policy Fellowship, Executive Branch Fellow, National Science Foundation

3:00 pm-5:00 pm  Graduate School Fair
                    Location: Edison D

5:00 pm-6:00 pm  Orientation to the next day’s activities (students are free to venture out for dinner and explore after this session)
                    Location: Edison D

6:00 pm-7:00 pm  Faculty Reception
                    Location: Whitney

7:00 pm–        Dinner on your own
Monday, October 23

7:00 am–8:30 am  Breakfast and orientation to the day’s activities
Location: Edison EFG Foyer

9:00 am–10:00 am  Group 1 Posters
Groups 3 & 4 attend student sessions

FACULTY for groups 3 & 4 make NSF visits (please schedule with your program director)

10:00 am–10:15 am  Switch Groups/break

10:15 am–11:15 am  Group 2/Session 2

11:15 am–12:30 pm  Lunch and orientation to the afternoon’s activities
Location: Edison EFG

12:30 pm–1:30 pm  Group 3 Posters
Groups 1 & 2 attend student sessions

FACULTY for groups 1 & 2 make NSF visits (please schedule with your program director)

1:30 pm–1:45 pm  Switch Groups/break

1:45 pm–2:45 pm  Group 4 Posters/Session 4

2:45 pm–3:15 pm  Closing Session

Student Poster Sessions—Monday, October 23, 2017

Westin Alexandria / Edison D

9:00 am–10:00 am | Session 1
Physics, Engineering, International Science and Engineering

10:15 am–11:15 am | Session 2
Computer and Information Science and Engineering, Materials Research,
Mathematical Sciences, Cyberinfrastructure

12:30 pm–1:30 pm | Session 3
Astronomical Sciences, Biological Sciences, Earth Science, Education and Human Resources

1:45 pm–2:45 pm | Session 4
Atmospheric Sciences and Geospace; Chemistry; Ocean Sciences; Social, Behavioral, and Economic Sciences
Student/Faculty Sessions—Monday, October 23, 2017
Westin Alexandria

Session 1|9:00 am–10:00 am
Student Session A:
*Applying for Graduate School Support from NSF: The Graduate Research Fellowship Program (GRFP)*—Dr. Gisele Muller-Parker, Program Director, Graduate Research Fellowship Program
Room: Banneker

Faculty Session A:
*NSF REU Program Update*—Dr. R. Corby Hovis, Program Director, Education and Human Resources
Room: Bell

Session 2|10:15 am–11:15 am
Student Session B
*Preparing for Professional Life: Resume Building and Networking*—
Dr. Rebecca Jones, George Mason University
Room: Wright

Faculty Session B: Visits to NSF: Please schedule directly with your program director.

Session 3|12:30 pm–1:30 pm
Student Session C
*Applying for Graduate School Support from NSF: The Graduate Research Fellowship Program (GRFP)*—Dr. Gisele Muller-Parker, Program Director, Graduate Research Fellowship Program; and Dr. Jong-on Hahm, the National Science Foundation
Room: Wright

Faculty Session C:
*Assessment of REU Impacts: Current Resources and Planning for Expansion*—
Dr. Elizabeth L. Ambos, Executive Officer, the Council on Undergraduate Research; Dr. Anne Boettcher, President, the Council on Undergraduate Research; and Dr. Sally O’Connor, Biology Program Director, the National Science Foundation
Room: Bell

Session 4| 1:45 pm–2:45 pm
Student Session D
*Undergraduate Scholarships through the Barry Goldwater Scholarship and Excellence in Education Foundation*—Dr. John Mateja, President, Barry Goldwater Scholarship and Excellence in Education Foundation
Room: Banneker

Faculty Session D: NSF Visits: Please schedule directly with your program director
Poster Session 1  
Location: Edison D  
NSF Division: Engineering

1_1  
Title: “A Study Involving a Tetranuclear Cobalt(III) Complex as a Water Oxidation Catalyst”  
Presenter(s): Abbygail Reid  
REU Site: Training Undergraduates in Electrochemical Technologies for Clean Fuels (Biofuels and Hydrogen) Production and Applications  
Host Institution: Old Dominion University  
Grant #: 1560194  
Principal Investigator / Faculty Mentor: Alvin Holder

1_2  
Title: “Additive Manufacturing of Bioinspired Compositional Gradients for Tailoring Mechanical Property Distributions”  
Presenter(s): Christina Sheldon  
REU Site: Interdisciplinary Research Experiences in Metrology and Nondestructive Inspection  
Host Institution: Texas A&M University  
Grant #: 1659856  
Principal Investigator / Faculty Mentor: Mathew Kuttolamadom

1_3  
Title: “Application of the Euro NCAP Pedestrian Protocol Using an Advanced Human Body Model”  
Presenter(s): Alexandra Deghand  
REU Site: Imaging and Mechanics-Based Projects on Accidental Cases of Trauma (IMPACT)  
Host Institution: School of Medicine, Wake Forest University  
Grant #: 1559700  
Principal Investigator / Faculty Mentor: Joel Stitzel

1_4  
Title: “Autonomous Collision Avoidance System for UAVs Using ADS-B Transponders”  
Presenter(s): Tristan Sherman  
REU Site: Research Experience for Undergraduates in UAV Technologies  
Host Institution: California State Polytechnic University, Pomona  
Grant #: 1560478  
Principal Investigator / Faculty Mentor: Subodh Bhandari

1_5  
Title: “Biological Filtration (without Ozonation) for the Removal of THM Precursors”  
Presenter(s): Sara Bartczak  
REU Site: From Bench to Market: Engineering Systems for High-Efficiency Separations  
Host Institution: University of Arkansas  
Grant #: 1659653  
Principal Investigator / Faculty Mentor: Shannon Servoss
1_6
Title: “Coupling of Agent-Based and Network Models of Cardiac Fibrosis”
**Presenter(s):** Thomas Athey
**REU Site:** Multi-Scale Systems Bioengineering
**Host Institution:** University of Virginia
**Grant #:** 1560282
**Principal Investigator / Faculty Mentor:** Timothy E. Allen

1_7
Title: “Design and Fabrication of Cantilevered Beams to Investigate Time-Scale Dependencies of Energy Transfer during Flow-Induced Vibrations”
**Presenter(s):** Emily Ashlyn Browning
**REU Site:** Advancing Sustainable Systems and Environmental Technologies (ASSETs) to Serve Humanity
**Host Institution:** Clarkson University
**Grant #:** 165962
**Principal Investigator / Faculty Mentor:** Shane W. Rogers

1_8
Title: “Environmental Fate Predicting via Atom-Based Computer Simulations”
**Presenter(s):** Jessica Maass
**REU Site:** Summer Academy in Sustainable Manufacturing
**Host Institution:** Wayne State University
**Grant #:** 1461031
**Principal Investigator / Faculty Mentor:** Jeremy Rickli

1_9
Title: “Environmentally Stable, Low-Cost, Conductive Polymers”
**Presenter(s):** Victoria Oceanna Jones
**REU Site:** Engineering Entrepreneurship Education (E3)—A Multidisciplinary, Entrepreneurial Research Experience for Undergraduates
**Host Institution:** University of Connecticut
**Grant #:** 1560072
**Principal Investigator / Faculty Mentor:** Daniel D. Burkey

1_10
Title: “Fabrication and Electrical Properties of CNT Interconnects for Microelectronics Applications”
**Presenter(s):** Zakia Ahmed
**REU Site:** A Novel Cu/CNT Material System for Through Silicon via Interconnects
**Host Institution:** University of Texas at Arlington
**Grant #:** 1734983
**Principal Investigator / Faculty Mentor:** Leila Ladani
1_11
Title: “How the Moisture Content of Moso Bamboo (Phyllostachys Edulis) Affects Its Electrical and Mechanical Properties”
Presenter(s): Jada Damond
REU Site: Innovative Engineering Using Renewable Resources
Host Institution: The University of Alabama
Grant #: 1559867
Principal Investigator / Faculty Mentor: Susan Burkett

1_12
Title: “Integration of Digital Forensics with Physical Analysis to Improve Understanding of the Counterfeiting Ecosystem”
Presenter(s): Dakota Earle
REU Site: Collaborative Research: Security Printing and Anti-Counterfeiting Technology
Host Institution: SD School of Mines and Tech
Grant #: 1560421
Principal Investigator / Faculty Mentor: Jon Kellar

1_13
Title: “Interactive Graphical User Interface for Ray Aberration Generator 3.0”
Presenter(s): Nicholas J. Mennona
REU Site: Research in Optics
Host Institution: University of Arizona
Grant #: 1460723
Principal Investigator / Faculty Mentor: R. John Koshel

1_14
Title: “Investigation of Motion Cueing Algorithms on the IMS Driving Simulator”
Presenter(s): Andrew Masters
REU Site: Collaborative International Automotive Engineering in Germany and the USA
Host Institution: Virginia Tech
Grant #: 1560107
Principal Investigator / Faculty Mentor: Jan Bohn

1_15
Title: “Modulating Signaling Pathways to Promote Acinar Cell Secretory Function In Vivo”
Presenter(s): Luis Reira
REU Site: Advancing Human Health from Nano to Network
Host Institution: University of Rochester
Grant #: 1559970
Principal Investigator / Faculty Mentor: Beth Olivares | Stephon Hamell
1_16
Title: “Simultaneous EMG Control of Multiple Grasp Functions with a Dexterous Artificial Hand”
Presenter(s): Michael Bornstein
REU Site: Sensing and Smart Systems
Host Institution: Florida Atlantic University
Grant #: 1659484
Principal Investigator / Faculty Mentor: Jason Hallstrom

1_17
Title: “Step Down DC-DC Converter for Electric Vehicles”
Presenter(s): Samira Nikpour | Ayan Mallik
REU Site: Summer Engineering Research Experiences in Transportation Electrification
Host Institution: University of Maryland–College Park
Grant #: 1559845
Principal Investigator / Faculty Mentor: Alireza Khaligh

1_18
Title: “Synthesis of Fe/C Composite Materials from Spent Coffee Grinds and Ferric Ammonium Citrate”
Presenter(s): Rosanna Granata | Yanbin Cui
REU Site: Environmental Engineering Solutions for Pollution Prevention
Host Institution: University at Buffalo, State University of New York
Grant #: 1559989
Principal Investigator / Faculty Mentor: John D. Atkinson

1_19
Title: “Triboelectric Charging and Electrostatic Separation of Wind-Blown Desert Sands in Northwest China”
Presenter(s): Amber K. Phillips
REU Site: Electrostatic Charging in Wind-Blown Dust
Host Institution: Case Western Reserve University
Grant #: 1559508
Principal Investigator / Faculty Mentor: Daniel Lacks

NSF Division: International Science and Engineering

1_20
Title: “Response of a Tropical Dry Forest System in Coastal Jalisco, Mexico to Category 5 Hurricane Patricia”
Presenter(s): Jennifer Magaña | Stacey Meekhof | Samuel Gutierrez | Taylor Henne
REU Site: IRES: SOBRE MEXICO: Student Opportunities for Biological Research in Mexico
Host Institution: Central Washington University and Estacion de Biologia, Chamela, Universidad Nacional Autonoma de Mexico
Grant #: 1559447
Principal Investigator / Faculty Mentor: Daniel Beck
NSF Division: Physics

1_21
Title: “A Guiding Light: Multispectral Imaging of Medieval Maps”
Presenter(s): Nicole Polglaze | Roger Easton
REU Site: Imaging in the Physical Sciences
Host Institution: Rochester Institute of Technology
Grant #: 1658806
Principal Investigator / Faculty Mentor: Roger R. Dube

1_22
Title: “An Investigation of Evolution of the Galaxy Merger Rate Out to z=3”
Presenter(s): Carly KleinStern
REU Site: Multimessenger Astrophysics
Host Institution: Rochester Institute of Technology
Grant #: 1659740
Principal Investigator / Faculty Mentor: Joshua Faber

1_23
Title: “Cran- and Acai-Berry Synthesized Fold Nanoparticles: Anti-Cancer Properties against Prostate Cancer”
Presenter(s): Pierce L. Bloebaum | V. C. Thipe M. Khoobchandani
REU Site: Materials and Modeling
Host Institution: University of Missouri
Grant #: 1359430
Principal Investigator / Faculty Mentor: Sashi Satpathy | Kattesh Katti

1_24
Title: “Deep Defects in Hexagonal Boron Nitride as Qubit Candidates”
Presenter(s): Evan Folk
REU Site: Physics at Howard University
Host Institution: Howard University
Grant #: 1659224
Principal Investigator / Faculty Mentor: Prabhakar Misra | Pratibha Dev

1_25
Title: “Harmonic Kicker RF Cavity for the Jefferson Lab Electron Ion Collider”
Presenter(s): Gail E. Dodge | Sarah A. Overstreet
REU Site: Accelerator and Nuclear Physics
Host Institution: Old Dominion University
Grant #: 1659177
Principal Investigator / Faculty Mentor: Haipeng Wang
1_26
Title: “Predicting Neutrino Flux for the MINERvA Experiment”
Presenter(s): Sonya Paola Vidal | Arie Bodek
REU Site: Physics and Optics at Rochester
Host Institution: University of Rochester / Physics and Astronomy
Grant #: 1460352
Principal Investigator / Faculty Mentor: Kevin McFarland

1_27
Title: “Searching for Extended Gamma-Ray Emission around MGRO J1908 Using the VERITAS Observatory”
Presenter(s): Erin Christine Aadland
REU Site: An Inclusive REU Program in Physics and Astronomy at the University of Utah
Host Institution: University of Utah
Grant #: 1742665
Principal Investigator / Faculty Mentor: David B. Kieda and Jordan Gerton

1_28
Title: “Wrinkling of a Curved Ultrathin Film on a Flat Liquid Surface”
Presenter(s): Alexander R. Hartwell
REU Site: NSF REU: Interactive Biomaterials
Host Institution: Syracuse University
Grant #: 1460784
Principal Investigator / Faculty Mentor: James H. Henderson

Poster Session 2
Location: Edison D
NSF Division: Computer and Information Science and Engineering

2_1
Title: “3D Printing Hydrogel Phantoms for MRI”
Presenter(s): Nmachi Anumba | Audrey Sillers
REU Site: Summer Undergraduate Program in Engineering Research at Berkeley—Collecting and Using Big Data for the Public Good
Host Institution: University of California, Berkeley
Grant #: 1659833
Principal Investigator / Faculty Mentor: James Demmel

2_2
Title: “Analyzing the Impact of Gender on the Automation of Feedback for Job Interviews”
Presenter(s): Astha Singhal
REU Site: Computational Methods for Understanding Music, Media, and Minds
Host Institution: University of Rochester
Grant #: 1659250
Principal Investigator / Faculty Mentor: Henry Kautz
2_3
Title: “Automated Feature Extraction for Kinetic Typography Analysis”
Presenter(s): Seo Park
REU Site: Harvey Mudd REU Site in Computer Systems
Host Institution: Harvey Mudd College
Grant #: 1659805
Principal Investigator / Faculty Mentor: Julie Medero

2_4
Title: “Automatic Extraction of Informal Topics from Online Suicidal Ideation”
Presenter(s): Reilly N. Grant
REU Site: Medical Informatics Experiences in Undergraduate Research
Host Institution: DePaul University and University of Chicago
Grant #: 1659836
Principal Investigator / Faculty Mentor: Daniela Raicu

2_5
Title: “Bio-Signal Acquisition System Development for Early Warning Score”
Presenter(s): Reinaldo Chris Reina
REU Site: Cultivating the IoT-Enabled Smart Community (IoT-SITY)
Host Institution: UC Irvine
Grant #: 1659887
Principal Investigator / Faculty Mentor: Sharnnia Artis | Nalini Venkatasubramanian

2_6
Title: “Capturing, Analyzing, and Aligning Multimodal Responses to Affective Visual Content”
Presenter(s): David L. Nester
REU Site: Computational Sensing
Host Institution: Rochester Institute of Technology
Grant #: 1559889
Principal Investigator / Faculty Mentor: Reynold Bailey | Cecilia O. Alm

2_7
Title: “Dissecting Convolutional Neural Networks for Automatically Classifying Biomedical Images”
Presenter(s): Justin Whitaker
REU Site: Software Testing and Analytics
Host Institution: East Carolina University
Grant #: 1560037
Principal Investigator / Faculty Mentor: Junhua Ding

2_8
Title: “Evaluation of ISO 26262: Analysis of Critical Issues in the Automotive Industry”
Presenter(s): Yegor Shea
REU Site: Software Safety: Research, Practice, and a Path Forward
Host Institution: University of Texas at Dallas
Grant #: 1461149
Principal Investigator / Faculty Mentor: Eric Wong
Title: “Fluorescent-Based Lateral Flow Point of Care Detection of Cervical Cancer Biomarkers in Serum”
Presenter(s): Meilin Zhu
REU Site: Sensor, Signal and Information Processing (SenSIP) Devices and Algorithms
Host Institution: Arizona State University
Grant #: 1659871
Principal Investigator / Faculty Mentor: Jennifer M. Blain Christen

Title: “Focusing Footstep Planning for Humanoids Using Homotopy-Class Guidance”
Presenter(s): Vinitha Ranganeni
REU Site: CMU Robotics Institute REU Site
Host Institution: Carnegie Mellon University
Grant #: 1659774
Principal Investigator / Faculty Mentor: John M. Dolan

Title: “Learning Perspective-Free Counting via Dilated Convolutions”
Presenter(s): Diptodip Deb
REU Site: Machine Learning in Natural Language Processing and Computer Vision
Host Institution: University of Colorado Colorado Springs
Grant #: 1659788
Principal Investigator / Faculty Mentor: Jonathan Ventura

Title: “Mathematical Filter Initialization for Decreased Learning Time”
Presenter(s): Mary Grace Hirsch
REU Site: Big Data Analytics at Oklahoma State University
Host Institution: Oklahoma State University
Grant #: 1659645
Principal Investigator / Faculty Mentor: David Eric Chan-Tin

Title: “Measuring Software Quality: Aggregating from a Security-Based Model”
Presenter(s): Tessa Valentien | Kali Kimball
REU Site: Research and Development of Algorithms in a Software Factory
Host Institution: Montana State University
Grant #: 1658971
Principal Investigator / Faculty Mentor: Clemente Izurieta

Title: “Provable Limitations on the Capabilities of Blockchain Adversaries”
Presenter(s): Erica Blum
REU Site: Trustable Embedded Systems Security Research
Host Institution: The University of Connecticut
Grant #: 1659764
Principal Investigator / Faculty Mentor: Alexander Russell
2_15
Title: “Transforming Interactive Visualizations into Design Assets through Web-Based Instrumentation”
Presenter(s): Apoorva Nori | Cole Polychronis
REU Site: Data Science Research for Safe, Sustainable, and Healthy Communities
Host Institution: Worcester Polytechnic Institute
Grant #: 1560229
Principal Investigator / Faculty Mentor: Elke A. Rundensteiner | Lane Harrison

2_16
Title: “Wireless Gas Sensors in IoT”
Presenter(s): Jillian Leigh Chandler
REU Site: Research Experiences on Internet of Things (IoT)
Host Institution: University of Central Florida
Grant #: 1560302
Principal Investigator / Faculty Mentor: Damla Turgut

NSF Division: Cyberinfrastructure

2_17
Title: “Reducing Power Consumption by Identifying Key Issues: Exploration in Energy Saving”
Presenter(s): Bayley Meyer
REU Site: Undergraduate Research in Collaborative Data Visualization Applications
Host Institution: Clemson University
Grant #: 1359223
Principal Investigator / Faculty Mentor: Oyewole Oyekoya

NSF Division: Materials Research

2_18
Title: “Effect of Constricted Cell Migration on the Cell Cycle and DNA Replication”
Presenter(s): Leeza Marie Santiago
REU Site: LRSM REU-Site
Host Institution: LRSM, University of Pennsylvania
Grant #: 1659512
Principal Investigator / Faculty Mentor: Mark Licurse

2_19
Title: “Hybrid Perovskite Solar Cells”
Presenter(s): Erik Nordquist
REU Site: Materials for Society
Host Institution: Boise State University
Grant #: 1658076
Principal Investigator / Faculty Mentor: Rick Ubic
2_20
Title: “Investigating the Photovoltaic and Photocatalytic Activity of TiO2 Anatase and Rutile Phases”
Presenter(s): Margaret de los Santos
REU Site: Renewable Energy Generation and Storage
Host Institution: Binghamton University
Grant #: 1658990
Principal Investigator / Faculty Mentor: Jeffrey M. Mativetsky

2_21
Title: “Optimizing the Direct Visualization of HPC Microgels via Scanning Electron Microscopy”
Presenter(s): Anthony Dobrila
REU Site: Synthesis, Assembly, and Characterization of Soft Matter
Host Institution: Cleveland State University
Grant #: 1659541
Principal Investigator / Faculty Mentor: Petru Fodor | Kiril A. Streletzky

2_22
Title: “Ultra-Thin Flexible Battery Cell”
Presenter(s): Jack Jack Mershon
REU Site: Multidisciplinary Research Experience for Undergraduates in Nanomaterials for Energy and Biological Applications
Host Institution: Indiana University–Purdue University Indianapolis
Grant #: 1659688
Principal Investigator / Faculty Mentor: Mangilal Agarwal

2_23
Title: “Classification of Solvable Leibniz Algebras with Quasi-Filiform Lie Nilradical”
Presenter(s): Wesley Whiting
REU Site: USA-Uzbekistan Collaborative Research in Leibniz Algebras
Host Institution: Institute of Mathematics, Uzbekistan Academy of Sciences
Grant #: 1658672
Principal Investigator / Faculty Mentor: Zair Ibragimov

2_24
Title: “Ebola Could be Eradicated through Voluntary Vaccination”
Presenter(s): Jan Rychtar | Andrew Brettin
REU Site: UNCG Math Biology REU
Host Institution: University of North Carolina at Greensboro
Grant #: 163217
Principal Investigator / Faculty Mentor: Igor V. Erovenko
2_25
Title: “Quantifying Uncertainty in a Model of Visceral Leishmaniasis in Malta”
Presenter(s): Brant Jones
REU Site: Undergraduate Mathematical Science Research at James Madison University
Host Institution: James Madison University
Grant #: 1560151
Principal Investigator / Faculty Mentor: Brant Jones

2_26
Title: “Random Subspace Two-dimensional LDA for Face Recognition”
Presenter(s): Garrett Bingham
REU Site: Interdisciplinary Integration in Statistical Learning and Data Mining at the University of North Carolina Wilmington
Host Institution: University of North Carolina Wilmington
Grant #: 1659288
Principal Investigator / Faculty Mentor: Cuixian Chen

2_27
Title: “Spectrum of the Kohn Laplacian on the Rossi Sphere”
Presenter(s): Maddie Brown | Tawfik Abbas
REU Site: Mathematical Analysis and Applications
Host Institution: University of Michigan–Dearborn
Grant #: 1659203
Principal Investigator / Faculty Mentor: Yunus Zeytuncu

2_28
Title: “The Sortability of Graphs and Matrices Under Context-Directed Swaps (CDS)”
Presenter(s): Samuel William Heil
REU Site: Complexity across Disciplines
Host Institution: Boise State University
Grant #: 1359425
Principal Investigator / Faculty Mentor: Liljana Babinkostova

Poster Session 3
Location: Edison D
NSF Division: Astronomical Sciences

3_1
Title: “Lunar Surface Characterization Using Radar Imaging”
Presenter(s): Natalia Soto | Hilda M. Colon
REU Site: Research in Radio/Radar Astronomy and Atmosphere Sciences at Arecibo Observatory
Host Institution: Universidad Metropolitana
Grant #: 1559849
Principal Investigator / Faculty Mentor: Anne Virkki
NSF Division: Biological Sciences

3_2
Title: “Floral Albedo as a Response Factor of Climate Change: A Case Study in Helianthella Quinquenervis”
Presenter(s): A. Sarah Walwema
REU Site: Field Research in Ecology and Evolutionary Biology at the Rocky Mountain Biological Laboratory
Host Institution: Rocky Mountain Biological Laboratory
Grant #: 1262713
Principal Investigator / Faculty Mentor: Reithel Jennifer

3_3
Title: “Depth Affects Nutrient Limitation of Phytoplankton within a Stratified Lake”
Presenter(s): Abigail Lewis
REU Site: Translational Ecology for Undergraduates
Host Institution: Cary Institute of Ecosystem Studies
Grant #: 1559769
Principal Investigator / Faculty Mentor: Alan R. Berkowitz

3_4
Title: “Biogas Optimization Utilizing Different Plant Substrates for Anaerobic Co-Digestion”
Presenter(s): Ben Hatch
REU Site: Utilizing Plants for Innovative Research (UPIR): Cultivating the Next Generation of Scientists and Engineers
Host Institution: Kettering University
Grant #: 1560169
Principal Investigator / Faculty Mentor: Michelle Ammerman | Lihua Wang

3_5
Title: “Sulindac Sulfide Mediates Inhibition of Cell Transformation through COX-2-Independent Signaling”
Presenter(s): Cosette Zacarias
REU Site: Genetic and Biochemical Mechanisms of Prokaryotic and Eukaryotic Organisms
Host Institution: Louisiana State University
Grant #: 1659752
Principal Investigator / Faculty Mentor: Fern Tsien | Yaguang Xi

3_6
Title: “Functionalization of Graphene Biosensors”
Presenter(s): Dennis Baidoo
REU Site: Integrated Science for Society
Host Institution: Boston College
Grant #: 1560200
Principal Investigator / Faculty Mentor: Kenneth Stephen Burch
3_7
Title: “Toward Atomistic Simulations of Pathways and Rate Constants for Protein-Peptide Unbinding Processes”
Presenter(s): Elissa Adelaide Fink
REU Site: Training and Experimentation in Computational Biology (TECBio)
Host Institution: University of Pittsburgh
Grant #: 1659611
Principal Investigator / Faculty Mentor: Joseph C. Ayoob | Lillian Chong

3_8
Title: “Mitochondrial Physiology, Mobility, and Connectivity in Calcium-Regulated Contraction of the Caenorhabditis Elegans Spermatheca”
Presenter(s): Ethan Wold | Yara Rincon
REU Site: Biological Inquiry: From Molecules to Organisms
Host Institution: Northeastern University
Grant #: 1460628
Principal Investigator / Faculty Mentor: Wendy Smith

3_9
Title: “DMSO Cures Prions by Increasing Aggregate Size to Limit Inheritance”
Presenter(s): Grace M. Scheidemannle
REU Site: Interdisciplinary Undergraduate Summer Research in Biology
Host Institution: Marquette University
Grant #: 1659595
Principal Investigator / Faculty Mentor: Allison Abbott

3_10
Title: “Syn-tasiRNAs: One More Step Forward to Unraveling the Biogenesis of 22nt tasiRNAs”
Presenter(s): Jennifer Probst
REU Site: Research Experience in Plant Science at the Danforth Center
Host Institution: Donald Danforth Plant Science Center
Grant #: 1659812
Principal Investigator / Faculty Mentor: Shannon G. Rapp

3_11
Title: “Comparison of Contaminant Accumulation in Reservoir Fishes of Different Trophic Levels and Habitats”
Presenter(s): Jessica L. Gray
REU Site: Radioecology
Host Institution: Savannah River Ecology Laboratory, University of Georgia
Grant #: 1460940
Principal Investigator / Faculty Mentor: J. Vaun McArthur | Olin E. Rhodes
3.12
Title: “From Brains to Communities: Integrative Biology of Pollinators on Lesvos, Greece, and Puerto Rico”
Presenter(s): K. Barreto | E. Brown | P. Cruz-Vasquez | A. Fernandez | E. Metzler | C. Pavlick | V. Rivera Figueroa | T. Salaguinto
REU Site: Synergistic Studies of Honey Bees in the Republic of Turkey
Host Institution: University of Central Oklahoma
Grant #: 1560389
Principal Investigator / Faculty Mentor: John F. Barthell | John M. Hranitz

3.13
Title: “The Reproductive Response of Forbs to Seasonal Fire in a Chihuahuan Desert Grassland”
Presenter(s): Juan Comacho
REU Site: Aridland Ecology
Host Institution: University of New Mexico
Grant #: 1659441
Principal Investigator / Faculty Mentor: Scott Collins

3.14
Title: “Semi-Automated Quantification of Lipid Droplets in CARS Microscopy”
Presenter(s): Kevin Joe
REU Site: Enabling Analysis and Design of Complex Biological Systems through Data Science
Host Institution: Tufts University
Grant #: 1560388
Principal Investigator / Faculty Mentor: Kyongbum Lee | Eric L. Miller

3.15
Title: “Testing the Effects of Light Pollution on Growth and Intraspecific Competition in Common Milkweed, Asclepias Syriaca”
Presenter(s): Kyle Haynes
REU Site: Ecology and Evolutionary Biology at the University of Virginia’s Bland Experimental Farm
Host Institution: University of Virginia
Grant #: 1659816
Principal Investigator / Faculty Mentor: Melissa Hey

3.16
Title: “Deciphering Ancestry in African Treefrogs: Genus Leptopelis”
Presenter(s): Kyle Jaynes
REU Site: Natural History Research Experiences
Host Institution: National Museum of Natural History, Smithsonian Institution
Grant #: 1560088
Principal Investigator / Faculty Mentor: Gene Hunt
3_17
Title: “The Function of Newly Identified Small Proteins in the Mycobacterial Ribosome”
Presenter(s): Matthew Kohn | Katherine Nemeth
REU Site: Networking Basic Research for Collaborative Biological Discovery
Host Institution: Wadsworth Center
Grant #: 1359413
Principal Investigator / Faculty Mentor: Todd Gray

3_18
Title: “Limiting Nutrients at Cave Springs Arkansas”
Presenter(s): Michelle A. Evans-White
REU Site: Assessment and Management of Ecosystem Services at the Nexus of Food, Energy, and Water Systems
Host Institution: University of Arkansas
Grant #: 1659857
Principal Investigator / Faculty Mentor: Brian Haggard

3_19
Title: “A Conserved Kinase Cascade May Regulate Both Epithelial Migration and Neuronal Morphology”
Presenter(s): Sally Horne-Badovinac | Maria Yow
REU Site: Molecular Genetics and Cell Biology
Host Institution: The University of Chicago
Grant #: 1659490
Principal Investigator / Faculty Mentor: Aaron Turkewitz

3_20
Title: “Isolation and Characterization of Plant Growth Promoting Seed Endophytic Bacteria”
Presenter(s): Shannon Brown
REU Site: Advancing California Community College Students through Engineering Research
Host Institution: University of California, Berkeley
Grant #: 1461157
Principal Investigator / Faculty Mentor: Jeffrey Bokor | Lea K. Marlor

3_21
Title: “Temporal and Spatial Variations in the Growth Rate of Corbicula Fluminea in the Columbia River”
Presenter(s): Summer Henricksen | Gretchen Rollwagen-Bollens
REU Site: Landscape Ecology and Ecosystem Dynamics: Integrating Terrestrial and Aquatic Perspectives
Host Institution: Washington State University Vancouver
Grant #: 1461057
Principal Investigator / Faculty Mentor: Stephen Bollens
3_22
Title: “Effects of Fishes on Aquatic Insects in Linked Aquatic-Terrestrial Food Webs”
Presenter(s): Tyler C. Seidel
REU Site: Sustainable RIVER (Remediating InVasives to Encourage Resilience)
Host Institution: University of South Dakota
Grant #: 1560048
Principal Investigator / Faculty Mentor: Meghann Elizabeth Jarchow | Jeff Wesner

3_23
Title: “Copepod Sex-Specific Thermal Tolerance: Can Males Take the Heat?”
Presenter(s): Kailin Richardson
REU Site: Collaborative Research: Investigating the Consequences of Global Change on Marine Animals and Their Ecosystems
Host Institution: Mystic Aquarium
Grant #: 1658663
Principal Investigator / Faculty Mentor: Tracy Romano

NSF Division: Earth Science

3_24
Title: “Clove Oil Anesthesia in Pacific Hagfish (Eptatretus stoutii)”
Presenter(s): Cathy A. Trejo
REU Site: Summer Undergraduate Research Fellowship in Ecology and Environmental Sciences (SURFEES)
Host Institution: Chapman University
Grant #: 1659892
Principal Investigator / Faculty Mentor: Christopher Kim

NSF Division: Education and Human Resources

3_25
Title: “Detection of Hot Electrons Excited across a Schottky Barrier by Singly Charged Ions”
Presenter(s): Adam J. Miller
REU Site: Solid-State Devices for Electronics, Photonics, and Magnetics Technology
Host Institution: Holcombe Department of Electrical and Computer Engineering, Clemson University
Grant #: 1560070
Principal Investigator / Faculty Mentor: William R. Harrell | Chad Sosolik

3_26
Title: “A Case Study of Children’s Initial Learning of Probability”
Presenter(s): Madeline Naumann | Megan Rickards
REU Site: Preparing Aspiring Teachers to Hypothesize Ways to Assist Young Students (PATHWAYS)
Host Institution: Salisbury University
Grant #: 1356001
Principal Investigator / Faculty Mentor: Randall E Groth
3_27
Title: “Single-Cell, Single-Molecule Analysis of TNF-alpha Signaling with Quantum Dots”
Presenter(s): Prerana Jaikumar
REU Site: Discoveries in Bioimaging
Host Institution: University of Illinois at Urbana-Champaign
Grant #: 1461038
Principal Investigator / Faculty Mentor: Stephen Boppart

Poster Session 4
Location: Edison D
NSF Division: Atmospheric and Geospace Sciences

4_1
Title: “Sensitivity of Global Methane Bayesian Inversion to Surface Observation Data Sets and Chemical-Transport Model Resolution”
Presenter(s): Ethan Lew
REU Site: PSU Center for Climate and Aerosol Research REU
Host Institution: Portland State University
Grant #: 1659655
Principal Investigator / Faculty Mentor: Linda A. George
NSF Division: Chemistry

4_2
Title: “Evaluating the Cytotoxicity of Tin Dioxide NanoFiber”
Presenter(s): Karelle Aiken | Ashley Reynolds
REU Site: Collaborative Multidisciplinary Investigations through Undergraduate Research Experiences
Host Institution: Chemistry and Biochemistry, Georgia Southern University
Grant #: 1359229
Principal Investigator / Faculty Mentor: Worlanyo Eric E. Gato | Ji Wu

4_3
Title: “Development of FRET-Based Assay to Observe Binding of RNA Modification Enzyme RsmG to 16S Ribosomal RNA”
Presenter(s): Caitlin Hawkins
REU Site: REU Site at Kent State University: Liquid Crystals and Advanced Materials
Host Institution: Kent State University
Grant #: 165957
Principal Investigator / Faculty Mentor: Torsten Hegmann

4_4
Title: “Lipophilic and Hydrophilic Uptake of Ruthenium Anticancer Compounds”
Presenter(s): Angela R. Hairston
REU Site: Research Experiences for Undergraduates in Chemistry at the University of Alabama
Host Institution: The University of Alabama
Grant #: 1358971
Principal Investigator / Faculty Mentor: John B. Vincent
Title: “Investigation of the Electronic and Structural Factors Affecting the Release of Fluorescent Dyes from Alginate Beads”
Presenter(s): Patricia Otero
REU Site: Research Experiences at the Interface of Chemistry and Biological Sciences
Host Institution: University of Miami
Grant #: 1560103
Principal Investigator / Faculty Mentor: Franço Raymo
Please note: Poster will be on display, but presenter will not be present.

Title: “Long-Range Ordering in 1-methyl-1-alkylpyrrolidinium bis(trifluorosulfonyl)imide ionic liquids”
Presenter(s): Reese A. Richardson
REU Site: Integrated Experimental and Computational REU Site at Northern Illinois University
Host Institution: Northern Illinois University
Grant #: 1659548
Principal Investigator / Faculty Mentor: Ralph Allen Wheeler

Title: “Oxidative Addition of Para-Substituted Aryl Halides to Predict Reaction Selectivity”
Presenter(s): Allison Renee Tomczyk
REU Site: IRES—Carroll University CREATE Program
Host Institution: Carroll University
Grant #: 1559240
Principal Investigator / Faculty Mentor: Kent Edward Molter

Title: “Biocatalytic Activity of a Versatile Peroxygenase”
Presenter(s): Andrew Dobria
REU Site: REU Training Site: Molecular Biophysics
Host Institution: Princeton University
Grant #: 1659126
Principal Investigator / Faculty Mentor: Jannette Carey

Title: “Developing Block Copolymer Gels for Battery Separator Applications”
Presenter(s): Adrienne Nichole Smiley
REU Site: Chemistry Applied to Real World Problems—Chemical Sciences at CSU
Host Institution: Colorado State University
Grant #: 1461040
Principal Investigator / Faculty Mentor: James Richmond Neilson
4_10
Title: “Charge Selective Membranes for Hybrid Organic-Inorganic Perovskites”
Presenter(s): Gabrielle Berns
REU Site: Collaborative Undergraduate Research in Energy
Host Institution: University of Massachusetts at Amherst
Grant #: 1263075
Principal Investigator / Faculty Mentor: Kevin R. Kittilstved | Dhandapani Venkataraman

4_11
Title: “Predicting Biomolecular Diffusion Using Surface Residue Exposure”
Presenter(s): Jennifer Haseleu | Jeffery L. White
REU Site: An REU Site in Interdisciplinary Chemistry at Oklahoma State University
Host Institution: Oklahoma State University
Grant #: 1559874
Principal Investigator / Faculty Mentor: Christopher J. Fennell

4_12
Title: “Copper Distribution in the Cytoplasm of Pseudomonas aeruginosa”
Presenter(s): Greta Becker
REU Site: Membrane Biochemistry and Bioinspired Synthesis
Host Institution: Worcester Polytechnic Institute
Grant #: 1659529
Principal Investigator / Faculty Mentor: Arne Gericke

4_13
Title: “Isolation and Identification of Antimicrobial Peptides from Solanum lycopersicum”
Presenter(s): Wilaysha Evans
REU Site: Summer Undergraduate Research Opportunity in Chemistry (SUROC) at UNC at Chapel Hill
Host Institution: University of North Carolina at Chapel Hill
Grant #: 1460874
Principal Investigator / Faculty Mentor: Jeffrey Johnson | Leslie Hicks

4_14
Title: “PADs Project: How to Collect 710 Samples in 28 Days”
Presenter(s): Catherine Elizabeth Breakfield
REU Site: Collaborative Research: IRES: Development of Novel Paper-Based Devices to Assess the Quality of Pharmaceuticals and Water in the Developing World
Host Institution: Saint Mary’s College, Notre Dame, IN
Grant #: 1559496
Principal Investigator / Faculty Mentor: Toni Barstis

4_15
Title: “Integrating Computational Chemistry with Photoinduced Synthesis of Thiazolines”
Presenter(s): Marina Michaud
REU Site: Research Experience for Undergraduates at the Interface of Computations and Experiments
Host Institution: North Carolina State University
Grant #: 1359377
Principal Investigator / Faculty Mentor: Elon Ison
4_16
Title: “The Effects of a Threonine to Serine Substitution in Prokaryotic Ribonucleotide Reductase”
Presenter(s): Denis Cipurko
REU Site: Undergraduate Research in Chemistry at Syracuse University
Host Institution: Syracuse University
Grant #: 1659775
Principal Investigator / Faculty Mentor: Michael Bradley Sponsler

4_17
Title: “Detection of N4-acetylcytidine and Other Novel Modifications in the mRNA of Saccharomyces cerevisiae”
Presenter(s): Brittney Williams
REU Site: Research Experiences for Undergraduates in Chemistry at the University of Cincinnati
Host Institution: University of Cincinnati
Grant #: 1659648
Principal Investigator / Faculty Mentor: Anna D. Gudmundsdottir

NSF Division: Ocean Sciences

4_18
Title: “First Characterization of the Light Emission from a Deep-Sea Octocoral”
Presenter(s): Isaiah J. Klimek
REU Site: Scripps Undergraduate Research Fellowship (SURF)
Host Institution: Scripps Institution of Oceanography, University of California, San Diego
Grant #: 1659793
Principal Investigator / Faculty Mentor: Jane L. Teranes | Dimitri Deheyn

4_19
Title: “Marsh vs. Mangrove Vegetation: Differences in Callinectes sapidus Predation Success”
Presenter(s): Jade Blennau | Elizabeth Borda
REU Site: Ocean and Coastal Research Experiences for Undergraduates
Host Institution: Texas A&M University at Galveston
Grant #: 1560242
Principal Investigator / Faculty Mentor: Anna Armitage

NSF Division: Social, Behavioral, and Economic Sciences

4_20
Title: “Confidence and Youth’s Digital Literacy Practices”
Presenter(s): Madeline Nicol
REU Site: The Science of Language and the Language of Science
Host Institution: Ohio State University
Grant #: 1461039
Principal Investigator / Faculty Mentor: Laura Wagner
4_21
Title: “Spousal Support, Maladaptive Denial, and PTSD in Military Veterans”
Presenter(s): Brooks B. Gump | Jessica Dupree
REU Site: Training Diverse Undergraduate Teams of Veterans and Non-Veterans to Conduct Trauma Research with Veterans
Host Institution: Syracuse University
Grant #: 1559793
Principal Investigator / Faculty Mentor: Matthew Dykas

4_22
Title: “Aquatic Vegetation and the Relative Abundance of Fish Species in the Mississippi and Illinois Rivers”
Presenter(s): Julia M. Breed | Robert Christian Rice
REU Site: Exploring Evidence of the Anthropocene: Archaeological and Ecological Interdisciplinary Research Experiences for First-Generation Students in the Upper Mississippi River System
Host Institution: Southern Illinois University Edwardsville
Grant #: 1659633
Principal Investigator / Faculty Mentor: Carol E. Colaninno | John H. Chick

4_23
Title: “Comparing Patterns of Pragmatic Reasoning in Chinese and English Color Reference Games”
Presenter(s): Jennifer Hu
REU Site: Language, Cognition, and Computation
Host Institution: Stanford University
Grant #: 1659585
Principal Investigator / Faculty Mentor: Michael C. Frank

4_24
Title: “The Geospatial and Temporal Components of Terrorist Target Selection”
Presenter(s): Michael Turner | Taylor Dauer
REU Site: Crime Analytics—Research Experiences for Undergraduates
Host Institution: University of North Carolina at Charlotte
Grant #: 1659748
Principal Investigator / Faculty Mentor: Matt Phillips

4_25
Title: “Mental Health Outcomes Following Abortion in Ukraine”
Presenter(s): Dominique Callahan | Mary M. Martin
REU Site: Effects of Political Upheaval and Ethnic Discord on the Mental Health of a Population
Host Institution: Dordt College
Grant #: 1560078
Principal Investigator / Faculty Mentor: Luralyn M. Helming
Title: “Economic Impacts of Manure Management on Water Quality”
Presenter(s): Chris Ferguson
REU Site: LAKES REU
Host Institution: University of Wisconsin–Stout
Grant #: 1659791
Principal Investigator / Faculty Mentor: Zach Raff

Title: “I Know Because I Care: Exploring the Mediating Role of Self-Concept Clarity in the Relationship between Self-Compassion and Its Benefits”
Presenter(s): Jacob Coutts
REU Site: Hojooba’ bee la’ hoonii, Undergraduate Studies into the Social Psychophysiology of Compassion
Host Institution: Northern Arizona University
Grant #: 1659888
Principal Investigator / Faculty Mentor: Daniel Weidler

Title: “Bridging Wildlife Genetics and Yurok Language to Understand and Convey Chmuuek (Lynx rufus) Natural History”
Presenter(s): Isabel Liz Sablan Johnson
REU Site: Rroulou’sik: Natural Resource Science on Native American Lands
Host Institution: Humboldt State University
Grant #: 1559943
Principal Investigator / Faculty Mentor: Matt Johnson

REUS 2017 Speakers’ Biographies
Alphabetical by last name

Elizabeth L. Ambos is executive officer for the international nonprofit Council on Undergraduate Research (CUR). CUR (http://www.cur.org) supports and facilitates high-quality undergraduate student-faculty collaborative research and scholarship. More than 700 institutions and 13,000 individuals belong to CUR. Prior to becoming CUR’s executive officer in May 2012, Ambos served for six years as assistant vice chancellor for research initiatives and partnerships for the 23-campus California State University system. A geophysicist by training, Ambos has also held several appointments at California State University, Long Beach, including associate vice president for research and external support, graduate dean, associate dean, and professor of geological sciences in the College of Natural Sciences and Mathematics. She holds a bachelor’s degree in geology from Smith College, as well as master’s and doctoral degrees in marine geology and geophysics from University of Hawaii at Mānoa.
Liljana Babinkostova is a professor in the Department of Mathematics at Boise State University. Her research efforts concern problems in topology, game theory, and cryptography, ranging from highly theoretical to the most practical of efforts. She routinely engages undergraduate students in her research. Babinkostova is one of the lead faculty members that developed the Idaho Conference on Undergraduate Research as well as an undergraduate research program at her institution. She currently serves as a councilor in the Mathematics Division of AAAS-PD and the Mathematics and Computer Science Division of CUR. She is also involved in the Idaho Diversity Network established by Idaho EPSCoR as part of its efforts in supporting STEM in Idaho. Babinkostova is the principal investigator for the NSF REU Site: Complexity across Disciplines (CAD), a program in interdisciplinary mathematics research.

Anne Boettcher is director of the Undergraduate Research Institute and Honors Program at Embry-Riddle Aeronautical University in Prescott, Arizona. She is currently president of CUR and has been a member since 1999. Boettcher has chaired the Undergraduate Research Programs Division of CUR co-chaired the URPD conference “Windows of Opportunity for Undergraduate Research, and served as facilitator and host for several CUR Institutes. Prior to joining Embry-Riddle, she was a professor of biology and undergraduate research program director at the University of South Alabama. While at South Alabama, she served as co-principal investigator for NSF-REU and principal investigator for Merck-AAAS programs, mentored more than 60 undergraduate and graduate research students, and integrated research and ethics components into all of her courses.

Susan Brennan is program director for NSF’s Graduate Research Fellowship Program and professor of psychology with joint appointments in computer Science and linguistics at Stony Brook University in New York. She is a cognitive scientist who studies psycholinguistics, spoken dialogue, verbal and nonverbal communication, and the human use of technology. She received, a BA from Cornell University in anthropology, a master of science from MIT (from what is now the Media Lab), and a PhD in psychology from Stanford University. She is passionate about graduate education and was once a graduate research fellow.

DaNa Carlis
Meteorologist DaNa L. Carlis serves as the weather portfolio advisor at NOAA’s Office of Oceanic and Atmospheric Research (OAR). Prior to joining OAR, Carlis spent 18-months as policy advisor to Vice Admiral Manson K. Brown, assistant secretary of commerce for environmental observations and prediction (ASEOP), and Dr. Richard Spinrad, NOAA chief scientist; he oversaw efforts to enhance NOAA’s Diversity and Inclusion Initiative, reimagine NOAA’s Cooperative Institutes (CI21), and develop a more robust NOAA R&D portfolio focused on strategy, policy, and planning development for the National Weather Service (NWS). Carlis served as a research meteorologist from 2004 to 2014 at the NWS Honolulu Forecast Office and the National Centers for Environmental Prediction (NCEP) Environmental Modeling Center (EMC) in College Park, MD. Much of his time at EMC was spent developing the next-generation U.S. weather forecast model called the Global Forecasting System (GFS) whose products are used by U.S. weather forecast offices, international weather prediction centers, media outlets, and academic institutions.
Carlis earned a bachelor’s of science degree in chemistry (2000), an MS (2002), and a PhD (2007) in atmospheric sciences from Howard University. He completed a Research Experience for Undergraduates (REU) program at the City University of New York (CUNY), where he studied organic and analytical chemistry.

**R. Corby Hovis** is a senior program director in the Directorate for Education and Human Resources at the National Science Foundation (NSF) in Arlington, VA, where he has worked since 1997. At NSF, Hovis is the NSF-wide coordinator for the Research Experiences for Undergraduates (REU) program, the federal government’s oldest and largest grant program supporting research experiences for students. He also coordinates the participation of community colleges in NSF’s programs supporting cybersecurity education such as the Advanced Technological Education (ATE) program, which sponsors four major centers for cybersecurity education. Before coming to NSF, he served on the faculty of Valparaiso University in Indiana and as science editor at Encyclopædia Britannica in Chicago. He received his BA in physics and English from Wake Forest University and his PhD from Cornell University in both astronomy and the history and philosophy of science. From September 2009 through August 2010, he served on special assignment from NSF as an American Council on Education (ACE) Fellow in the Office of the President at The Ohio State University.

**John M. Hranitz** is a professor in the Department of Biological and Allied Health Sciences at Bloomsburg University of Pennsylvania. In 2013, he worked with faculty and administration to create the Center for Undergraduate Research at Bloomsburg University and has served three years as its director. Hranitz also served as an interim director of the Office of Research and Sponsored Programs at Bloomsburg University for three years. Prior to joining Bloomsburg University, Hranitz was in the Department of Biology at the University of Central Oklahoma for nine years, where his collaborations led to his participation in NSF-REU Site grants for 10 years. He earned bachelor’s and master’s degrees in biology from Bloomsburg University and a doctorate in zoology from Mississippi State University.

**Rebecca M. Jones**, a former undergraduate researcher at The Ohio State University, earned her Ph.D. in inorganic chemistry from the University of Cincinnati and joined the faculty of Austin Peay State University in 2004. While earning tenure at APSU, she created the Office of Undergraduate Research (OUR) in 2010 and was appointed Director. She relocated to George Mason University In January 2012 to become the Assistant Director of OSCAR, where she administered student programs such as the Undergraduate Research Scholars Program and the Undergraduate Student Travel Fund. In September 2015, she transitioned to a term associate professorship in Chemistry at GMU and program lead for the STEM Accelerator initiative. She serves as the Secretary for the Mason chapter of Sigma Xi and is an active member of the American Chemical Society, AAAS, and the Council on Undergraduate Research.

**John Mateja**, president of the Goldwater Foundation, earned his bachelor's and PhD degrees from the University of Notre Dame in nuclear physics in 1972 and 1976, respectively. Throughout his career, he has been a staunch advocate for the involvement of undergraduates in research, serving as president of the Council on Undergraduate Research in 1993. He has held faculty and administrative positions at Tennessee Technological University and Murray State University. In addition, he has held administrative positions at Argonne.
National Laboratory, Department of Energy, and the National Science Foundation. Mateja has been named a Fellow of the Council on Undergraduate Research and of the American Physical Society for his work to reform undergraduate education.

**Shermaime Mitchell-Ryan** is a native Washingtonian and product of the District of Columbia public school system. She completed her BA in biology with a minor in theater arts from St. Mary’s College of Maryland, the state’s public honors college in St. Mary’s City. Her devotion to students was cultivated during her stint at Paul Public Charter School as an instructor of character education. Her interest in data-driven policy began with her completion of a master’s degree in cancer biology prevention and control from University of the District of Columbia/Georgetown University (Lombardi Comprehensive Cancer Center), where courses in molecular epidemiology, cancer epidemiology, and behavioral science in cancer control encouraged a thorough interrogation of health polices directed at underserved communities. Mitchell-Ryan completed her PhD in cancer biology/pharmacology in the Department of Developmental Therapeutics at Wayne State University School of Medicine. She serves as an American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellow at the National Science Foundation’s ADVANCE program office, where her enthusiasm for data-driven policy has grown exponentially. Mitchell-Ryan credits her experiences throughout her academic career as both a student and teacher for her scholarly activism in gender equity while advocating the use of intersectional approaches to broadening participation in STEM.

**Sally O’Connor** is a program director in the Division of Biological Infrastructure (DBI) at the National Science Foundation (NSF). Since 2002, O’Connor has managed the Research Experience for Undergraduates (REU) Sites program in the biosciences. She also serves as BIO representative to a few NSF-wide working groups, including the Partnership for International Research and Education (PIRE) and the Experimental Program to Stimulate Competitive Research (EPSCoR) programs. From 2010 to 2012, she served as DBI’s acting deputy division director. Prior to coming to NSF, O’Connor was a professor at Xavier University in New Orleans and director of the Center for Environmental Programs. She worked in environmental programs at both Xavier University and Tulane University. While at Xavier, she ran programs funded by the U.S. Department of Energy, U.S. Environmental Protection Agency, NASA, Mellon Foundation, and other public and private agencies. O’Connor received a PhD in chemistry at the University of Illinois at Chicago, where she received an Illinois state scholarship. She held an instructor postdoctoral position in the Department of Chemistry at the University of Virginia.
Nadeene Riddick is an AAAS Science and Technology Policy Fellow in the Division of Graduate Education at the National Science Foundation (NSF). At the NSF, Riddick is assisting with the evaluation preparation and portfolio analysis of the NSF Research Traineeship program. Prior to the fellowship, Riddick was a postdoctoral fellow at the National Institutes of Health (NIH), where her research focused on simian immunodeficiency virus (SIV) infection of nonhuman primates, in an attempt to understand why SIV infection causes an AIDS-like disease in some monkey species but not in others. Riddick has a long-standing interest in improving science education and science literacy through inquiry-based community engagement programs and teaching. Additionally, Riddick is actively involved in multiple nonprofit organizations aimed at promoting diversity in the field of biomedical sciences. This past summer, she had the opportunity to lead the science component of a STEAM Summer Camp in the Gambia, West Africa.

Riddick attended Cornell University where she received a bachelor of science degree in general biology, and she earned her doctorate degree from the University of Pennsylvania in cell and molecular biology.

Valentin Soloiu is the Allen E. Paulson Distinguished Chair and professor at Georgia Southern University. He has 30 years of teaching and research in higher education and has authored more than 100 papers, 30 technical studies, and nine textbooks and instruction manuals. His research is in combustion instabilities, emissions, and NVH in internal combustion and jet engines.

Upcoming Student Events

Posters on the Hill

Each spring, the Council on Undergraduate Research (CUR) hosts an annual undergraduate poster session on Capitol Hill. This event will help members of Congress understand the importance of undergraduate research by talking directly with the students that these programs impact. This is a unique opportunity that, we believe, will have a very positive impact on the future of federal funding for undergraduate research. Submissions for 2018 will close on November 1st, 2017. For more information, please visit http://www.cur.org/conferences_and_events/student_events/posters_on_the_hill/.

National Conference on Undergraduate Research

The National Conference on Undergraduate Research (NCUR), established in 1987, is dedicated to promoting undergraduate research, scholarship, and creative activity in all fields of study by sponsoring an annual conference for students. For more information on this year’s event, please visit http://www.cur.org/ncur_2018/. NCUR 2018 will be hosted by the University of Central Oklahoma April 4-7. Submissions are now open.
SECOND FLOOR

1. EDISON BALLROOM
2. WRIGHT
3. BANNEKER
4. WHITNEY
5. CARVER
6. BELL
7. CURIE
8. HOPKINS BOARDROOM
9. HOPKINS BOARDROOM
   PRIVATE FOYER
10. PREFUNCTION

LOBBY LEVEL

1. LOBBY
2. TANGENT
3. TRADEMARK

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Additional spaces for meetings and events, not displayed here, may also be available. Contact your hotel representative for more information.

This document contains approximate measurements and square footage that are for illustrative purposes only. We cannot guarantee the floor plan accuracy or completeness, therefore encourage you to review the space to make sure it is suitable for your event.