

2017 NSF Engineering Education and Centers Grantees Conference

Poster Session Information

REU/RET Site Participant Poster Session: Sunday, October 29th — 6:00 – 8:00 PM

Presenter	Program	Poster Title
Adu-Beng, Emmeline	REU	Fabrication of miRNA-155 Biosensors via Back-Gated Graphene Field Effect Transistors
Beardall, Chad Stuart	REU	Solid State Laser Power Supply Controllers
Canty, Julia	REU	Integrating Harnessed Balance Training with the Community
Chae, Joyce		The Catalytic Degradation of Methyl Orange Using Electrochemically Deposited Ag-NP Matrices
Harvey, Refreeno	REU	Understanding Streamflow Infiltration in Desert Regions
Koker, Terry	RET	Photons Pattern a Patent
Johnson, Angela	RET	Microfluids, 3D Printing, and High School
Langston, Marjorie	RET	Antimicrobial & Antioxidant Screening of <i>Urtica dioica</i> L., <i>Laportea canadensis</i> L Wedd., & <i>Boehmeria cylindrical</i> L. Swartz for Medicinal Application
Lello-Smith, Isaac	REU	2017 CyberHealthGIS Research Experience for Undergraduates
McGeary, Julie	RET	Biogas Production Lab for High School Biology
Mongeon, Kelsey	RET	STEM Integration in a K-12 School
Mountain, Courtney	RET	Tyrosine- and/or N-terminal-specific rhodium complex formation: site-specific natural protein modification
Phillips, Jenette	REU	To Be an Engineering Student with ADHD: Where Confidence and Creativity Collide
Powley, Chris	RET	Promoting Learning About Computational Tools and the Environment
Puccia, Angela	RET	Teachers Become the Students During RET/REU Summer Program
Ratkos, Ron	RET	Autonomous Cars
Sanchez, Lilia	REU	Thin Support Graphene Oxide Membrane for Copper Grid Nano-Device
Temesgen, Merhawit	REU	Calculation of Energy Loss in the Left Ventricle from Color Doppler Ultrasound
Waxenberg, Sophie	REU	Optimized imaging of marine life near ocean current turbines to reduce environmental impacts
Whitehead, Ashley	RET	Flight of the Fruit: Exploring scale, gravity, and Personification

Poster Session A: Monday, October 30th — 10:30 – 11:45 AM

Presenter	Poster	Poster Title
Atman, Cindy	21	Engineering Education Pioneers and Trajectories of Impact
Barrella, Elise	51	Measuring Change: Helping Engineering Students Tackle Complex, Sustainability Problems
Benes, Bedrich	26	Exploration of Affordances of Visuo-Haptic Simulations to Learn the Concept of Friction
Benson, Lisa	23	Engineering Student Motivation, Learning and Epistemologies
Berdanier, Catherine	45	Investigating the Formation of Engineers and the Future Professoriate: Linking Academic Writing to Doctoral Socialization, Persistence, and Attrition
Blaser, Brianna	42	Increasing the Participation of People with Disabilities in Engineering
Brunhaver, Samantha	29	Feedback and Feet-Forward: Making Headway in Helping Students on Career Paths
Carnasciali, Maria-Isabel	10	Age & Prior Experience as factors contributing to Engineering Student Diversity
Carpenter, Pam	55	From the Body to the Grid: Nano-scale Harvesting to the Larger Scale Smart Grid Technologies Research Experience for Undergraduates Summer Program
Carpenter, Pam	56	Modernizing the Electric Grid Summer Pre College Program
Cheville, Alan	36	Impact Depends on Where You Stand: A Mapping the Engineering Education Ecosystem
Coley, Brooke	50	Making Stories for Impact: Engineering undergraduate student maker experiences at two U.S. engineering programs
Darolia, Rajeev	32	High School Structural Factors and Engineering Degree Attainment
Engler, Adam	25	Evaluation of a Clinical Immersion Course and its Impact on Bioengineering Design Projects
Fawcett, Helen	7	A Symbiotic Relationship – Integrated REU/RET Research Teams
Gaskins, Whitney	15	Capturing Experiences of Stereotype Vulnerability and Sense of Belonging of African American Students at Xavier University Louisiana
Godwin, Allison	44	Interactions within Diverse Engineering Teams: Lessons Learned and Implications
Gross, Elizabeth	28	Facilitating the Pathways to a Master's in Engineering Degree
Haynes, Comas	2	Increasing Minority Presence within Academia through Continuous Training (IMPACT)
High, Karen	33	Holistic STEM Faculty Development: A National Research Agenda to Promote Improved Research, Teaching, Service, and Leadership Through Evidence-Based Engagement
Huang-Saad, Aileen	27	Exploring Engineering Entrepreneurship Education Impact and Engagement
Hutner, Todd	12	Argument-Driven Engineering: A New Instructional Approach to Teach Engineering in Middle School Science Classrooms
Jacobs, Eddie	11	An Analysis of Empathy and Gender Inequity in Engineering Disciplines

Johnson, George	9	Advancing STEM Education with Engineering Research Experiences for Pre-Service & In-Service Teacher Pairs
Jordan, Shawn	17	Creating Impact with Culturally-Relevant Engineering Design Curriculum for the Navajo Nation
Kammerdiner, Alla	18	Data-driven optimization models for situational assessment of exposures to falls: integrated research and education
Kapila, Vikram	54	RET Site in Mechatronics and Robotics with Entrepreneurship and Industry Experiences
Kotys-Schwartz, Daria	31	From School to Work: Understanding the Transition from Capstone Design to Industry
Kumpaty, Subha	16	Collaboration and Synergy with Global Engagement of Undergraduates at MSOE REU
Kuttolamadom, Mathew	8	Additive Manufacturing of Bio-Inspired Gradient Materials & Surfaces
Lambrinidou, Yanna	24	Engineers' Imaginaries of "the Public"
Lande, Micah	43	Instigating a Revolution for Additive Innovation: An Educational Ecosystem of Making and Risk Taking
LeBlanc, Saniya	53	Nanotechnology Fellows Program: Preparing Undergraduate Students for Careers in Nanotechnology
Linsey, Julie	35	Identifying the Interplay of Expertise Development, Creativity, and Learning in University Makerspaces
Main, Joyce	20	Early Career Outcomes of Engineering PhDs
Martin, Tom	5	A Longitudinal Study of the Dimensions of Disciplinary Culture to Enhance Innovation and Retention among Engineering Students
Martin, Tom	6	Radically Expanding Pathways in the Professional Formation of Engineers
Mendoza, Noemi	3	"Enculturation of Engineering Students in the First-Year Engineering Program"
Motevalli, Vahid	39	Increase the Impact of Manufacturing Research through Integrating Techno-Entrepreneurship in the Undergraduate Summer Research Experience
Norton, Terri	46	Learn from Disasters Field Mission on Reconstruction of the Tohoku Region of Japan for Underrepresented Minority Students in STEM
Reidinger, Zoe	19	Developing a Multi-Tiered Mentoring REU Program to Support Non-Traditional REU Students
Salzman, Noah	52	Measuring the Effects of Pre-College Engineering Education
Santillan-Jimenez, Eduardo	40	Increasing impact by synergizing research-center based mentoring with LSAMP, EPSCoR, iREUs and other initiatives to broaden participation in STEM
Schell, William	13	Building an Engineering Leadership Identity
Simmons, Chelsey	22	Engineering for Biology: Multidisciplinary Research Experiences for Teachers in Elementary Grades
Simmons, Denise	41	Increasing Impact of the Hidden Curriculum: Exploring Student Outcomes from Out-of-class Activities
Sochacka, Nicola	34	How stories shape the system of engineering education and provide a lens for its investigation

Soloiu, Valentin	49	Low-Temperature Heat Release and Negative Temperature Coefficient Region for Fischer-Tropsch Synthetic Kerosene
Sun, Lulu	14	Can we motivate students' programming language learning by applying second language acquisition in a blended learning environment?
Svihla, Vanessa	1	Impacts of Identifying and Building on Student Assets in a Diverse Chemical Engineering program
Veety, Elena	48	Leveraging an RET Program to Maximize Impact through Engineering Design Competition
Wang, Xia	30	First Year Experience of Running the Research Experience for Teachers (RET) in Alternative Energy and Automotive Engineering Program
Wingo, Kim	38	Incorporating Polymer Science into the High School Classroom
Wylie, Caitlin	47	Learning in Laboratories: How Undergraduates Participate in Engineering Research Groups
Zhang, Xiaoyu	4	2017 Clean Fuel REU Site at Old Dominion University
Zhu, Weihang	37	Incorporating Advanced Design and Manufacturing into High School Curriculum

Poster Session B: Monday, October 30th — 4:15 – 5:30 PM

Presenter	Poster	Poster Title
Abu-lail, Nehal	34	REU site-Engineering tools for disease diagnosis and treatment: Impact on the training and diversity of engineering undergraduates
Agarwal, Mangilal	7	REU Site at IUPUI: Multidisciplinary Research for Undergraduates in Nanomaterials for Energy and Biological Applications
Agarwal, Mangilal	8	RET Site at IUPUI: Research Experiences for Teacher Advancement in Nanotechnology (RETAIN)
Artiles, Mayra	44	The Dissertation Institute: Motivating Underrepresented Racial Minorities towards Ph.D. Completion
Artis, Sharnnia	21	Reframing & Reimagining the Doctoral Student Narrative: Black Women's Experiences in Engineering and Computer Science
Barry, Carol	50	Training Graduate Student Mentors for an REU Program
Bhandari, Subodh	23	Research Experience for Undergraduates in UAV Technologies
Bowen, Bradley	24	Research Experiences for Teachers: Engineering in Precision Agriculture and Sustainability for Rural STEM Educators
Brown, Billyde	36	REVAMP: Research Experience for Student Veterans in Advanced Manufacturing and Entrepreneurship
Cahill, Eileen	13	Occurrence of Emerging Contaminants in an Urban Water System Impacted by Storm Water
Cavicchi, Kevin	47	The RET Program in Polymer Engineering at the University of Akron: Best Practices For Maximum Impact

Conrad, Leyla	32	REU Site: Summer Undergraduate Research Experience (SURE) – Robotics
Cook-Chenault, Kimberly	6	NSF RET Site: Rutgers University Research in Engineering for Teacher (RU RET-E) for Green Energy Technology and NSF REU Site: Green Energy Technology Undergraduate Program (GET UP) - Programs that Stimulate and Sustain Diversity and Inclusion in STEM
Curry, Michael	26	RET Site Sustainable Electronics: Connecting Environmental and STEM Education with High School Science Curriculum
Dare, Emily	25	RET PLACE: Engaging STEM Teachers in Computational Research and Local Environmental Engineering Issues
Gardner, Douglas	46	The Multifaceted Impacts Created by NSF's Engineering REU/RET Program at The University of Maine
George, Stephanie	9	Novel Mentoring Structure and Professional Development at an REU Site in Biomedical Engineering
Ghiaei, Aida	45	The Joule Fellows- Teachers in Sustainable Energy Research Laboratories
Halada , Gary	48	The REU Site in Nanotechnology for Health, Energy and the Environment: Promoting Engagement and Diversity in Research
Hamidi, Foad	41	Studying the impact of Maker Employment for Baltimore Youth in Afterschool Jobs
Helge Bøhn, Jan	30	REU Site: Collaborative International Automotive Engineering in Germany and the USA
Huff, James	2	Shame in engineering education: Unpacking a key socio-psychological mechanism of professional formation
Johnson, Odis	54	Understanding the Intersection of the STEM and School-to-Prison Pipelines: A Hierarchical Analysis of the Impact of School Discipline on STEM Outcomes in High School
Johnson, Nicole	56	Why representation design matters: student cognition and problem-solving in statics and digital logic
Johri, Aditya	40	Situated Learning Genres and Informal Engineering Education
Jones, Libby	33	REU Site: Sustainability of Horizontal Civil Networks in Rural Areas
Kajfez, Rachel	53	Understanding Engineering Pathways and Their Impact on Community and Identity: Project Overview and Initial Plan
Kellam, Nadia	10	Exploring self-publishing as a way to increase impact of an NSF project on the Engineering Faculty's Teaching Journey
Kennedy, Marian	51	Undergraduate Engineering Students' Researcher Identity and Epistemic Cognition
Kirn, Adam	4	Navigating the Cultures of Engineering: Effects of Student Attitudinal Profiles on Pathways
Lang, Amy	28	REU Site in Fluid Mechanics: 10 Years of Impact
Li, Hua	35	REU student engagement during and after REU program: a case study comparing individual project with group project
London, Jeremi	11	From Research to Impact in Engineering Education: Insights from a Convergent Parallel Mixed Methods Study
London, Jeremi	12	Toward a National Agenda for Broadening Participation of African Americans in Engineering and Computer Science Informed by Scholarship & Practice

Maciejewski, Anthony	49	Throwing Away the Course-Centric Learning Model to Revolutionize Engineering Education
Magana, Alejandra	5	A Cognitive Apprenticeship Approach for Supporting Student Development of Computational Adaptive Expertise
Martin, Amy	42	Successes of a new NSF Research Experience for Teachers (RET): Water-Energy Education for the Next Generation (WE2NG) Empowers K-12 Educators to Train Our Future Scientists to Solve Critical STEM Issues
Montfort, Devlin	15	Personal Epistemologies in Engineering Education and Practice
Ogilvie, Andrea	18	Problems, Perceptions, & Adjustments: Understanding the Transition Experience for Engineering Transfer Students at 4-Yr Institutions
Ohland, Matthew	3	Access and Contribute to MIDFIELD to Improve Research on Student Pathways
Okoli, Okenwa	27	REU program effectiveness: Impact of the student selection process
Orr, Marisa	43	The Academic Dashboard: Putting Students in the Driver's Seat of their Education
Petersen, Eric	52	Undergraduate Research in Energy and Propulsion
Pinnell, Margaret	20	Reflections on a COLLABORATIVE RET Site: "Inspiring The Next Generation of a Highly-Skilled Workforce in Advanced Manufacturing and Materials"
Richard, Jacques	29	REU Site: AERO-U: Aerospace Engineering Research Opportunities for Undergraduates at Texas A&M University Aerospace Engineering
Rickli, Jeremy	31	REU Site: Summer Academy in Sustainable Manufacturing
Riley, Donna	39	ROAR! Building Infrastructure for Change at Scale
Scheerer, Eric	22	Rehabilitation Engineering Research Experience for Undergraduates
Shealy, Tripp	17	Preparing engineers to address climate change and its implications: modeling impact of college experiences on students' beliefs and agency
Shryock, Kristi	38	Revolutionizing aerospace engineering education by broadening aerospace applications
Smith, Andrew	14	Outcomes from the NSF REU Site: Discoveries in Bioimaging
Stefl, Shannon	55	Who's Not At The Table: Working Towards A National Research Agenda for Broadening Participation in Engineering
Sukumaran, Beena	37	RevED: Revolutionizing Engineering Diversity
Summerville, Amy	19	Putting impact in students' hands: Improving course outcomes through social cognitive processes
Walther, Joachim	1	Empathy in engineering: Why it's important, and what we're doing about it
Zaghi, Arash	16	Potential and Challenges of Students with ADHD in Engineering programs