

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
193	38714	A Collective Action Approach to Broadening Participation in Computing	Shaundra Bryant Daily	sbd16@duke.edu
194	38450	A Community-Driven Process for Developing NSF Review Panelists	Rebecca A Bates	rebecca.bates@mnsu.edu
195	37408	A Comparison of an Integrated Nonlinear Storytelling and Simulation-Based Learning Game Module Assigned Outside-the-Classroom versus Inside-the-Classroom	Omar Ashour	oma110@psu.edu
196	36963	A Framework to Assess Debugging Skills for Computational Thinking in Science and Engineering	Derrick J. Hylton	dhylton@spelman.edu
197	37634	A Gamified Approach for Active Exploration to Discover Systematic Solutions for Fundamental Engineering Problems	Mohammad Ilbeigi	milbeigi@stevens.edu
198	36726	A Mixed-Methods Investigation of Engineers Targeting the Consequences of Variability	Zachary Riggins Del Rosario	zdelrosario@olin.edu
199	37251	A Move to Sustainability: Launching an Instructor Interface	Kimberly Grau Talley	kgt5@txstate.edu
200	39693	A New Mentoring and Undergraduate Research Experience Model between REUs and RETs at the Stevens REU/RET Site Program on Sustainable Energy and Bioengineering	Pinar Akcora	pakcora@stevens.edu
201	39846	A New Public Dataset for Exploring Engineering Longitudinal Development by Leveraging Curricular Analytics	David Reeping	reepindp@ucmail.uc.edu
202	38057	A Preliminary Analysis of Identity Development in the Figured Worlds of High-Achieving, Low-Income Engineering Students	Bethani Cogburn	bcogburn@uncc.edu
203	38321	A Research Study on Assessing Empathic Formation in Engineering Design	Justin L Hess	jhess@purdue.edu
204	37869	A Trajectory-Clustering Framework for Assessing AI-Based Adaptive Interventions in Undergraduate STEM Learning	Mohammad Rashedul Hasan	hasan@unl.edu
205	36941	A Web-Based Writing Exercise Employing Directed Line of Reasoning Feedback for a Course on Electric Circuit Analysis	James P Becker	jbecker@montana.edu
206	39167	Academic Success of STEM College Students with Attention Deficit Hyperactivity Disorder and the Role of Classroom Teaching Practices: Project Update	Nolgie O. Oquendo-ColÃ³n	noquendo@umich.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
207	38182	ACCESS in STEM: An S-STEM Project Supporting Economically Disadvantaged STEM-Interested Students in Their First Two Years	Heather Dillon	hedillon@uw.edu
208	38743	Achieving Active Learning through Collaborative Online Lab Experiences	Julia Yoo	julia.yoo@lamar.edu
209	39398	Adaptive Expertise: A Potential Tool for Supporting S-STEM Student Retention and Graduation	Frank T Fisher	Frank.Fisher@stevens.edu
210	38388	AMPLIFY Institute: A Professional Development Program Designed for and with Engineering Instructional Faculty	Julian Rodrigo Sosa Molano	juliansosa14@yahoo.com
211	36950	An Educational Game Using Multiphysics Enriched Mixed Reality for Integrated Geotechnical Engineering Education	Cheng Zhu	zhuc@rowan.edu
212	40155	An Engineering/Computer Science Project with Community Service Focus	Tariq Khraishi	khraishi@unm.edu
213	39764	An Expanded Integrated Achievement and Mentoring (iAM) Program to Promote Access to STEM Professions	Jessica Santangelo	jessica.santangelo@hofstra.edu
214	37677	An Investigation of Women Engineering Undergraduate Student Belonging in an Academic Makerspace	Elisa Bravo	ebravo@umich.edu
215	39818	Applying Research Results in Instructor Development to Reduce Student Resistance to Active Learning: Project Update	Cynthia J. Finelli	cfinelli@umich.edu
216	38622	Areas of Improvement and Difficulty with Lab Report Writing in the Lower-Division Engineering Laboratory Courses across Three Universities	Dave Kim	kimd@wsu.edu
217	37921	Assessing Awareness and Competency of Engineering Freshmen on Ethical and Responsible Research and Practices	Bimal P. Nepal	nepal@tamu.edu
218	37149	Assessing Scientific Literacy across the Undergraduate Curriculum: Preliminary Results from the Collaboration Across Boundaries (CAB) Pedagogical Study	S. Monisha Pulimood	pulimood@tcnj.edu
219	39345	Asset-Based Practices in a Steam Middle School: Lessons Learned from Teachers Perspectives	Joel Alejandro Mejia	alex.mejia@utsa.edu
220	37293	Audio for Inclusion: Broadening Participation in Engineering Through Audio Dissemination of Marginalized Students Narratives	Stephen Secules	ssecules@fiu.edu
221	37775	Beyond Surveys: Using Visual Data to Evidence Achievement of Proposed Learning Objectives	Carla Lopez Del Puerto	carla.lopezdelpuerto@upr.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
222	37830	Broadening Participation in Computing and Artificial Intelligence at a Hispanic-Serving Community College	Sarah Rodriguez	srodriguez@vt.edu
223	38318	Broadening Participation in Engineering via the Transfer Student Pathway: Findings from an S-STEM-Enabled Partnership	David B Knight	dbknight@vt.edu
224	39577	Brownian Motion or Intentional Engagement? Addressing Practical Obstacles Between Two- and Four-Year STEM Transfer Institutions	Michelle Maher	mahermi@umkc.edu
225	37343	Building a Culture of "Engineering with Engineers"	Yen-Lin Han	hanye@seattleu.edu
226	38041	Building Data Center Career Pathways Through K-12 Industry Externships	Josh Labrie	jlabrie@nvcc.edu
227	39033	Building Interest in Technology Careers through a Five-Week Saturday Program	Karen Wosczyzna-Birch	karenlee@snet.net
228	38921	Building Partnerships for Advanced Manufacturing Programs	Karen Wosczyzna-Birch	karenlee@snet.net
229	38632	Can You See Yourself Here? Broadening Participation in STEM through Virtual Reality Career Exploration	Sarah Lynn Ferguson	fergusons@rowan.edu
230	38582	CAREER: "Support our Troops": Re-storying Student Veteran and Service Member Deficit in Engineering through Professional Formation and Community Advocacy" Year 2	Angela Minichiello	angie.minichiello@usu.edu
231	38499	CAREER: Characterizing Master's-Level Departure from the Engineering Doctorate through Multiple Stakeholders Perspectives	Catherine G. P. Berdanier	cgb9@engr.psu.edu
232	39923	CAREER: Disrupting the Status Quo Regarding Who Gets to Be an Engineer" Highlights from Year 2	Jeremi S London	jslondon@vt.edu
233	37365	CAREER: Supporting Mental Health and Wellness in Engineering Culture to Promote Equitable Change	Karin Jensen	kjens@umich.edu
234	37506	ChangeMaker K12: A Platform To Support Teacher Candidates in Systems Thinking, Engineering Education, and Change	Douglas Charles Williams	dwilliams@louisiana.edu
235	37159	Chemical Engineers in Chemistry Coursework: Longitudinal Impacts on Engineering Identity	Michael Geoffrey Brown	brownm@iastate.edu
236	38143	Children's Identity Conception in Engineering Activities in the Home Environment	Sawsan Werfelli	swerfel1@binghamton.edu
237	39108	Classroom Skills Desired by Students	Muhammad Dawood	dawood@nmsu.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
238	39169	Collaborative Research: AGEP FC-PAM: Project ELEVATE (Equity-focused Launch to Empower and Value AGEP Faculty to Thrive in Engineering)	Linda DeAngelo	deangelo@pitt.edu
239	38416	Community as "Surroundings" in a Classroom Ecosystem	Renee M Clark	rmclark@pitt.edu
240	38588	Computational Thinking in the Formation of Engineers: Year 3	Noemi V Mendoza Diaz	NMENDOZA@TAMU.EDU
241	40315	Connected Learning Spaces Supporting Engineering Interest Development: A Case Study of Ego-Centric Network Analysis of Relationships	Raul Mishael Sedas	rmsedas@uci.edu
242	38804	Connecting Classroom Curriculum to Local Contexts to Enhance Engineering Awareness In Elementary Youth	Rebekah J Hammack	rebekah.hammack@montana.edu
243	37017	CS Frontiers: Module 4 "A Software Engineering Curriculum for High School Females"	Veronica M Catete	vmcatete@ncsu.edu
244	37919	CyberSecurity for Advanced Manufacturing Organizations	Tony Hills	thills@northweststate.edu
245	39680	Description, Assessment, and Outcomes of Several Interventions within a National Science Foundation Research Traineeship (NRT): Graduate Certificate, Field Trips, Internships and International Experiences	Eduardo Santillan-Jimenez	esant3@uky.edu
246	37754	Designing a Curriculum to Broaden Middle School Students Ideas and Interest in Engineering	Shawn Stevens	shawn_stevens@wgbh.org
247	38849	Designing Learning Environments for Knowledge, Skills, and Mindset Development	Ellen Zerbe	ezerbe3@gatech.edu
248	40112	Developing a National Framework for Recognition of Engineering and Engineering Technology Faculty Instructional Excellence	Donald P. Visco	dviscoj@uakron.edu
249	38612	Developing and Creating Affective Knowledge Spaces for Teachers as Advocates for Social Justice	Sabrina L Strong-Nasabal	ss172@illinois.edu
250	39302	Developing and Implementing Innovation-based Academic Content and Experiences for First-Year Low-Income Students	Karl D. Schubert	karl.schubert@uark.edu
251	38918	Developing Micro-Credentials to Infuse Cybersecurity into Technician Education	Evelyn C. Brown	evelynbrown23@gmail.com
252	39392	Developing Optical Laboratories for Teaching Engineering and Physics	Nathan Lemke	

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
253	40261	Developing Professional Identity: Integrating Academic and Workplace Competencies within Engineering Programs	Betul Bilgin	bbilgin@uic.edu
254	38487	Developing Tools, Pedagogies, and Policies for Computer-Based Collaborative Learning Activities	Mariana Silva	mfsilva@illinois.edu
255	37009	Development and Application of Assessment Tools for a Research Experience for Teachers Site	Weihang Zhu	wzhu21@central.uh.edu
256	38807	Development and Evolution of Workshops to Support Online Undergraduate Research	Robert Deters	detersr1@erau.edu
257	37712	Development and Initial Outcomes of an NSF RIEF Project in Understanding Teamwork Experience and its Linkage to Engineering Identity of Diverse Students	Yiyi Wang	yiyiwang@sfsu.edu
258	37016	Diversifying the Graduate Student Pipeline to Academia: Challenges in Recruitment of Low-Income, High Achieving Students to Graduate School—Award # 2130403	Yanfen Li	yanfen_li@uml.edu
259	37456	Early Research Scholars Program Update and Reflection Study	Renata A Revelo	revelo@uic.edu
260	37857	Educational Contexts that Support Student Motivation Lead to Better Academic Outcomes in STEM: The Role of Mathematics Instructors in Student Motivation	Chris Hulleman	chris.hulleman@virginia.edu
261	39450	Effectiveness of Vertically-Integrated Project Teams in Tackling an Engineering Grand Challenge	Mathew Kuttolamadom	mathew@tamu.edu
262	37495	Effects of an Intervention on Student Self-Efficacy and Integration in Chemical Engineering Sophomores	Brad Cicciarelli	bradc@latech.edu
263	37234	Elective Track Choice and Career Attitudes in Engineering Undergraduate Education: Antecedents, Gender Differences, and Implications	Karin Jensen	kjens@umich.edu
264	39936	Endeavour S-STEM Program for First-Year Students: 3rd-Year Results	Diana G. de la Rosa-Pohl	ddelarosa2@uh.edu
265	39786	Engaging Students in Exploring Computer Hardware Fundamentals Using FPGA Board Games	Pavlo Antonenko	p.antonenko@coe.ufl.edu
266	39470	Engaging Transfer Students in a College of Engineering	Christy Wheeler West	cwwest@southalabama.edu
267	36931	Engineering a Transfer Friendly Experience with Alternative Pathways to Excellence	Katherine Acton	kacton@stthomas.edu
268	38096	Engineering Connections in Culturally-Responsive Mathematical Modeling Problems	Corey E. Brady	corey.brady@vanderbilt.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
269	38929	Engineering Ethics through High-Impact Game-Based Ethical Interventions: Design and Playful Assessment	Scott Streiner	Scs147@pitt.edu
270	40078	Engineering Faculty Members Experience of Professional Shame: Summary of Insights from Year Two	James L. Huff	jlhuff@harding.edu
271	38616	Engineering Instruction Action Team (E-IAT): Improving Teaching Methods in Engineering	Robert A Baffour	rbaffour@uga.edu
272	38362	Engineering Pathways for Appalachian Youth: Design Principles and Long-term Impacts of School-Industry Partnerships	Malle R Schilling	schillingmr@vt.edu
273	37262	Engineering PLUS (Partnerships Launching Underrepresented Students) - Eddie Bernice Johnson INCLUDES National Alliance	Claire Duggan	c.duggan@neu.edu
274	37811	Engineering Students Definitions of and Perceptions of Entrepreneurial Failure	Thomas M. Katona	tkatona@calpoly.edu
275	37587	Enhance Data Science Education for Non-Computing Majors through Accessible Hands-on Experiences	Xumin Liu	xmlics@rit.edu
276	37688	Enhancing Early Childhood Educators' Knowledge of Computer Science and Engineering Concepts to Spark Young Children's Early Interest in STEM Careers	Gisele Ragusa	ragusa@usc.edu
277	38276	Enhancing the Transfer Experience through a Collaborative Cohort Program for Engineering Scholars, Years 3 and 4 of an NSF S-STEM	Nihal Orfi	nihal.orfi@fresnocitycollege.edu
278	37785	Enriching the REU Experience through Student-Led Outreach Activities	Laila Guessous	guessous@oakland.edu
279	37340	Ethics in Artificial Intelligence Education: Preparing Students to Become Responsible Consumers and Developers of AI	Sheikh Ahmad Shah	shahst@bc.edu
280	37091	Evaluation of a Three-Year Research Experiences for Undergraduates Site Focused on Engineering Solutions in Support of Communicative Disorders	Todd Freeborn	tjfreeborn1@eng.ua.edu
281	38015	Examining Scripts of Whiteness in Engineering Education	Diana A. Chen	dianachen@sandiego.edu
282	37211	Examining the Community of Practice in the NSF RED Program	Julia M. Williams	williams@rose-hulman.edu
283	37434	Expanding and Sustaining Education Programs beyond the Nsf Support Period	Shasta Ihorn	sihorn@sfsu.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
284	37825	Exploring and Supporting Non-STEM Teachers Engineering Identity Development during Implementation of an Engineering Design Elective Course in Rural Middle Schools	Tameshia Ballard Baldwin	tsballar@ncsu.edu
285	37146	Exploring Impacts of Socially Engaged Engineering Training: What Do Students Attend to in Scenario-Based Interviews?	Erika Mosyjowski	emosy@umich.edu
286	37151	Exploring Other People's Mind, Exploring Your Own Mind -A Story of Divergent Thinking from Mechanical Engineering Practice	Laura Murphy	lrmurphy@umich.edu
287	37962	Exploring the Broader Impact of the NSF S-STEM program on the Culture of a Community College Engineering Department	Jan Edwards	jedwards1@clcollinois.edu
288	38148	Exploring the Importance of Bonding and Bridging Capital for Graduate Women Accessing Academic and Professional Pathways in STEM	Johnny C. Woods, Jr.	johnnycw@vt.edu
289	37987	Fab Friday and Its Impact on Computer Science Majors Motivation and Career Readiness	Marisol Clark-Ibanez	mibanez@csusm.edu
290	38511	Faculty Experiences with Hands-on Models for Calculus Instruction	Eric Davishahl	edavishahl@whatcom.edu
291	37061	Final Year of an S-STEM Summer, Sophomore Bridge: Successes of Three Cohorts	Katie Evans	kevans1@hbu.edu
292	38437	Findings & Implications of an Exploration into Smartness in Engineering	Cassandra Wallwey	cwallwey@vt.edu
293	37261	First Cohort Experiences During an International Research Experiences for Undergraduates Program Focused on Fractional-Order Circuits and Systems	Todd Freeborn	tjfreeborn1@eng.ua.edu
294	36959	First-Year Engineering Students Desired Practices in Mechanical Engineering	Jingfeng Wu	jingfeng@umich.edu
295	40135	Five Year Assessment for Educating Diverse Undergraduate Communities with Affordable Transport Equipment	Zeynep Ezgi Durak	zeynepezgi.durak@wsu.edu
296	37008	Fostering Leaders in Technology Entrepreneurship (FLiTE): Program Goals and First-Year Activities	Paul M Yanik	pyanik@wcu.edu
297	38046	Foundational Strategies to Support Students with Diverse Backgrounds and Interests in Early Programming	Aakash Gautam	

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
298	37440	From Cohort to Classroom: Transitioning to Year 2 in a Faculty Learning Community	Katherine Goodman	katherine.goodman@ucdenver.edu
299	37086	Funds of Knowledge and Intersectional Experiences of Identity: Graduate Students Views of Their Undergraduate Experiences	Jessica Mary Smith	jmsmith@mines.edu
300	40165	Greater Equity, Access, and Readiness for Success in Engineering and Technology (GEARSET) - An Alternate Pathway to Engineering and ET	Lesley M Berhan	lesley.berhan@utoledo.edu
301	38348	Growing Entrepreneurially Minded Researchers with New Product Development in Applied Energy: NSF REU Comparison of Traditional Delivery vs. Virtual	Lisa Bosman	lbosman@purdue.edu
302	38493	Helping Rural and Underrepresented Students Succeed in STEM	Carol S Gattis	csg@uark.edu
303	39466	High Tech and High Touch: Inclusive Ecosystems for Community College Engineering and Engineering Technology Student Success	Eugene Leo Draine Mahmoud	emahmoud@mtsac.edu
304	39826	HighSchoolers Understanding about "Engineering" and Their Perception of the Coding-Engineering Relationship	Jaai Uday Phatak	phatakj@bc.edu
305	38574	HSI Implementation and Evaluation Project: Commitment to Learning Instilled by Mastery-Based Undergraduate Program (CLIMB-UP)	Dina Verdin	dina.verdin@asu.edu
306	37802	IM STEM: LSAMP- In Situ Inclusive Mentoring	Audrey Boklage	audrey.boklage@austin.utexas.edu
307	37416	Imagining and Co-designing a Supportive College Experience for First Generation Students through an NSF S-STEM Program	Katherine C. Chen	kcchen@wpi.edu
308	38627	Impact of Engineers Without Borders USA Experiences on Professional Preparation	William C. Oakes	oakes@purdue.edu
309	38001	Impact of RET Summer Program Designs on Teachers Technological-Content Knowledge and Lesson Plan Development Outcomes	Shenghua Zha	shzha@southalabama.edu
310	38551	Impact of Student/Team Characteristics on Design Project Outcomes in Senior Design Courses	Shun Takai	stakai@niu.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
311	39219	Impacts of the ProQual Institute: Building Communities of Technical Stem Faculty for Long-Term Engagement in Educational Research	John Ray Morelock	john.morelock@uga.edu
312	36858	Implementing an Ecosystem to Expand Capabilities and Opportunities for STEM-Scholars	Carla Lopez Del Puerto	carla.lopezdelpuerto@upr.edu
313	37062	Implementing Computational Thinking Strategies across the Middle/High Science Curriculum	Thomas Tretter	tom.tretter@louisville.edu
314	37324	Implementing the Vertically Integrated Projects (VIP) Model at a Public Urban Research University in the Southeastern United States	Craig O. Stewart	costewrt@memphis.edu
315	37378	Improving Students Decision-Making Behavior in Choosing an Engineering Pathway	Jennifer R Amos	jamos@illinois.edu
316	38029	Improving Two-Year Students Spatiotemporal Computing Skills through START Internship	Jia Lu	jlu@valdosta.edu
317	38796	Improving Undergraduate STEM Writing: A Collaboration Between Instructors and Writing Center Directors to Improve Peer-Writing Tutor Feedback	Robert Weissbach	rweissba@iupui.edu
318	39065	Inclusive Engineering Classrooms and Learning Communities: Reflections and Lessons Learned from Three Partner Universities in Year 2	Jessica Moriah Vaden	jmv78@pitt.edu
319	39078	Inclusive, Asset-Based Instructional Strategies in Engineering Design: Empowering Faculty with Professional Development	Hannah Budinoff	hdb@arizona.edu
320	37586	Integrating Computational Thinking into a Neural Engineering High School Curriculum	Susan Meabh Kelly	susan.kelly@uconn.edu
321	37891	Integrating Design Thinking and Digital Fabrication into Engineering Technology Education through Interdisciplinary Professional Learning	Christopher Russell	crussell@nvcc.edu
322	37807	Integrating Internet of Things into Mechatronics to Prepare Mechanical Engineering Students for Industry 4.0	Hakan Gurocak	hgurocak@wsu.edu
323	36853	Integrating Servingness in a Mini-Capstone Project: Resilient and Sustainable Emergency Housing Design	Carla Lopez Del Puerto	carla.lopezdelpuerto@upr.edu
324	39674	Intelligently Preparing the Future Construction Engineering Workforce by Connecting the Professional and Educational Communities	Homero Murzi	hmurzi@vt.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
325	37929	International Interdisciplinary Undergraduate Research Program on Big Data in Energy and Related Infrastructure: Challenges and Lessons Learned from the COVID-19 Pandemic and University Policies and Practices	Bimal P. Nepal	nepal@tamu.edu
326	38112	Investigating Creativity, Confidence, and an Entrepreneurial Mindset through Curricular Modification and Community Engagement	Katrina Donovan	Katrina.Donovan@sdsmt.edu
327	38058	Investigating Role Identities of Low-Income Engineering Students Prior to Their First Semester of College	Ryan Scott Hassler	rsh14@psu.edu
328	38938	Investigating the Effects of Culture and Education on Ethical Reasoning and Dispositions of Engineering Students: Initial Results and Lessons Learned	Scott Streiner	Scs147@pitt.edu
329	37026	Investigating the Impact of Context Choice on Learning Experience via Immersive Simulations in an Object-Oriented Programming Course	Sabahattin Gokhan Ozden	sgo7@psu.edu
330	36863	Iron Range Engineering Academic Scholarships for Co-Op Based Engineering Education	Catherine MCGough Spence	catherine.spence@ire.minnstate.edu
331	38102	Latinx Engineering Students Surviving the Odds to Accomplish Their College Degree	Hilda Cecilia Contreras Aguirre	cecontre@nmsu.edu
332	39143	Learning by Evaluating (LbE): Engaging Students in Evaluation as a Pedagogical Strategy to Improve Design Thinking	Andrew Jackson	andrewjackson@uga.edu
333	37960	Lessons Learned Doing Secondary Data Analysis in EER	Jennifer M Case	jencase@vt.edu
333A	36799	Lessons Learned from a Capacity-Building Workshop for Two-Year Colleges Seeking U.S. National Science Foundation Funding	Marialice Mastronardi	marialice.mastronardi@utexas.edu
334	36791	Master's Individual Development Plans as an Essential Tool in Workforce Development	Deborah Silver	dsilver@rutgers.edu
335	37020	Material Agency with Summer STEM Youth Designing with Micro:bits	Vanessa Svihla	vsvihla@gmail.com
336	36914	Math to Makerspace: Evolution of a Bridge Program to Support Cohort Development	Jill Davishahl	jill.davishahl@wwu.edu
337	39290	Measuring the "Thinking" in Systems Thinking: Correlations between Cognitive and Neurocognitive Measures of Engineering Students	Tripp Shealy	tshealy@vt.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
338	36930	Mental Health in Engineering Education Before, During, and After COVID-19 Related Disruptions	Andrew Danowitz	adanowit@calpoly.edu
339	38296	Mentoring Competencies From the Perspective of Mentors and Their Racially Marginalized STEM Mentees	Vibhavari Vempala	vvempal@umich.edu
340	39018	Mentoring to Support Community Colleges through the NSF ATE Proposal Submission Process	Karen Wosczyzna-Birch	karenlee@snet.net
341	37195	Mobile Learning in STEM: A Case Study in an Undergraduate Engineering Course	Krishna Pakala	krishnapakala@boisestate.edu
342	39562	Moving Toward Transdisciplinary Learning Around Topics of Convergence: Is it really Possible in Higher Education Today?	Greg J Strimel	gstrimel@purdue.edu
343	37210	Native American Student Research Experiences in IoT-Enabled Environmental Monitoring Technologies: An Analysis of North Dakota Tribal Student Experiences in Beijing, China and Mobile, Alabama	Jill M. D. Motschenbacher	jmotschenbacher2@unl.edu
344	37901	Neural Correlates of Learning Preferences and Individual Differences in Design Fixation: Preliminary Evidence from Functional Magnetic Resonance Imaging (fMRI)	Evangelia G. Chrysikou	lilachrysikou@drexel.edu
345	38948	NSF ATE: Internet of Things Education Project	Gary J. Mullett	gmullett@stcc.edu
346	38983	NSF DUE 2142666 and NSF DUE 2142685. Collaborative Research-Engineering Empathetic Engineers (E ³): Effects of the Humanities on Engineers Critical Thinking and Empathy Skills	John Carrell	john.carrell@ttu.edu
347	38981	NSF Grantee Poster Session Undergraduate's Social Capital and Engineering Professional Skills: Comparison between Different Types of Institutions	Kerrie A Douglas	douglask@purdue.edu
348	39416	NSF Grantees Poster Session: Power Engineering Curriculum Update: Preliminary Evaluation of Student Concept Maps on Energy Forecasting	Valentina Cecchi	vcecchi@uncc.edu
349	39581	NSF INCLUDES ALRISE Alliance : Accelerate Latinx Representation in STEM Education.	Anna Tanguma-Gallegos	atanguma@asu.edu
350	38228	NSF S-STEM Academy of Engineering Success: Reflections on a Seven-Year Journey	Robin A.M. Hensel	robin.hensel@mail.wvu.edu
351	39495	NSF S-STEM Track 3: Scaling Up Student Success through Broadening Participation Beyond our S-STEM Cohort	Maryam Darbeheshti	maryam.darbeheshti@ucdenver.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
352	37623	NSF S-STEM: Inclusive Hackathon Themes to Attract Underrepresented Community College Students into Computing Disciplines	Vinitha Hannah Subburaj	vsubburaj@wtamu.edu
353	39533	On ACCESS Program Support for Students Academic Success in the Cybersecurity Field	Katerina Goseva-Popstojanova	katerina.goseva@mail.wvu.edu
354	38319	Organizational Partnerships S-STEM Research Hub	David B Knight	dbknight@vt.edu
355	39131	Outcomes & Observations in the Transfer Success Co-Design in Engineering Disciplines (TranSCeND) Program at the University of Tennessee, Knoxville	Jennifer Retherford	jretherf@utk.edu
356	40318	Perspectives from an Intervention Model to Improve Retention and Success Among Low-income Hispanic Engineering Students	Manuel A. Jimenez	manuel.jimenez1@upr.edu
357	39584	Pilot Study of the Impacts of a Robotics Curriculum on Student's Subject-Related Identities and Understanding of Engineering	Holly M Golecki	golecki@illinois.edu
358	39940	Post-COVID Professional Development and Community Building for a Pedagogical Change Project	Jill K Nelson	jnelson@gmu.edu
359	39477	Potential Interventions to Promote Engineering Technology Adoption among Faculty	Michelle E Jarvie-Eggart	mejarvie@mtu.edu
360	39660	Practicing Facilitating STEM Discussions: A Study on the Use of a Digital Simulation Tool for Teachers	G. R. Marvez	gr.marvez@tufts.edu
361	37063	Progress in S-STEM Program Electrical Engineering Scholars at the Benjamin Franklin Cummings Institute of Technology	Lisa Shatz	lshatz@suffolk.edu
362	40344	Promoting Research-Driven Data Analytics Curriculum in High School through an NSF RET Site	Shengfan Zhang	shengfan@uark.edu
363	36843	Promoting the Dispositional Dimension of Competency in Undergraduate Computing Programs	Rajendra K Raj	rkr@cs.rit.edu
364	38363	Promoviendo el Éxito Estudiantil a través de un Sistema de Apoyo (PromESA): Promoting Student Success through a Holistic Support System in Engineering Education	Cole Hatfield Joslyn	cole.joslyn@nau.edu
365	39159	Reaching Consensus: Using Group Concept Mapping in a Multi-Site STEM Hub Research Team	ANTHONY WEISS	anthony.weiss@mail.umkc.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
366	38861	Rebuilding and Reinforcing Creativity through Assessment in Engineering Students and Practitioners	Bret N Lingwall	bret.lingwall@sdsmt.edu
367	39049	Reflections from an Interdisciplinary Team Research Project during a 10-week NSF REU Program	Eric Markvicka	eric.markvicka@unl.edu
368	37018	Regional Assets, Factors, and Strategies Supporting Engineering Pre-Transfer Pathways	Kristin Kelly Frady	frady@clemsom.edu
369	38438	Reimagining International Research for Students in a Virtual World	David B Knight	dbknight@vt.edu
370	37097	Relationship between Mindset and Grit on Undergraduate Engineering Student Retention	Wook-sung Yoo	
371	38667	Relationships Between Metacognitive Monitoring During Exams and Exam Performance in Engineering Statics	Saryn Goldberg	eggsgz@hofstra.edu
372	39858	Remote Engaged Student Learning through Hands-on Internet of Things	Lifford McLauchlan	Lifford.McLauchlan@tamuk.edu
373	36686	Renewable Energy Systems Training (REST) Project Final Report	Mohsen Azizi	azizi@njit.edu
374	38931	Replicating a Community-Engaged Educational Ecosystem: First-Year Findings	Danielle Wood	dwood5@nd.edu
375	37760	Reporting the Progress and Performance Evaluation of an Ongoing Integrated Program for Recruitment, Retention, and Graduation of High-Achieving, Low-income Engineering Students	Houshang Darabi	hdarabi@uic.edu
376	39748	Representation of Engineering Structures Concepts in Academic and Workplace Contexts	Shane A. Brown	shane.brown@oregonstate.edu
377	38209	Research Experiences for Teachers in Simulation and Visualization for Innovative Industrial Solutions: Year 2	John Moreland	morelanj@pnw.edu
378	36916	Responsive Support Structures for Marginalized Students in Engineering: Insights from Years 1-3	Malini Josiam	m2josiam@gmail.com
379	37590	RET Site: Enhancing Teacher Knowledge & Skills in Modern Manufacturing - Lesson and Feedback	Wayne P Hung	Hung@entc.tamu.edu
380	38752	REU Site on UAV Technologies: Exposing Participants to Multidisciplinary Environment	Subodh Bhandari	sbhandari@cpp.edu
381	37028	REU-PATHWAYS: Pathways for Community College Students to Enrich Their Education and Careers	Claire Duggan	c.duggan@neu.edu
382	38904	RH Lab RELIA: A Remote Integrated Environment for Embedded Computing and RF Communication Systems	Rania Hussein	rhussein@uw.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
383	38864	Self-Regulation of Cognition and Self-Regulation of Motivation in Problem Solving	Oenardi Lawanto	olawanto@gmail.com
384	38538	Setting the Stage for Co-Creation: Using Workshops to Scaffold Interdisciplinary Research, Collaboration, and Community Building	Trina C. Kershaw	tkershaw@umassd.edu
385	40095	Shark AI: Teaching Middle School Students AI Fundamentals Using Fossil Shark Teeth	Jeremy A. Magruder Waisome	jam323@ufl.edu
386	39053	Sketchtivity, an Intelligent Sketch Tutoring Software: Broadening Applications and Impact	Donna Jaison	donnajaison@tamu.edu
387	37472	Sociotechnical Systems Perspective of Underrepresented Minority Student Success at a Predominantly White Institution	Arunkumar Pennathur	arunkumar-pennathur@uiowa.edu
388	37101	S-STEM: Creating Retention and Engagement for Academically Talented Engineers' Lessons Learned	Indira Chatterjee	indira@unr.edu
389	36926	Strengthening Student Motivation and Resilience through Research and Advising	Zhaoshuo Jiang	zsjiang@sfsu.edu
390	39281	Student Perceptions of Confidence in Learning and Teaching before and after Teaching Improvements	Sarah Lynn Orton	ortons@missouri.edu
391	37290	Supporting and Understanding Undergraduates' Computing Pathways Through the Flit-GAP S-STEM Program	Stephen Secules	ssecules@fiu.edu
392	38007	Supporting Low-Income Engineering Transfer Student's Transition from Community College to a 4-Year University through a Comprehensive Scholarship Program	Anna-Lena Dicke	adicke@uci.edu
393	37740	Supporting Student Internships with the Nsf Hsi Program at a Medium-Sized Hispanic-Serving Institution	Alberto Cureg Cruz	acruz37@csu.edu
394	37329	Sustaining and Scaling the Impact of the MIDFIELD project at the American Society for Engineering Education (Year 1)	Susan M Lord	slord@sandiego.edu
395	39328	Testing the Performance of Outcome Measures for LGBTQ STEM Students and Their Peers	Bryce E. Hughes	bryce.hughes@montana.edu
396	37104	The Community as "Surroundings" in a Classroom Ecosystem	Renee M Clark	rmclark@pitt.edu
397	38246	The Development of Professional Mentors to Supplement Low Socio-Economic Students Webs-of-Support	Robert Merton Stwalley	rms3@purdue.edu
398	37422	The Effects of COVID-19 on Students Tool Usage in Academic Makerspaces	Astrid Layton	alayton@tamu.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
399	39191	The Freshman Year Innovator Experience (FYIE): Bridging the URM Gap in STEM	Noe Vargas Hernandez	noe.vargas@utrgv.edu
400	38895	The impact of Oral Exams on Engineering Students Learning	Huihui Qi	huqi@ucsd.edu
401	39891	The Impact of Pre-Service Teachers Perceptions of Engineering on Their Self-Efficacy with Teaching Engineering	Betsy Chesnutt	bchesnut@utk.edu
402	36968	The Importance of Career Competencies for Engineering Students	Karen L. Webber	kwebber@uga.edu
403	37617	The NSF S-STEM Program at a Rural, Hispanic Serving Institution	Anitha Sarah Subburaj	asubburaj@wtamu.edu
404	37794	The Process of Building Faculty Buy-in for Course-Based Adaptations of an Ecological Belonging Intervention to Transform Engineering Representation at Scale	Linda DeAngelo	deangelo@pitt.edu
405	39978	The REU Site in Nanotechnology for Health, Energy and the Environment: Best Practices for Enhancing Research Skills, Professional Development, and Diversity	Gary P. Halada	gary.halada@stonybrook.edu
406	38695	The Rising Doctoral Institute: Helping Racial and Ethnic Minority Students Overcome the Transition into the Engineering Ph.D.	Abimelec Mercado Rivera	
407	38240	The SD-FIRST Program – Impact on First-Generation Students	Cassandra M Birrenkott	cassandra.birrenkott@sdsmt.edu
408	36831	The S-STEM Program for Mathematics Majors at the University of Texas at Arlington	Tuncay Aktosun	aktosun@uta.edu
409	37526	The Stressors for Doctoral Students Questionnaire: Year 2 of an RFE Project on Understanding Graduate Engineering Student Well-Being and Retention	Joseph Francis Mirabelli	jfmirab2@illinois.edu
410	37407	Thematic Maps of Interdependent Engineering Judgment Processes in Undergraduate Systems Engineering Capstone Projects	Royce A Francis	seed@email.gwu.edu
411	39182	Thinking Inversely in Engineering Design: Towards an Operational Definition of Generative Design Thinking	Zhenghui Sha	zsha@austin.utexas.edu
412	39183	Thinking with Mechanical Objects: A Think-Aloud Protocol Study to Understand Students Learning of Difficult and Abstract Thermodynamic Concepts	Beyza Nur Guler	bng@vt.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
413	37990	Towards an Understanding of the Impact of Community Engaged Learning Projects on Enhancing Teachers Understanding of Engineering and Intercultural Awareness	Kellie Schneider	kschneider2@udayton.edu
414	40023	Tracking the Progress Towards an Engineering Degree of Three Cohorts of Low-income Engineering Students Supported by a Track 3 Multi-Institutional S-STEM Grant	Ricky T Castles	castlesr@ecu.edu
415	38005	Transforming Engineering Education for Neurodiversity: Epistemic Communities as a Model for Change	Maria Chrysochoou	maria.chrysochoou@uconn.edu
416	38003	Undergraduate Student Experiences With FossilSketch Software to Learn Basics of Micropaleontology	Anna Stepanova	anna_stepanova@tamu.edu
417	39918	Understanding Capstone Design Activity Engagement in Mechanical Engineering	Elliott Clement	clemenel@oregonstate.edu
418	39729	Understanding Context: Propagation and Effectiveness of the Concept Warehouse in Mechanical Engineering at Five Diverse Institutions and Beyond – Results from Year 4	Brian P. Self	bself@calpoly.edu
419	38822	Using a Situational Leadership Framework to Understand the Role of Mentors in Cultivating Innovative Thinking Skills in STEM Education	Jeffrey Stransky	stranskyj6@students.rowan.edu
420	38838	Using a Situational Leadership Framework to Understand the Role of Mentors in Cultivating Innovative Thinking Skills in STEM Education	Sadan Kulturel-Konak	sadan@psu.edu
421	37976	Using a Timeline of Programming Events as a Method for Understanding the Introductory Students Programming Process	Phyllis Beck	pjb82@msstate.edu
422	36745	Using Adaptive Learning Platform Metrics for Early Identification and Personalized Support of Low-Performing Students	Autar Kaw	kaw@eng.usf.edu
423	36703	Using Agile Principles for Cohort Building in a Graduate Software Engineering Program	Stan Kurkovsky	kurkovsky@ccsu.edu
424	38439	Using Badging to Promote Makerspace Participation and Engineering Identity Development: Emergent Themes and Lessons Learned from a Pilot	Hannah Budinoff	hdb@arizona.edu
425	36869	Using Neural Networks to Provide Automated Feedback on Elementary Mathematics Instruction	Peter Youngs	pay2n@virginia.edu

NSF GRANTEES POSTER SESSION

Wednesday, June 28

9:15 am - 10:45 am

Poster Board #	Paper ID	Title	Author	Author Email
426	38272	Using the ARCS Model of Motivation to Design 9â€™12 CS Curriculum	Prateek Shekhar	pshekhar@njit.edu
427	39072	US-Sweden Bioinformatics IRES Year 2: Improving Student Preparedness	Mark A Chapman	markchapman@sandiego.edu
428	38430	Utilization of Social Management Theoretical Framework and Program Management Tool to Successfully Manage Large Multi-Department STEM Projects	Oludare Adegbola Owolabi	Oludare.Owolabi@morgan.edu
429	39760	Variations in Motivation for Learning to Use MATLAB among First-Year Engineering Students	Alison K Polasik	polasik@campbell.edu
430	40319	What Constitutes Research Excellence? Experimental Findings on Factors Driving Faculty Perceptions of Tenure Candidates in STEM	Lizandra C Godwin	lizandra.godwin@gmail.com
431	37818	Why Research Involvement Makes an Engaging Learning Experience for Neurodiverse Students	Alexandra Hain	alexandra.hain@uconn.edu
432	38664	Work in Progress: Assessing a Faculty Community of Practice and Identifying Its Opportunities to Enhance Equitable Infrastructure Education	Rodolfo Valdes-Vasquez	rvaldes@colostate.edu
433	37955	Work in Progress: Building a Project-Based Learning for Rural Alabama STEM Middle School Teachers in Machine Learning and Robotics RET Site	Xiaowen Gong	xgong@auburn.edu
434	40054	Work in Progress: Building a Sustainable Institutional Structure to Support STEM Scholars	Donald W. Mueller	muellerd@pfw.edu
435	37259	Work in Progress: Teaching Ethics Using Problem-Based Learning in a Freshman Introduction to Electrical and Computer Engineering	Todd Freeborn	tjfreeborn1@eng.ua.edu