

CURRICULUM VITAE
AMANDA J. SMITH
DIRECTOR OF K-12 ENGAGEMENT
ASSISTANT TEACHING PROFESSOR OF SCIENCE EDUCATION
Pennsylvania State University
100 Innovation Bldg. Rm 122
University Park PA 16802
ajs398@psu.edu

EDUCATION

PhD	Pennsylvania State University , Education Leadership PhD Candidate	Anticipated 2024
ME	George Mason University , Curriculum & Instruction Advanced Studies in Teacher Leadership K-12 Administration Certification	May 2009
BS	Pennsylvania State University , Biology	December 2005
BS	Pennsylvania State University , Curriculum & Instruction Science Education Minor in Education Theory & Policy Studies 6-12 Biology Teaching Certification	December 2005

EMPLOYMENT

Director of K-12 Engagement March 2021-Present
Pennsylvania State University
University Park, PA

- *Penn State K-12 Engagement Strategy*: to broaden reach and awareness of the many opportunities that exist for K-12 students, teachers, administrators, and families within the Penn State ecosystem, and develop the K-12 engagement strategy to support all Penn State entities working with K-12 to address their needs and goals.
- *Executive Director of ENGINE of Central PA, A STEM Ecosystem (2018-present)*: a cross-sector collaboration in Central PA across 12 counties to better unify and align STEM education outreach opportunities from all stakeholders; including opportunities such as: establishing the Chief Science Officers (CSO) STEM Leadership program for middle and high school students; established the Remake Learning Days of Central PA Festival; and events and experiences to help schools with STEM strategic planning and goals

STEM Outreach & Engagement Liaison June, 2014 – March 2021
Pennsylvania State University
University Park, PA

- *Executive Director of ENGINE of Central PA, A STEM Ecosystem (2018-present)*: a cross-sector collaboration in Central PA across 12 counties to better unify and align STEM education outreach opportunities from all stakeholders; including opportunities such as:

- establishing the Chief Science Officers (CSO) STEM Leadership program for middle and high school students; established the Remake Learning Days of Central PA Festival; and events and experiences to help schools with STEM strategic planning and goals
- *Developed the STEM Collaborative (2016-2019)*: a collaboration between Central Intermediate Unit #10, BLaST Intermediate Unit #17, and CSATS with 17 school districts in the region to prepare tailored professional development workshops geared towards transdisciplinary education
 - *PA STEM Ambassador (2018)*: representing CSATS and developing a policy project to enhance legislatures understanding of STEM education and new policies to impact K-12 STEM Education
 - *100kin10 Lead for College of Education, Penn State University (2016-present)*: national organization developed under the Obama administration to prepare 100K STEM teachers by 2021, serving on two rural education project teams
 - *Developed partnerships with schools to support federal/state level grants*: currently established 63 school district relationships that have partnered on broader impacts component of federal and state grants across Pennsylvania and nationally.
 - *Lead for teachers in industry program in Pittsburgh, PA*: 7-week research experience for teachers program in STEM industries and supporting their development of classroom research projects based on their experience
 - *Lead for teachers in field experience to Costa Rica with the PSU CHANCE Program (2017)*: 2 week in-field research experience for teachers and supporting their development of classroom research projects based on their experience
 - *Developed the Navigate Education in PA Database education database*: education entities searchable database based on extensive criteria for Penn State researchers, College of Education, and other stakeholders
 - Corporate Foundation Relations representative to prepare grant proposals with corporations and foundations for CSATS
 - Redesigned and maintain CSATS website and ENGINE of Central PA website
 - Lead marketing and advertising efforts for all CSATS programs
 - Networking with other Penn State outreach groups and STEM colleges to enhance University knowledge on our services
 - *Lead for E3 Committee (Enlighten, Engage, Emerge), a subcommittee of Penn State Engaged Scholarship Council (2016)*: networking with general education faculty and providing resources to enhance the general education curriculum by exposing students early to engaged opportunities inside and outside the University network.

Affiliate Instructor in Integrated Science & Technology 2013 to 2014
James Madison University
Harrisonburg, VA

- Oversee and lead the independent science research project for HS senior students
- Collaborate with JMU science instructors involving integration of secondary education and higher education course work for dual enrollment status

Advanced Placement Biology & Independent Research Teacher 2012 to 2014
Briar Woods High School, Loudoun County Public Schools
Ashburn, VA

- Establish independent science research curriculum incorporating the science business community (INOVA open heart surgery experience and National Institute of Health facilities)
- Managing science research based projects for the Intel International Science and Engineering Fair

- Organized ecology research based trip to Wallops Island Marine Science Consortium for 100 AP Biology students
- Piloting STEMlete program and assisting in education outreach efforts for new online community business
- Piloting and modifying bioengineering curriculum for Virginia Polytechnic Institute and State University Fralin Institute education outreach program – incorporating science lab experiences to include statistical based data analysis

High School Summer School Dean
Loudoun County Public Schools
Ashburn, VA

Summer 2012

- Hire summer school teachers for all four core areas and assist with placement of classes throughout the building
- Manage all book and material distribution in the building
- Oversee attendance policy follow through
- Provide instructional support for staff
- Assist in all disciplinary issues among student body
- Assist in preparation for high school summer school graduation

Science Department Chair
Tuscarora High School, Loudoun County Public Schools
Leesburg, VA

2010 to 2012

- Assisting with the communication between the science department and administration
- Providing instructional support to the science department
- Observing and assisting with evaluation of science department members
- Holding biweekly department meetings to evaluate curriculum process with each content area
- Reviewing and overseeing the safety policies within the science department
- Implemented the Tuscarora Science and Engineering Fair which includes 250 students and 60 judges from the DC metropolitan area
- Responsible for managing the science funding (\$2.1M establishment budget, \$50K annual budget), laboratory equipment inventory and chemical inventories
- Leading the SOL science remediation review and assist with science SOL testing
- Leading the student run initiatives for the PBIS program

Middle School Science Teacher
Eagle Ridge Middle School, Loudoun County Public Schools
Ashburn, VA

2006 to 2010

- Attending professional development conferences and workshops to improve teaching techniques
- Sponsoring a new environment and community based project club, C.A.U.S.E.Corp
- Created a portfolio based project with a showcase night for families while on 6th grade collaborative team
- Lead the INSPIRE program, a transition summer camp for rising 7th graders
- Equity Committee member
- choreographer of spring musicals

SCHOOL CONTRACTS

STEM Collaborative initiative over the course of three academic year (2016-2017, 2017-2018, 2018-2019). The pilot year was free to districts to develop the partnership and support a foundation for implementing STEM and NGSS approaches to curriculum. The following two years were contracted CSATS professional development with each district partner.

School: ***Bald Eagle Area School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount (Year): \$7,556.46 (2017)
 Program: Google Supported Rural Educator Education for Networked Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$2,200 (2018)

School: ***Bellwood Antis School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount (Year): \$650 (2018)

School: ***Central Dauphin School District***
 Program: Google Supported Rural Educator Education for Networked Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$8,470 (2018)

School: ***Juniata County School District***
 Program: Google Supported Rural Educator Education for Networked Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$2,680 (2018)

School: ***Mifflin County School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount (Year): \$8,745.88 (2017)
 Program: STEM Committee professional development 4 day series
 Amount Awarded: \$18,490.18 (2017)

School: ***MoShannon Valley School District***
 Program: Google Supported Rural Educator Education for Networked Improvement in Computer Science (GREEN-CS)
 Amount Awarded: \$900 (2018)

School: ***Montgomery School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount Awarded: \$5,093.65 (2017)

School: ***Northeast Bradford School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount Awarded: \$3,820.23 (2017)

School: ***Philipsburg-Osceola School District***
 Program: Google Supported Rural Educator Education for Networked Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$1,300 (2018)

School: ***Southern Tioga School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Amount Awarded: \$3,820.23 (2017)

School: ***St. Joseph's Catholic Academy***
 Program: Google Supported Rural Educator Education for Networked
 Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$650 (2018)

School: ***Towanda School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Year: 2017
 Amount Awarded: \$6,367.06 (2017)

School: ***West Branch Area School District***
 Program: Elementary Grades 3-5 Series: NGSS Integration Workshops
 Year: 2017
 Amount Awarded: \$7,496.47 (2017)
 Program: Google Supported Rural Educator Education for Networked
 Improvement in Computer Science (GREEN-CS)
 Amount Awarded: \$4,800.00 (2018)

School: ***Young Scholars***
 Program: Google Supported Rural Educator Education for Networked
 Improvement in Computer Science (GREEN-CS)
 Amount (Year): \$2600 (2018)

GRANT PROPOSALS

Proposals in Review

Title: CAS-Climate: Bubble generation and ripening in underground hydrogen storage
 Sponsor: National Science Foundation
 Role: Support for strategy for outreach and engagement to underserved schools
 PI: Yasher Mehmani (Earth and Mineral Sciences)
 Award Amount: \$315,949
 Date Submitted: 9/17/2022

Funded Proposals

Title: ***Harnessing the Power of PA STEM Ecosystems***
 Sponsor: PA SMART
 Role: Subcontracted for communication work and asset mapping with PDE
 PI: Nancy Peter, Philadelphia Education Fund
 Award Amount: \$499,579.50
 Date Submitted: 3/18/2022

Title: ***Chief Science Officers Program for ENGINE of Central PA***
Sponsor: Siemens
PI: Amanda Smith (ENGINE of Central PA)
Award Amount: \$10,000
Date Submitted: 2/2022

Title: ***Remake Learning Days of Central PA***
Sponsor: Grable Foundation & Southwestern PA Grant Makers
PI: Amanda Smith (CSATS, ENGINE of Central PA)
Award Amount: \$8,000
Date Submitted: 10/2021

Title: ***Materials Research Science and Engineering Center (MRSEC): Center for Nanoscale Science***
Sponsor: National Science Foundation
Role: Leading the MRSEC Chief Science Officers for ENGINE of Central PA (Pre-College Education Component)
PI: Vincent Crespi (Materials Engineering)
Award Amount: \$18,787,222
Date Submitted: 11/26/2019

Title: ***SHaping of Authentic Practices by Engaging in Modeling of A Topic with Teachers to Explore Research in Science (SHAPE MATTERS)***
Sponsor: National Institute of Health
Role: Developing a dissemination model to the educators and schools within the ENGINE of Central PA
PI: Kathy Hill (CSATS)
Award Amount: \$1,326,413
Date Submitted: 7/19/2019

Title: ***Remake Learning Days for Central Pennsylvania***
Sponsor: Grable Foundation
PI: Amanda Smith (CSATS, ENGINE of Central PA)
Award Amount: \$22,000
Date Submitted: 10/15/2019, 10/26/2020

Title: ***Collaborative Research: Estuarine metabolism and gas exchange determined from dissolved oxygen time series: method development, field evaluation, and application to historical data***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: Raymond Najjar (Meteorology)
Award Amount: \$899,401(over 3 years)
Date Submitted: 8/26/2019

Title: ***Youth Entrepreneurship HUB for Central PA***
Sponsor: PASYDN
Role: Penn State representative to develop partnerships for K-12 entrepreneurship curriculum development and experiences
PI: MaryAnn Volders (Central Pennsylvania Institute for Science and Technology)
Award Amount: \$15,000

Date Submitted: 7/19/2019

Title: ***CAREER: Evaluating the distribution of bubble nuclei for acoustic cavitation in tissues***

Sponsor: National Science Foundation

Role: Developing a dissemination model to the educators and schools within the ENGINE of Central PA territory

PI: Julianna Simon

Award Amount: \$546,050 (over 5 years)

Date Submitted: 7/18/2019

Title: ***Collaboration Grant with CSATS and Amgen Foundation***

Sponsor: 100kin10

PI: Amanda Smith (CSATS)

Award Amount: \$2,353

Date Submitted: 7/16/2019

Title: ***Collaboration Grant with CSATS and PSU Harrisburg Data Center***

Sponsor: 100kin10

PI: Amanda Smith (CSATS)

Award Amount: \$4,000

Date Submitted: 7/16/2019

Title: ***Chief Science Officers Program for Centre County***

Sponsor: American Association for University Women (AAUW)

Role: Co-leading the Chief Science Officers Program for ENGINE Ecosystem

PI: Michele Crowl (Discovery Space of Central Pennsylvania)

Award Amount: \$5,000

Date Submitted: 6/03/2019

Title: ***Center for Renewable Energy Storage Systems and Technology (CRESST)***

Sponsor: National Science Foundation

Role: Support and dissemination of workshop opportunities

PI: Chris Rahn (Engineering)

Award Amount: preproposal

Date Submitted: 1/16/2019

Title: ***BUILDING Education RET Site***

Sponsor: National Science Foundation

Role: Support and dissemination of workshop opportunities

PI: Somayeh Asadi (Architectural Engineering)

Award Amount: \$600,00 (over 3 years)

Date Submitted: 9/19/2018

Title: ***CAREER: Rational Design of Phase-Changing Nanomaterials for Spatiotemporal Protein Delivery***

Sponsor: National Science Foundation

Role: Support and dissemination of workshop opportunities

PI: Scott Medina (Biomedical Engineering)

Award Amount: \$500,00 (over 5 years)

Date Submitted: 7/20/2018

Title: ***CAREER: Multiscale Modeling of Axonal Fiber Bundles in the Brain***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Reuben Kraft (Mechanical Engineering)
 Award Amount: \$500,00 (over 5 years)
 Date Submitted: 7/19/2018

Title: ***Expanding YIE(3)LD in AG: Youth Involvement in Exploring Exciting Employment Directions***
 Sponsor: National Institute of Food and Agriculture
 Role: Support and dissemination of workshop opportunities
 PI: Kathy Hill (CSATS)
 Award Amount: \$149,938 (over 3 years)
 Date Submitted: 7/11/2018

Title: ***Blue Box Program: Expanding STEM Research to K-12 Classrooms***
 Sponsor: Barnes and Noble Gift Disbursement
 PI: Amanda Smith (CSATS)
 Award Amount: \$15,000
 Date Submitted: 6/28/2018

Title: ***Google Educator PD Grant: GREEN CS***
 Sponsor: Google Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Kathy Hill (CSATS)
 Award Amount: \$25,000
 Date Submitted: 4/12/2018

Title: ***Investigation of tropical/extratropical interaction mechanisms at the intraseasonal time scale***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Sukyoung Lee (Meteorology)
 Award Amount: \$613,489 (over 3 years)
 Date Submitted: 12/19/2017

Title: ***SaTC-EDUC: Advancing Cybersecurity Education through Self-Learning Memory Integrity Training Kit***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Swaroop Ghosh
 Award Amount: \$300,000 (over 2 years)
 Date Submitted: 12/15/2016

Title: ***The first open access digital archive for high fidelity 3-5 data on morphological phenomes***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Tim Ryan (Anthropology)

Award Amount: \$716,762 (over 5 years)
Date Submitted: 9/09/2016

Title: ***Multiscale Simulation Techniques for Liquid-Vapor Phase Change Heat Transfer***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: Alex Rattner (Mechanical and Nuclear Engineering)
Award Amount: \$509,877 (over 5 years)
Date Submitted: 7/21/2016

Title: ***APPL-RED***
Sponsor: United States Department of Agriculture
Role: Support and dissemination of workshop opportunities
PI: Annmarie Ward (CSATS)
Award Amount: \$149,991 (over 3 years)
Date Submitted: 3/18/2016

Title: ***Developing a Climatology of Horizontal Convective Rolls over Oklahoma: Combining Observational Data Sets to Increase Understanding***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: David Stensrud (Meteorology)
Award Amount: \$484,146
Date Submitted: 2/01/2016

Title: ***IUSE-Polar: APPLES: Arctic Plant Phenology – Learning through Engaged Science***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: Eric Post (Biology)
Award Amount: \$566,316 (over 3 years)
Date Submitted: 1/13/2015

Title: ***The Dynamics of Jets and Waves in the Atmosphere and Southern Ocean***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: Sukyoung Lee (Meteorology)
Award Amount: \$669,285 (over 3 years)
Date Submitted: 1/1/2014

Title: ***Boeing – Research Experiences for Teachers***
Sponsor: Boeing Corporation
Role: Design and implementation of professional development for teachers, logistical planning of industry host placements and teacher interviews
PI: CSATS Director
Award Amount: \$200,000

Unfunded Proposals

Title: ***STEM + CS Institutes for Pennsylvania***
 Sponsor: PA SMART
 PI: Amanda Smith (CSATS, ENGINE of Central PA)
 Award Amount: \$497,007
 Date Submitted: 1/10/2020

Title: ***IDEA Hub for Central Pennsylvania***
 Sponsor: PA SMART
 Role: Disseminating entrepreneurship model to ENGINE of Central PA, supporting and connecting industry partnerships
 PI: Sherri Connell (Penns Valley School District)
 Award Amount: \$500,000
 Date Submitted: 1/10/2020

Title: ***Physical Computing using Raspberry Pi Certification***
 Sponsor: PA SMART
 Role: Developing a dissemination model to the educators and schools within ENGINE of Central PA
 PI: Thomas McClain (Tuscarora Intermediate Unit 11)
 Award Amount: \$500,000
 Date Submitted: 1/10/2020

Title: ***SPARC (Science Program And Research Coach) mobile science program***
 Sponsor: PA SMART
 Role: Developing a dissemination model to the educators and schools within ENGINE of Central PA
 PI: David Garbe (Pennsylvania Society for Biomedical Research)
 Award Amount: \$500,000
 Date Submitted: 1/10/2020

Title: ***Penn State iCARE2 (Inspiring Cancer Research Careers) - An innovative pipeline program to engage teachers and underrepresented pre-college/college students in authentic research experiences***
 Sponsor: National Institute of Health
 Role: Developing a dissemination model to the educators and schools within ENGINE of Central PA
 PI: Kathy Hill (CSATS) and Kristen Eckert (PSU Cancer Institute)
 Award Amount: \$2,372,166
 Date Submitted: 9/25/2019

Title: ***Collaborative Research: Chief Science Officers: Empowering Tomorrow's STEM Leaders Today***
 Sponsor: National Science Foundation (ITEST)
 Role: Leading the Chief Science Officer Program for Pennsylvania Ecosystems
 PI: Jeremy Babendure (Arizona SciTech Institute)
 Award Amount: \$3,000,000
 Date Submitted: 8/19/2019

Title: ***PIPELINE|STEM***
Sponsor: PA SMART
PI: Amanda Smith
Award Amount: \$469,000
Date Submitted: 12/18/2018

Title: ***INSPIRE – Integrating the STEM Pipeline in Rural Education***
Sponsor: Lockheed Martin
PI: Amanda Smith
Award Amount: \$165,299
Date Submitted: 5/18/2018

Title: ***Using Digital Innovation to revitalize K-12 STEM Education through High Performance Computing (HPC-in-K-12)***
Sponsor: University Strategic Plan RFP
Role: Support and dissemination of workshop opportunities
Award Amount: \$199,300 (over 2 years)
Date Submitted: 1/31/2017

Title: ***First Energy Corporation***
Sponsor: First Energy
Role: CSATS representative for developing programs First Energy funding could support
PI: Jonathan Thurley (Corporation Foundation Relations)
Award Amount: \$140,000 (over 3 years)
Date Submitted: 10/15/2017

Title: ***Classroom teachers Using Supercomputers Through Experiences in Research (CLUSTER)***
Sponsor: National Science Foundation
Role: Support and dissemination of workshop opportunities
PI: Conrad Tucker (School of Engineering Design Technology and Prof Programs)
Award Amount: \$599,468 (over 3 years)
Date Submitted: 10/10/2017

Title: ***Highlighting Agricultural Research Via Immersive Experiences For Secondary Teachers And Students (HARVEST)***
Sponsor: United States Department of Agriculture
Role: Support and dissemination of workshop opportunities
PI: Sairam Rudrabhatla
Award Amount: \$298,913 (over 3 years)
Date Submitted: 3/10/2017

Title: ***Chesapeake Bay***
Sponsor: United States Department of Agriculture
Role: Support and dissemination of workshop opportunities
PI: Tom Richard
Award Amount: \$15,000,000
Date Submitted: 9/22/2016

Title: ***Modeling Wicked Problems with FEW Solutions: A Multi-Scale Environmental and Economic Assessment of Nutrient Pollution in the Chesapeake Bay***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Eric Smithwick (Geography)
 Award Amount: \$2,975,191 (over 3 years; \$297,519 for education)
 Date Submitted: 3/22/2016

Title: ***RET in Engineering and Computer Science Site: Research in Energy and Environmental Sustainability in Teams of Researchers and Educators (RESTORE)***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Rachel Brennan (Environmental Engineering)
 Award Amount: \$599,343
 Date Submitted: 11/02/2015

Title: ***NNCI: The Pennsylvania State University Nanotechnology User Facility***
 Sponsor: National Science Foundation
 Role: Support and dissemination of workshop opportunities
 PI: Suman Datta (Electrical Engineering)
 Award Amount: \$4,319,069
 Date Submitted: 4/03/2015

Retired Funded Proposals

Title: ***Northeast Woody/Warm Season Biomass Consortium***
 Sponsor: United State Department of Agriculture
 Role: Support and dissemination of workshop opportunities
 PI: Tom Richard (Agriculture)
 Award Amount: \$10,00,000 (\$2,000,000 per year for 5 years)
 Date Submitted: 2012

PEER REVIEWED PRESENTATIONS & POSTERS

Peter, N., Roberts, D., **Smith, A.**, Chang, L., and Cloud, W. (June 2022). *Broaden Your Impact: Going from Ecosystem to Ecosphere*. National STEM Learning Ecosystems Convening, Bay City, Michigan.

Smith, A., and Irvin, T. (October 2020). *Addressing the Inequality of Broadband Access for Rural Pennsylvania Schools: A cross-sector partnership between PBS, Penn State University, and K-12 schools during the COVID-19 pandemic*. Engaged Scholarship Consortium. Virtual.

Peter, N., Roberts, D., **Smith, A.**, Black, W., Chang, L., and Konsur, A. (October 2020). *A Tale of 8 Ecosystems..and then some! Developing a State-Wide STEM Ecosystem*. National STEM Learning Ecosystems Convening. Virtual

Smith, A., and Crowl, M. (March 2020). *Building Successful Partnerships: Asset Mapping Utilizing 100Kin10 STEM Grand Challenges*. National STEM Learning Ecosystems Convening, San Antonio, TX.

- Smith, A.**, and Rice, J. (March 2020). *Building Successful Partnerships: Asset Mapping Utilizing 100Kin10 STEM Grand Challenges*. Pennsylvania Department of Education Data Summit, Hershey, PA.
- Smith, A.** (October 2019). *STEM Learning Ecosystems: A Platform for Engaged Scholarship for Higher Education Institutions*. Engaged Scholarship Consortium, Denver, CO.
- Hill, K.M., **Smith, A.**, Johnson, M., and Ward, A. (January 2018). *Using the MASTER model framework to support teachers in incorporating research practices in the secondary classroom*. Association of Science Teacher Educators, Baltimore, MD.
- Smith, A.** (December 2017). *How to bring research to education in STEM*. SAS Institute, Hershey, PA.
- Hill, K.M., Johnson, M., **Smith, A.**, and Ward, A. (August 2017). *Supporting teachers to translate research experiences into practices-based instruction*. European Science Education Research Association, Dublin, Ireland.
- Smith, A.** (June 2017). *Bridging Research and Education in STEM*. Philadelphia Higher Education Network for Neighborhood Development (PHENND) Conference, Philadelphia, PA.
- Smith, A.** (March 2017). *Bridging Research and Education in STEM: Industry research with K-12 Education*. ABC Create Conference, New Kensington, PA.
- Hill, K.M., Johnson, M., **Smith, A.**, and Ward, A. (April 2017). *Challenges of Teachers Developing and Implementing Practices-based Student Investigations*. National Association for Research in Science Teaching, San Antonio, TX.
- Smith, A.** and Baughman-Gray, K. (December 2016). *Penn State Center for Science and the Schools, CIU#10, BLAST IU 17 & Schools: Going Beyond Collaboration to Enhance STEM in the Classroom*. STEM Summit 2016, Hershey, PA.
- Smith, A.** and Gorski, I. (September 2015). *Enlighten, Engage, and Emerge (E3): A Scalable Model to Inform Early Undergraduates of Engaged Scholarship Opportunities*. Engaged Scholarship Symposium, University Park, PA.

PANEL DISCUSSIONS & CONFERENCE WORKSHOPS

- Lead Workshop “Pitsco Education & ENGINE of Central PA: A flourishing partnership approach”
STEM Ecosystem Convening, Bay City, Michigan, June 2022.
- Panelist “The Growth and Impact of STEM Ecosystems Across Pennsylvania”, PAIU Conference,
Seven Springs Resort, Somerset, PA, June 2022.
- Panelist “STEM Career Readiness Panel Discussion”, Career & Workforce Readiness Summit,
Partnership for Career Development, Harrisburg, PA, August 2021.
- Lead Presentation “STEM Learning Ecosystems: A Strategic Pathway for Strengthening Broader
Impacts”, Advancing Research Impact in Society (ARIS) Summit, May 2021.

Lead Workshop “Engaging young learners in STEM Ecosystem Opportunities.” Family Engagement Conference, Harrisburg, PA, March 2020 (Cancellation – COVID)

Lead Presentation “Engaging with Pennsylvania STEM Ecosystems.” Scouts of America Pennsylvania Councils, Indiana, PA, November 2019.

Lead Workshop “Professional Growth That Works For Teachers’ Schedules: How might we redesign professional growth opportunities that are not limited by the constraints of the school day?” 100kin10 Summit, March 2019.

Panelist for “College and Career Readiness”, Fall Leadership Conference Panel for Central PA Superintendents Leadership, State College, PA, October 2018.

Panelist for “STEM Career Readiness Panel Discussion”, SAS Institute Conference, Hershey, PA, December 2015.

Co-Lead Workshop “Understanding the Systems Nature of Research”, ASSET STEM Education Conference, Hershey, PA, March 2015.

TEACHER PROFESSIONAL DEVELOPMENT AND OUTREACH PROGRAMS

ENGINE of Central PA, STEM Learning Ecosystem

Central Pennsylvania, 2018-present

Role: Executive Director

Description: ENGINE of Central PA, Empowering Next Generation of Innovators and Entrepreneurs, is a collaborative network elevating and cultivating cross-sector partnerships. Our network builds a community of lifelong learners that promotes equitable access to meaningful transdisciplinary experiences. We strive to empower youth living and working in our region to be innovative problem-solvers, ready to succeed in careers of tomorrow.

STEM Collaborative Leadership Series

Pennsylvania State University, University Park PA, 2016-2017

Role: Lead - organizer and co-facilitator of professional activities

Description: To build districts’ capacity to integrate STEM into their classrooms through establishment of a STEM Representative, building a STEM committee and developing STEM pilot projects in their home districts.

CSATS Summer Research Experiences for STEM Teachers Program

Pennsylvania State University, University Park, PA 2016-2017

Role: Organizer and facilitator of industry and ecology RET experiences

Description: Program that actively involves K-12 science, technology, engineering, and math educators in research alongside university or industry scientists and engineers and curriculum development related to the research projects for implementation in the classroom. Redesigned and co-lead weekly professional development sessions with teachers to identify big ideas aligned with their teaching assignments and develop classroom research projects; reviewed work products prepared and submitted by teachers; provided follow-up support during the academic year.

Summer 2016 – nuclear engineering (Westinghouse), sealants (Callery), hyper-saturated aqueous solutions (Eckert Technologies Group, LLD)

Summer 2017 - nuclear engineering (Westinghouse), sealants (Callery), hyper-saturated aqueous solutions (Eckert Technologies Group, LLD), conservation biology (La Selva Biological Research Station, Costa Rica)

PROFESSIONAL AFFILIATIONS

- National STEM Learning Ecosystems
- 100kin10
- Association for Science Teacher Education (ASTE)
- Association for American University Women (AAUW)
- Graduate Women in STEM (GWIS)
- National Science Teachers Association (NSTA)
- National STEM Education Centers (NSEC)
- National STEM Coalition
- PA STEM Coalition

PROFESSIONAL SERVICE TO PROFESSION

Contributor to the Pennsylvania STEM Ecosystems (PSSE) Policy Memo on STEM Education presented to U.S. Department of Education

August 2021

Act 13 Stakeholder Advisory Council under Matthew Stem, Deputy Secretary for Elementary and Secondary Education, Commonwealth of Pennsylvania

Harrisburg, PA 2020-present

Career Ready PA Coalition Council under Pedro Rivera, Secretary of Education, Commonwealth of Pennsylvania

Harrisburg, PA 2020-present

100kin10 Representative

2017-Present

Co-leading the Rural Micro-Network

Served on two project teams:

-100kin10 Supporting STEM Ed in Rural Communities

-100kin10 PLCs for Rural STEM Teachers and University Scientists

PA STEM Ambassador

Harrisburg, PA 2018

PA STEM Coalition

Harrisburg, PA 2017-present

PROFESSIONAL SERVICE TO DEPARTMENT/UNIVERSITY

Serving on the Outreach Sustainability Council

Penn State University, University Park, PA, 2022-present

Serving on the Energy Outreach Forum

Penn State University, University Park, PA, 2022-present

**Serving as a College of Education representative for the Multicultural Engineering Programs
Director Search Committee for College of Engineering**
Penn State University, University Park, PA, April 2019

Serving WPSU “Finding Your Roots” Event for outreach to local school districts
State College, PA, April 2019

Graduate Women in STEM Organizer of VOICES Conference
Voices Conference, State College, PA, February 2017

**Serving as the College of Education faculty representative for the College of Education IT
Specialist Search Committee**
Penn State University, University Park, PA, April 2017

Student Awards Committee
Pennsylvania State University, University Park, PA, Spring 2016 & Spring 2017

Penn State Learning Innovative Team Forum (LIFT)
Pennsylvania State University, University Park, PA, 2016

Engaged Scholarship Council
Pennsylvania State University, University Park, PA 2014-present

COMMUNITY SERVICE

Penn State College Diabetes Network Advisor
Pennsylvania State University, 2017-present

Governor’s STEM Competition Judge
IU 10 & IU 17 Competitions, 2017

AAUW STEM Committee in Centre County
State College, PA 2017-present

IPATH (INOVA Partnering Actively Through Health) Advisor
Leesburg, VA 2010-2012

Lead of Tour of the Tropics, Costa Rica
Ashburn, VA, Summer 2009

**Founder of CAUSE CORP (Creating Awareness by Unifying students through Education and
Community Outreach Projects)**
Ashburn, VA, 2006-2010

AWARDS AND HONORS

2022 Penn State College of Education Graduates of the Last Decade (Gold) Women's Leadership Conference Keynote Speaker

2017 Academic Alumni Honor and Keynote Speaker for Franklin Regional School District

2008 Northrup Grumman Zero Gravity Flight Program Alumnus

2007 Tourette Syndrome Association Teacher of the Year

REFERENCES AVAILABLE UPON REQUEST
