Jennifer L. Albert

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PROFESSIONAL EXPERIENCE

2015-Present — The Citadel, Charleston, SC; Zucker Family School of Education
- 2021-current: Associate Professor & Director of the STEM Center of Excellence
- 2015-2021: Assistant Professor & Director of the STEM Center of Excellence

2022 — University of Canberra, Canberra, ACT, Australia; STEM Education Research Centre
- May-September 2022: Fulbright Scholar Researcher

2006-2015 — North Carolina State University, Raleigh, NC
- 2013-2015: Postdoctoral Researcher, Department of Computer Science
- 2010-2013: Research Associate/Project Manager, Department of STEM Education, STEM Teams Grant
- 2009-2010: Outreach Coordinator, The Science House
- 2006-2009: Graduate Research Assistant, College of Education

EDUCATION

2012 — North Carolina State University, Raleigh, NC
Doctor of Philosophy in Science Education
Dissertation Chairs: Dr. Margaret R. Blanchard and Dr. Eric N. Wiebe
Dissertation: *Using Student-Generated Animations about Water Boiling to Impact Student Understanding of the Particulate Nature of Matter*

2005 — Austin Peay State University, Clarksville, TN
Master of Arts in Curriculum and Instruction

2003 — Teacher Certification, Austin Peay State University, Clarksville, TN

2003 — North Carolina State University, Raleigh, NC
Bachelor of Science in Chemistry

HONORS AND SCHOLARSHIPS

2023	Phi Kappa Phi Inductee
2020-current	Fellow in the James Near Center for Climate Studies at The Citadel
2020	Faculty Fellow in Residence for the Center for Excellence and Innovation in Teaching and Distance Education at The Citadel
2018-current	Faculty Fellow in the Center for Excellence and Innovation in Teaching and Distance Education at The Citadel
2018	Honoree for South Carolina Faculty Award for Service Learning
2017	Gear of Excellence from Reforge Charleston
2016-current	Faculty Fellow in The Citadel's Center for Cyber, Intelligence, and Security Studies (CCISS) at The Citadel
2016	Faculty Fellow in Service Learning and Civic Engagement at The Citadel
2010	CED Doctoral Dissertation Support Grant
2008	Penick Foundation Scholarship

K-12 TEACHING EXPERIENCE

2004-2006 Rossview High School, Clarksville, TN

- Science Teacher - Chemistry & AP Chemistry

2003-2004 Northwest High School, Clarksville, TN

- Science Teacher - Life Science & Physical Science

HIGHER EDUCATION TEACHING EXPERIENCE

The Citadel - Course Evaluation Average range - 4.3-4.8 out of 5

EART 201 – Earth Science for Educators – Fall 2016, Sum 2017, Sum 2020, Sum 2021
EDUC 101 – Educational Foundations – Fall 2017
EDUC 401 – Methods in Secondary Teaching – Spring 2017, Spring 2018
EDUC 402 – Science Methods in Secondary Teaching – Spring 2018, Fall 2020, Fall 2022
EDUC 499/520 – Internship in Student Teaching – Spring 2016, Fall 2019, Spring 2021
EDUC 529 – Emerging Technology for School Administrators – Fall 2020, Spring 2022, Summer 2022
EDUC 543 – Teaching, Learning, and Assessing with Technology – Summer 2016, Summer 2017, Summer 2018, Spring 2019, Summer 2020, Summer 2021, Summer 2022
EDUC 544 – Project-Based Learning in STEM Education – Spring 2018, Fall 2019, Spring 2021, Fall 2022
EDUC 546 – Leadership and Critical Thinking in STEM Education – Fall 2017, Fall 2018, Spring 2020
EDUC 547 – Research in STEM Education – Fall 2016, Summer 2018, Spring 2019

EDUC 548 – Multidisciplinary Experimental Design and Implementation – Fall 2018
EDUC 549 – Applications of Data Methods – Spring 2017
EDUC 587A – Science of Food – Sum 2017, Sum 2018, Sum 2019, Sum 2020
EDUC 587B – Earth Science – Sum 2017, Sum 2018, Sum 2019, Sum 2020
EDUC 587C – Physical Computing for Educations – Fall 2019, Fall 2021
EDUC 587D – Makerspace Education – Spring 2020, Summer 2022
EDUC 587E – Robotics Education – Fall 2020
EDUC 587F – Sustainability Education – Sum 2020
EDUC 623 – Science Methods in Secondary Teaching – Fall 2020
EDUC 670 – Foundations of STEM I – Fall 2019, Fall 2020
EDUC 680 – Foundations of STEM II – Spring 2017, Spring 2018, Spring 2019, Spring 2020, Spring 2021
SCSS 305 – The Future of Sustainability – Fall 2021

North Carolina State University

EMS 203 Introduction to Teaching Science – Spring 2008 Teaching Assistant
EMS 375 Methods of Teaching Science I – Spring 2009 Teaching Assistant
EMS 476 Supervised 1 student teacher - Fall 2011 – 8th grade science
EMS 521 Advanced Methods I in Science Education; synchronous/online, Spring 2011 – Co-instructor
EMS 531 Introduction to Research in Science Education; synchronous/online, Spring 2012 – Co-instructor for half-semester
EMS 573 Technology Tools for Science Teaching; synchronous/online, Fall 2011 – Co-instructor/Fall 2012 – Lead instructor

SCHOLARSHIP

RESEARCH METRICS (2/13/24)

# of Citations (according to Google Scholar): 864
h-index (publications cited at least 9 times): 12
i10-index (publications cited at least 10 times): 16

CURRENT RESEARCH PROJECTS

- Broaden participation through integrating computational thinking in content-area lessons: How do teachers co-design CT-infused lessons for all students? Which supports do teachers need to implement CT-infused lessons? How does teachers' knowledge of and pedagogy supporting CT integration change over time? How does students' understanding of CT change? (funding from NSF RPP and recently completed NSF STEM+C)

- STEM teacher professional development: Which evidence-based strategies (e.g., teacher professional development, teacher collaborative time, co-design of lessons, community of practice) are most effective in the creation of highly-effective teacher leaders in rural districts? How do middle school mathematics teachers integrate instructional practices, designed to support students' mathematical literacy, into their teaching? (funding from NSF NOYCE and SC CHE Centers of Excellence grant)

GRANTS and GIFTS - $7.5M as PI + over $2M as co-PI

G25. **Albert, J. L.**, Jocius, R., Joshi, D., Jostwick, C., & Blanton, M. Unboxing CT for Elementary Classrooms , National Science Foundation, $2,550,527, June 2023 - May 2028.

G24. **Albert, J. L.** & Robinson, R. Track 3: MTF: Learning to Lead (L2L): Building STEM Teacher Leaders that Broaden Participation in High-Needs Schools, National Science Foundation, $1,479,016, Oct. 2022 - Sept. 2027.

G23. **Albert, J. L**. Robinson, R., & Kane, B., Center of Excellence for Mathematical Literacy, SC Commission on Higher Education, $434,040, 2022-2025.

G22. Banik, S., Verdicchio, M., Nance, C., Navarro, J., Mukherjee, A., & **Albert, J. L.** GenCyber Cybersecurity Student Camp Grant, National Intelligence Agency and National Science Foundation, $99,000, Summer 2023.

G21. Banik, S., Verdicchio, M., Nance, C., Navarro, J., Mukherjee, A., & **Albert, J. L.** GenCyber Cybersecurity Student Camp Grant, National Intelligence Agency and National Science Foundation, $99,000, Summer 2022.

G20. Ortlieb, E., Robinson, R., & **Albert, J. L**., Center of Excellence for Mathematical Inquiry, SC Commission on Higher Education, $104,750, 2020-2021.

G19. Banik, S., Verdicchio, M., Nance, C., Navarro, J., Mukherjee, A., & **Albert, J. L.** GenCyber Cybersecurity Student Camp Grant, National Intelligence Agency and National Science Foundation, $95,845, Summer 2020.

G18. Banik, S., Jensen, C., **Albert, J.,** Navarro, J., & Verdicchio, M. CyberCorps: Principled Leaders with Cybersecurity Expertise, NSF CyberCorp #1946553, $1,072,304 (expected to total $2,875,863), Jan. 1, 2020 – Dec. 31, 2024

G17. **Albert, J.**, Jocius, R., Joshi, D., & Kane, B. CSforAll: RPP: Making CT: Integrating Computational Thinking into Elementary Classrooms, NSF CSforALL:RPP #1923503, $298,501, Sept. 2019 – Aug. 2022.

G16. Banik, S., Navarro, J., Mukherjee, A., & **Albert, J. L.** GenCyber Cybersecurity Student Camp Grant, National Intelligence Agency and National Science Foundation, $62,000, Summer 2019.

G15. Banik, S., Navarro, J., Mukherjee, A., & **Albert, J. L.** GenCyber Cybersecurity Student Camp Grant, National Intelligence Agency and National Science Foundation, $63,367, Summer 2018.

G14. **Albert, J.** Google CS4HS Grant, $35,000. March 2018-2019.

G13. **Albert, J.** AP Institute Grant, $12,685. South Carolina Department of Education, March 2018 – June 2018.

G12. **Albert, J.**, Jocius, R., Joshi, D. & Robinson, R. Collaborative Research: Integrating computing in STEM: Designing, developing, and investigating a team-based professional development model for middle- and high-school teachers. NSF-STEM+C Award # 1742332, $2,438,000, Sept. 2017 – Aug. 2022.

G11. **Albert, J.**, & Jocius, R. Determining the Efficacy of Maker Activities by Navigating Discourse (DEMAND). NSF-EAGER Award # 1723661, $284,560, June 2017 – June 2019.

G10. **Albert, J.** AP Institute Grant, $23,912. South Carolina Department of Education, March 2017 – June 2017.

G9. **Albert, J.**, Robinson, R., & Jocius, R. Improving Teacher Quality Grant: Promoting Problem Solving & Sense Making: Engaging Teachers in the Mathematical Process. SC Commission of Higher Education. $172,257.50, January 2017-August 2018.

G8. Joshi, D., Robinson, R., & **Albert, J.** Centers of Excellence Grant: STEM Ambassadors. SC Commission on Higher Education. $112,500, Sept. 2017-2018.

G7. **Albert, J.** Regional Partnership with Code.org. $87,200, Sept. 2016 – Aug. 2019.

G6. Joshi, D., Robinson, R., & **Albert, J.** Centers of Excellence Grant: STEM Ambassadors. SC Commission on Higher Education. $112,500, Sept. 2016-2017.

G5. Banik, S., Rudolph, G., Joshi, D, & **Albert, J. L.** GenCyber Cybersecurity Teacher Grant, National Intelligence Agency and National Science Foundation, $99,038, Summer 2016.

G4. **Albert, J.** Google CS4HS Grant, $35,000. March 2016-2017.

G3. **Albert, J.** Gift of $100,000 for Citadel Sustainability Project, December 2016

G2. **Albert, J.** Gift of $10,000 for Citadel Sustainability Project from Alumni, February 2016.

G1. Gosha, K, Lewis, C & **Albert, J**. Broadening Participation Research Project: Exploring Computing Careers through a Virtual Career Fair Using Embodied Conversational Agents. NSF-HBCU-UP Award #1533627, $348,501, Sept 2015-2018.

Master's Thesis Committee

Kimberly Gray (Summer 2017)

Thesis: Impact of a summer camp exposing children to science, technology, engineering, arts, and mathematics

Refereed Journal Articles

**Designates cadet co-author

J21. Jocius, R., Joshi, D., Robinson, R., O'Byrne, W., **Albert, J.**, & Blanton, M. (accepted). Computational thinking infusion as transformative teaching: investigating content area teacher perspectives and practices. *Computer Science Education.*

J20. Jocius, R., **Albert, J.**, Joshi, D., Blanton, M., & O'Byrne, W. (2023). Creating sustainable computational thinking infusion: an analysis of teacher-led practitioner inquiry projects, *Journal of Technology and Teacher Education, 31*(4), 492-522.

J19. Jocius, R., Joswick, C., **Albert, J.**, Joshi, D., & Blanton, M. (2023). Towards pedagogical content knowledge learning trajectories: tracing elementary teachers' infusion of computational thinking, *Professional Development in Education*, DOI: 10.1080/19415257.2023.2228813

J18. Blanton, M., Jocius, R., **Albert, J.L.,** Joshi, D., & Andrews, A. (2023). Dragons, Squishy Circuits, and Computational Thinking: Integrating Scientific Literacies into Elementary Classrooms. *Language Arts*.

J17. Jocius, R., O'Byrne, W.I., **Albert, J.,** Joshi, D., Blanton, M., Robinson, R., Andrews, A., Barnes, T., & Catete, V. (2022). Building a Virtual Community of Practice: Teacher Learning for Computational Thinking Infusion. *TechTrends. 10.1007/s11528-022-00729-6*

J16. Wiegand, R.P., Bucci, A., Kumar, A., **Albert, J.L**., & Gaspar, A. (2022). Identifying informatively easy and informatively hard concepts. *ACM Transactions on Computing Education (TOCE), 22*(1), 1-28.

J15. Jocius, R., O'Byrne, W.I., **Albert, J.,** Robinson, R., Joshi, D., Andrews, A., & Blanton, M. (2021). Leveraging Virtual Professional Development to Build Computational Thinking Literacies in English Language Arts Classrooms. *CITE Journal (English), 21*(4). (acceptance rate: 29%).

J14. Jocius, R., O'Byrne, **Albert, J.**, Joshi, D., Robinson, R., & Andrews, A. (2021). Infusing Computational Thinking into STEM Teaching: From Professional Development to Classroom Practice. *Journal of Educational Technology & Society, 24*(4).

J13. Jocius, R., **Albert, J.L.,** Andrews, A., & Blanton, M. (2020). A study in contradictions: Exploring standards-based making in elementary classrooms. *The Journal of Educational Research*, *113*(5), 396-403. (2019 impact factor: 1.400).

J12. Bari, A. G., Gaspar, A., Wiegand, R. P., **Albert, J. L**., Bucci, A., & Kumar, A. N. (2019). EvoParsons: design, implementation and preliminary evaluation of evolutionary Parsons puzzle. *Genetic Programming and Evolvable Machines*, 20(2), 213-244. (2019 impact factor: 1.781).

J11. **Albert, J.L.** & Martinez, D.** (February/March 2019). Cadets create indoor farm inside shipping containers. *Mother Earth News.*

J10. Imam, S., **Albert, J.L.**, Jocius, R. (January 2019). How Do You Stay Fit in Space?: Exploring Exercise Through Project-Based Learning. *Science Scope.* "Science Scope is an award-winning, peer-reviewed, practitioners' journal for grade 6–8 teachers, university

faculty responsible for teacher preparation, and state and district science supervisors and leaders."

J9. Blanchard, M. R., Kier, M. W., Stevens, V. & **Albert, J. L.** (2017). STEM Bingo: A STEM Careers Game. *Science Scope.*

J8. Addy, T. M., Simmons, P. E., Gardner, G. E. & **Albert, J. L.** (2015). A New "Class" of Undergraduate Professors: Examining Teaching Beliefs and Practices of Science Faculty with Education Specialties. *Journal of College Science Teaching, 44*(3).

J7. **Albert, J. L**., Blanchard, M. R., Kier, M. W., Carrier, S. J., & Gardner, G. E. (2014). Supporting teachers' technology integration: A descriptive analysis of social and teaching presence in technical support sessions. *Journal of Technology and Teacher Education, 22*(2), 137-165.#1 Journal Ranking in "Teacher Education and Technology" (H Index)

J6. Kier, M. W., Blanchard, M. R., Osborne, J. W., & **Albert, J. L**. (2014). The Development of the STEM career interest survey (STEM-CIS). *Research in Science Education, 44*(3), 461-481. (5-year impact factor: 2.116, 201 citations).

J5. **Albert, J. L.**, Blanchard, M. R., Keene, K., & Kinton, J. (2014). The Great Iced Tea Debate. *Science Scope, 37*(8).

J4. Kier, M. W., Blanchard, M. R., & **Albert, J. L.** (2014). Connecting students to STEM careers. *Science Scope, 37*(6).

J3. Blanchard, M. R. & **Albert, J. L**. (2011). Tried and True: No Matter the Weather, We'll Measure Together. *Science Scope, 34(9),* 66-70. [Accessed by 60,000 NSTA members]

J2. **Albert, J. L.,** Blanchard, M. R., Grable, L. L., & Reed, R. (2010). It's ELEMENTARY Watson! A crime scene investigation with a technological twist. *Science Scope, 34(4),* 16-22. [Accessed by 60,000 NSTA members]

J1. Blanchard, M. R., **Sharp, J. L.**, & Grable, L. L. (2009*).* Rev your engines! Linking physical science and math with car labs. *The Science Teacher, 76*(2), 35-40.

Refereed Book Chapter

BC4. Kane, B. D., Robinson, R., Blanton, M. & **Albert, J**. (in press). Letting the mathematics lead in mathematical literacy: A conceptual framework for how literacy is implicated in mathematics. In Scott, C., Miller, D. & Albert, M. Eds. Cultivating Literate Citizenry Through Interdisciplinary Instruction. IGI Global Publishing.

BC3. Jocius, R., Blanton, M., **Albert, J.,** Joshi, D., & Andrews, A. R. (2021). Computational Thinking and Making in Virtual Elementary Classrooms. In *Handbook of Research on Transforming Teachers' Online Pedagogical Reasoning for Engaging K-12 Students in Virtual Learning* (pp. 359-378). IGI Global.

BC2. **Albert, J.L.,** Jocius, R., Barnes, T., Joshi, D., Catete, V., Robinson, R., O'Byrne, W., & Andrews, A. (2020). Research-based Design Recommendations for Transitioning a Computational Thinking Integration Summer Professional Development to a Virtual Format. In Ferdig, R.E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R. & Mouza, C. (Eds.). *Teaching, Technology, and Teacher Education during the COVID-19*

Pandemic: Stories from the Field. Association for the Advancement of Computing in Education (AACE). Retrieved June 15, 2020 from https://www.learntechlib.org/p/216903/.

BC1. **Albert, J. L.,** Blanchard, M. R., & Wiebe, E. N. (2015). How high school students construct or create animations about water boiling. In K.D. Finson & J. Pederson (Eds.), *Application of Visual Data in K-16 Science Classrooms*.

Refereed Conference Proceedings

CP12. Jocius, R., Joshi, D., **Albert, J.,** Barnes, T., Robinson, R., Cateté, V., ... & Andrews, A. (2021, March). The Virtual Pivot: Transitioning Computational Thinking PD for Middle and High School Content Area Teachers. In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education* (pp. 1198-1204).

CP11. Jocius, R., Joshi, D., Dong, Y., Catete, V., Robinson, R., Barnes, T., **Albert, J**. & Lytle, N. (2020). Code, connect, create: The 3C model for integrating computational thinking into content area classrooms. *Proceedings of the ACM Technical Symposium on Computer Science Education (SIGCSE '20).* ACM, New York, NY, USA.

CP10. Jocius, R**., Albert, J**., Andrews, A. & Blanton, M. (2020). Exploring teachers' approaches to standards-based making in elementary classrooms. In G. Marks & D. Schmidt-Crawford (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1115-1119). Association for the Advancement of Computing in Education (AACE).

CP9. Jocius, R., **Albert, J.**, Andrews, A., Joshi, D. & Robinson, R. (2020). Infusing Computational Thinking into Disciplinary Teaching: From Professional Development to Classroom Practice. In D. Schmidt-Crawford (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 1751-1755).

CP8. Jocius, R., **Albert, J**., & Andrews, A. (2019). Scaffolding pedagogical change: Professional development to support elementary teachers in implementing mobile maker kits. In *Proceedings of the Society for Information Technology & Teacher Education International Conference 2019* (pp. 1569-1577). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

CP7. Jocius, R., **Albert, J.**, Andrews, A., Catete, V., Dong, Y., Joshi, D., Robinson, R., Barnes, T., & Lytle, N. (2019). Infusing computing through professional development: Shifts in content area teachers' understandings of computational thinking integration. In *Proceedings of the Society for Information Technology & Teacher Education International Conference 2019* (pp. 302-305). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

CP6. Dong, Y., Cateté, V., Jocius, R., Lytle, N., Barnes, T. **Albert, J.**, Joshi, D., Robinson, R., & Andrews, A. (2019). PRADA: A practical model for integrating computational thinking in K-12 education. In *Proceedings of the 50th ACM Technical Symposium on Computer Science Education (SIGCSE '19).* ACM, New York, NY, USA, 906–912.

CP5. Dong, Y., Cateté, V., Lytle, N., Isvik, A., Barnes, T., Jocius, R., **Albert, J.**, Joshi, D., Robinson, R., & Andrews, A. (2019). Infusing computing: Analyzing teacher programming products in K-12 computational thinking professional development. In *Proceedings of the 2019 ACM Conference on Innovation and Technology in Computer Science Education*. ACM, New York, NY, USA, 278-284.

CP4. **Albert, J. L**., Jones, K. R., Joshi, D., & Jocius, R. (2016). What do Activity Trackers and a Tablet Have in Common? STEM Ambassador Lesson Plans, Tips, and Tricks. *Proceedings of the Society for Information Technology & Teacher Education International Conference 2016.*

CP3. **Albert, J. L**., Wiebe, E. N., & Blanchard, M. R. (2012). Do student-generated digital animations enhance student understanding of water boiling? A study comparing student learning in a Sci Vis course. *Proceedings of the Association for Science Teacher Education 2012*. Retrieved 4-01-12 from http://theaste.org/publications/proceedings/2012proceedings.pl

CP2. Blanchard, M. R., Grable, L. L. & **Sharp, J. L.** (2009). Scaffolding Technology Integration of Middle School Science and Mathematics: Comparing the Results of Two Models of Teacher Professional Development. In I. Gibson et al. (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2009* (pp. 4015-4019). Chesapeake, VA: AACE.

CP1. Blanchard, M. R., **Sharp, J. L.,** & Grable, L. L. (2009). Videoconferencing versus Face-to-Face: Comparing the satisfaction of rural, middle school teachers with two different follow-up methods to teacher professional development. *Proceedings of the Association for Science Teacher Education 2009.* Retrieved 2-24-10 from http://theaste.org/cgi-bin/2009conference/2009proceedings.pl.

Reports

R1. **Albert, J. L.** (2018). South Carolina State Digital Learning Plan. *SC Department of Administration.*

Refereed Conference Paper/Poster Presentations

P66. Kane, B. D., Robinson, R., Blanton, M. & **Albert, J**. (2024, April). Letting the mathematics lead: A framework for understanding how literacy is implicated in mathematics. Paper presented at the annual conference of the American Educational Research Association: Philadelphia, PA.

P65. Jocius, R., Joshi, D., Blanton, M. & **Albert, J**. (2024, April). Exploring the Messy Middle: Longitudinal Case Studies of Teacher Learning About Computational Thinking Infusion. Paper presented at the annual conference of the American Educational Research Association: Philadelphia, PA.

P64. **Albert, J**., Joswick, C., Joshi, D., Jocius, R., Blanton, M., & Petrulis, R. (2024, March). Elementary Teachers Engaging with Learning Trajectories to Create Professional Learning Goals around Computer Science Integration. Poster presented at the annual

conference of the ACM Special Interest Group for Computer Science Education (SIGCSE): Portland, OR.

P63. Jocius, R., Blanton, M., O'Byrne, W., **Albert, J.,** & Joshi, D. (2023, December). Centering Teacher Autonomy: An Analysis of Practitioner Inquiry Projects for Computational Thinking Infusion. Paper presented at the annual conference of the Literacy Research Association Conference, Atlanta, GA.

P62. Blanton, M. Jocius, R., **Albert, J**., & Joshi, D (2023, December). Teaching computational thinking through the humanities and humanistic social sciences. Paper presented at the annual conference of the Literacy Research Association Conference, Atlanta, GA.

P61. Jocius, R., **Albert, J**., O'Byrne, W., Joshi, D., & Blanton, M. (2023, April). Computational Thinking Across the Content Areas: Examining Teachers' Perspectives and Practices. Paper presented at the annual conference of the American Educational Research Association: Chicago, IL.

P60. Joshi, D., Jocius, R., Blanton, M., **Albert, J**., & O'Byrne, W. (2023, March). Project Sustainability through Teacher Autonomy in CT Infusion. Paper presented at the annual conference of the ACM Special Interest Group for Computer Science Education (SIGCSE): Toronto, Canada.

P59. Jocius, R., **Albert, J**., Blanton, M., Joshi, D, & O'Byrne, W. (2023, March). Content Area Teachers' Approaches to Computational Thinking Infusion. Paper presented at the annual conference of the Society for Information Technology and Teacher Education Conference, New Orleans, LA.

P58. Jocius, R., Blanton, M., **Albert, J.,** O'Byrne, W., & Joshi, D. (2022, December). Unpacking Computational Thinking Literacies: Curricular Materials, Dispositions, and Teacher Learning. Paper to be presented at the Literacy Research Association Conference, Phoenix, AZ.

P57. Jocius, R., **Albert, J.,** O'Byrne, W., Blanton, M., Joshi, D., Robinson, R., & Andrews, A. (2022, April). Teacher learning in the virtual classroom. Paper presented at the American Educational Research Association Conference, San Diego, CA.

P56. Blanton, M., Jocius, R., **Albert, J**., Andrews, A., & Joshi, D. (2022, April). Leveraging virtual professional development to support elementary teachers' understandings of computational thinking. Poster presented at the American Educational Research Association Conference, San Diego, CA.

P55. Jocius, J., Blanton, M., **Albert, J.,** Andrews, A., & Joshi, D. (2021, December). Sandcastles, dragons, and algorithms: using read-alouds to develop computational thinking skills. Paper presented at the Literacy Research Association Conference, Atlanta, GA.

P54. **Albert, J.**, Joshi, D., & Robinson, R. (2021, December). Towards a grounded theory of disciplinary computational thinking. Paper presented at the Literacy Research Association Conference, Atlanta, GA.

P53. Jocius, R., Joshi, D., **Albert, J.,** Barnes, T., Robinson, R., Catete, V., Dong, Y., Blanton, M., O'Byrne, W.I., & Andrews, A. (2021, March). The Virtual Pivot: Transitioning Computational Thinking PD for Middle and High School Content Area Teachers. Paper to be presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Orlando, FL.

P52. Jocius, R., **Albert, J.,** Andrews, A., & Blanton, M. (2020, April). Exploring Teachers' Approaches to Standards-Based Making in Elementary Classrooms. In Society for Information Technology & Teacher Education International Conference (pp. 1314-1318). Association for the Advancement of Computing in Education (AACE).

P51. Jocius, R., Joshi, D., Dong, Y., Catete, V., Robinson, R., Barnes, T., **Albert, J**. & Lytle, N. (2020, March). Code, connect, create: The 3C model for integrating computational thinking into content area classrooms. Paper presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Portland, OR.

P50. Jocius, R**., Albert, J**., Andrews, A. & Blanton, M. (2020). Exploring teachers' approaches to standards-based making in elementary classrooms. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International Conference.

P49. Jocius, R., **Albert, J.**, Andrews, A., Joshi, D. & Robinson, R. (2020). Infusing Computational Thinking into Disciplinary Teaching: From Professional Development to Classroom Practice. Paper presented at the annual meeting of the Society for Information Technology & Teacher Education International Conference.

P48. Dong, Y., Catete, V., Jocius, R., Lytle, N., Barnes, T., **Albert, J.,** Joshi, D., Robinson, R., & Andrews, A. (2019, July). Infusing computing: Analyzing teacher programming products in K-12 computational thinking professional development. Paper presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Aberdeen, UK.

P47. Jocius, R., **Albert, J.L**., & Andrews, A. (2019, April). Navigating standards-based making practices in elementary classrooms. Paper presented at the American Educational Research Association Conference, Toronto, CA.

P46. Dong, Y., Catete, V., Jocius, R., Lytle, N., Barnes, T., **Albert, J.,** Joshi, D., Robinson, R., & Andrews, A. (2019, March). PRADA: A practical model for integrating computational thinking in K-12 education. Paper presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Minneapolis, MN.

P45. Jocius, R., Andrews, A., & **Albert, J. L**. (2019, March). Scaffolding Pedagogical Change: Professional Development to Support Elementary Teachers in Implementing Mobile Maker Kit. Paper presented at the Society for Information Technology & Teacher Education, Las Vegas, NV.

P44. Koester, M., **Albert, J.L**., & Van Sickle, M. (2019, January). Not a Crapshoot: Winning Strategies for Collaborative Science Teacher Education, Research, and Practice in

"Failing Schools". Paper presented at the Association for Science Teacher Education Conference, Savannah, GA.

P43. Jocius, R., **Albert, J. L.**, Andrews, A. (2018, November). Taking making to the classroom: exploring standards-based maker kits. Symposium presented at the Literacy Research Association Conference, Indian Wells, CA.

P42. Miller, M.**, Ganezer, J**., Cudd, R. M.**, Gustafson, D., & **Albert, J. L**. (2018, March). *Comparing nutrients and quality of aeroponically grown lettuce versus lettuce purchased from a grocery store.* Paper presented at the 79th Annual Meeting of Association of Southeastern Biologists, Myrtle Beach, SC.

P41. **Albert, J.L.**, Jocius, R., Robinson, R., & Joshi, D. (2018, March). *Lesson learned from PD on Problem-Solving and Sense-Making*. Paper presented at the Interdisciplinary STEM Teaching & Learning Conference, Savannah, GA.

P40. Koester, M., Van Sickle, M., & **Albert, J.** (2018, January). *Making a case for STEAM: It's not just an educational fad. Paper presented at the annual meeting of the* Association for Science Teacher Education Conference, Baltimore, MD.

P39. Gaspar, A, Golam, A. T. M., Wiegand, R. P., Bucci, A., Kumar, A., & **Albert, J. L**. (2017, May). *Evolutionary Practice Problems Generation: More Design Guidelines.* Paper presented at the international annual meeting of The Florida Artificial Intelligence Research Society, Key Largo, FL.

P38. **Albert, J. L**. (2017, January). *Impact of a unique STEM competition on students and teachers. Paper presented at the annual meeting of the Association for Science Teacher Education Conference, Des Moines, IA.*

P37. Gaspar, A., Golam, A. T. M., Kumar, A, Bucci, A., Wiegand, R.P., & **Albert, J.** (2016, November). *Evolutionary Practice Problems Generation: Design Guidelines*. Paper presented at 28th International Conference on Tools with Artificial Intelligence (ICTAI 2016).

P36. Bucci, A., Wiegand, R. P., Kumar, A., **Albert, J. L**., & Gaspar, A. (2016, May). *Dimension extraction analysis of student performance on problems.* Paper presented at the international annual meeting of The Florida Artificial Intelligence Research Society, Key Largo, FL.

P35. Price, T. W., Catete, V., **Albert, J. L**., & Barnes, T. M. (2016, March). *Lessons Learned from "BJC" CS Principles Professional Development*. Paper presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Memphis, TN.

P34. Wiegand, R. P., Kumar, A., Bucci, A., **Albert, J. L**., & Gaspar, A. (2016, March). *A data-driven analysis of informatively hard concepts in introductory programming.* Paper presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Memphis, TN.

P33. **Albert, J. L**. (2016, January). *Adding computational thinking to your science lesson: what should it look like? Paper presented at the annual meeting of the Association for Science Teacher Education Conference, Reno, Nevada.*

P32. Price, T. W., Catete, V., **Albert, J. L**., & Barnes, T. M. (2015, August). *Determining the impact of teacher professional development on perceived ability to teach a computer science principles course*. Paper presented at the annual meeting of the International Computing Education Research Workshop, Omaha, Nebraska.

P31. Price, T. W., **Albert, J**., Catete, V., & Barnes, T. M. (2015, July). *BJC in action: Comparison of student perceptions of a computer science principles course*. Paper presented at the Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT 2015).

P30. Brown, R., Lynch, C. F., Eagle, M., **Albert, J. L**., Barnes, T. M., Baker, R., Bergner, Y., & McNamara, D. (2015, June). *Good communities and bad communities: Does membership affect performance*? Poster presented at the Educational Data Mining Conference, Madrid, Spain.

P29. Brown, R., Lynch, C. F., Wang, Y., Eagle, M., **Albert, J. L**., Barnes, T. M., Baker, R., Bergner, Y., & McNamara, D. (2015, June). *Communities of performance and communities of preference*. Paper presented at the Graph Analytics Workshop at the Educational Data Mining Conference, Madrid, Spain.

P28. **Albert, J. L.** (2015, April). *Adding computational thinking to your science lesson: what could it look like?* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Chicago, IL.

P27. **Albert, J. L.**, Peddycord, B. W., & Barnes, T. M. (2015, March). *Evaluating Scratch programs to assess computational thinking in a science lesson.* Poster presented at the annual meeting of the ACM Special Interest Group on Computer Science Education, Kansas City, MO.

P26. **Albert, J. L.,** Blanchard, M. R., Kier, M. W., Carrier, S. J., & Gardner, G. E. (2014, January). *Social and teaching presence in technical support sessions: A descriptive analysis*. Paper presented at the annual meeting of the Association for Science Teacher Education, San Antonio, TX.

P25. Alsbury, T. L., Overstreet, N. A., Blanchard, M. R., & **Albert, J. L.**. (2013, April). *Using a District-wide Strategic Teaming Model to assist innovation and reform in impoverished districts: Innovation Leaders Academy.* Paper presented at the annual meeting of the American Educational Research Association in San Francisco, CA.

P24. Kier, M. W., Blanchard, M. R., Osborne, J. W., & **Albert, J. L**., (2013, April). *The Development of the STEM Career Interest Surveys (STEM-CIS).* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico.

P23. **Albert, J. L.,** Blanchard, M. R., & Wiebe, E. N. (2013, April). *Using student-generated animations to assess student understanding of the particulate nature of matter.* Paper

presented at the annual meeting of the National Association for Research in Science Teaching, Rio Grande, Puerto Rico.

P22. **Albert, J. L.**, Banks, A. J., Banks, J., & Banks, C. (2013, January). *Clickers versus cell phones: A comparison of student response systems and their effect on student achievement in a large lecture chemistry course*. Paper presented at the annual meeting of the Association for Science Teacher Education, Charleston, SC.

P21. Kier, M.W., Blanchard, M. R., Osborne, J.W., & **Albert, J. L.**, (2013, January). *The Development of the STEM Career Interest Surveys (STEM-CIS).* Paper presented at the annual meeting of the Association for Science Teacher Education, Charleston, SC.

P.20 Alsbury, T. L., Overstreet, N. A., Blanchard, M. R., Osborne, J. W., Williams, B., **Albert, J. L.,** Kier, M. W. & Reed, R. (2012, November). *Innovation Leaders Academy: Sustaining innovation in high need districts.* Paper presented at the annual convention of the University Council for Educational Administration, Denver, CO.

P19. **Albert, J. L.** & Blanchard, M. R. (2012, September). *Student-Generated Digital Animations as a Form of Assessment.* Paper presented at the annual meeting of the Mid-Atlantic Association for Teacher Education, Pembroke, VA.

P18. **Albert, J. L**., Blanchard, M. R., & Wiebe, E. N. (2012, March). *Exploring student-created animations to show level of understanding on nature of matter learning progression.* Poster presented at the annual international meeting of the National Association for Research in Science Teaching, Indianapolis, IN.

P17. Blanchard, M. R., Osborne, J. W., & **Albert, J. L**. (2012, March). *Is it Possible to Explicitly Stimulate Pedagogical Discontentment in Science Teachers through a Graduate Course?* Paper presented at the annual international meeting of the National Association for Research in Science Teaching, Indianapolis, IN.

P16. **Albert, J. L.,** & Banks, A. J. (2012, February). *A comparison of student response systems and their effect on student achievement in a large lecture chemistry course.* Paper presented at the annual meeting of the Eastern Educational Research Association, Hilton Head, SC.

P15. Blanchard, M. R., Osborne, J. W., & **Albert, J. L**. (2012, February). *Is it possible to explicitly stimulate pedagogical discontentment in science teachers through a graduate course?* Paper presented at the annual meeting of the Eastern Educational Research Association, Hilton Head, SC.

P14. **Albert, J. L.,** Wiebe, E. N., & Blanchard, M. R. (2012, January). *Do student-generated digital animations enhance student understanding of water boiling? A study comparing student learning in a Sci Vis course*. Paper presented at the annual meeting of the Association of Science Teacher Educators, Clearwater, Florida.

P13. **Albert, J. L.,** Wiebe, E. N., & Blanchard, M. R. (2011, September). *Student-generated digital animations: A study comparing student learning in a Sci Vis course*. Poster presented at the annual meeting of the Mid-Atlantic Association of Science Teacher Educators, Carter Caves, Kentucky.

P12. Blanchard, M. R., **Albert, J. L.,** & Osborne, J. W. (2011, September). *Exploring the Relationship of Pedagogical Discontentment to Teachers' Changes in Practices.* Paper presented at the international biannual meeting of the European Science Education Research Association, Lyon, France.

P11. Blanchard, M. R., Osborne, J. W., & **Albert, J. L.** (2011, April). *Are There Benefits to Pedagogical Discontentment?: A Two-Year Study Exploring its Link to Rural Science & Mathematics Teachers' Changes in Practices.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

P10. Addy, T. M., Simmons, P. E., Gardner, G. E., & **Albert, J. L.** (2011, April). *Epistemological beliefs & teaching practices of science faculty with education specialties.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Orlando, FL.

P9. **Albert, J. L.** & Wiebe, E. N. (2011, March). *Taking drawing digital: Using student-generated drawings to help students learn about molecules.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Orlando, FL.

P8. Blanchard, M. R., Osborne, J. W., & **Albert, J. L.** (2011, March). *Results of a two-year study: Exploring the relationship of teachers' pedagogical discontentment to changes in practices for 28 rural science and mathematics teachers.* Paper presented at the annual meeting of the National Association for Research in Science Teaching, Orlando, FL.

P7. Banks, A. J. & **Albert, J. L.** (2010, August). *Clickers in a non-science majors course.* Paper presented at the 21st Biennial Conference on Chemical Education, Denton, TX.

P6. Blanchard, M. R., Osborne, J. W., & **Sharp, J. L.** (2010, March). *Investigating the role of pedagogical discontentment in rural science and mathematics teachers' changes in practice: An exploration of 23 rural science and mathematics teachers following technology-infused teacher professional development.* Paper presented at the annual national meeting of the National Association for Research in Science Teaching, Philadelphia, PA.

P5. Blanchard, M. R., **Sharp, J. L.,** and Grable, L. L. (2009). *Scaffolding technology integration of middle school science and mathematics: comparing the results of two models of teacher professional development.* Paper presented at the annual international meeting of the Society for Information Technology and Teacher Education, Charleston, SC.

P4. Blanchard, M. R., **Sharp, J. L.**, and Grable, L. L. (2009, January). *Videoconferencing versus face-to-Face: Comparing the satisfaction of rural, middle school teachers with two different follow-up methods to teacher professional development.* Paper presented at the annual international meeting of the Association for Science Teacher Educators, Hartford, CT.

P3. Blanchard, M. R. & **Sharp, J. L**. (2008*). Comparing Two Methods of Technical Support for Teachers: Videoconferencing versus Face-to-Face*. Paper presented at the annual meeting of School Science and Mathematics, Durham, NC.

P2. Blanchard, M. R., **Sharp, J. L.**, & Grable, L. L. (2008). *Is videoconferencing a feasible option for teacher technical support? A mixed-methods pilot study with 29 rural, middle school science and mathematics teachers.* Paper presented at the annual meeting of the Mid-Atlantic Association for Science Teacher Educators, Lake Lure, NC.

P1. **Sharp, J. L.** & Banks, A. J. (2008). *Click Away: Does feedback from the use of clickers increase student achievement on final assessments in a university chemistry course?* Paper presented at the annual meeting of the Mid-Atlantic Association for Science Teacher Educators, Lake Lure, NC.

Conference Workshops

W2. **Albert, J. L**., Jones, K. R., Joshi, D., & Jocius, R. (2016). What do Activity Trackers and a Tablet Have in Common? STEM Ambassador Lesson Plans, Tips, and Tricks. Roundtable to be presented at the Society for Information Technology and Teacher Education Conference 2016 to be held in Savannah, GA, United States, March 21-26, 2016.

W1. Lynch, C. F., Barnes, T. M., **Albert, J. L.** (2015, June). Graph Analytics. Workshop presented at the international meeting of Educational Data Mining, Madrid, Spain.

Conference Presentations

Koester, M., Bell, E.V., **Albert, J. L**., Bramblett, J. (2018, September). Step up, get ready, respond! Taking flood resilience to school. Session presented at the Carolinas Climate Resilience Conference, Greenville, SC.

Rothell, N**., & **Albert, J. L.** (2017, November). SCESTA Share-A-Thon. Presentation. Session presented at the South Carolina Science Council Conference, Columbia, SC.

Koester, M., Van Sickle, M, Moore, R., & **Albert, J. L.** (2017, November). STEAM Presentation. Session presented at the South Carolina Science Council Conference, Columbia, SC.

Koester, M., Van Sickle, M, Moore, R., & **Albert, J. L.** (2017, November). STEAM Panel. Session presented at the South Carolina Science Education Leadership Association Meeting, Columbia, SC.

Albert, J. L., Reed, R., Blanchard, M. R., Ruffin, W, & Aguilar, C. (2012, November). Take Virtual Field Trips and Explore Science Labs! Workshop presented at the annual meeting of the North Carolina Science Teachers Association, Winston-Salem, NC.

Blanchard, M. R., Alsbury, T. L., **Albert, J. L**., & Kier, M. W. (2012, September). *Preliminary Results of using a Strategic Teaming Model for Systemic District Reform.* Paper presented at the annual meeting of the Mid-Atlantic Association for Teacher Education, Pembroke, VA.

Blanchard, M. R., **Albert, J. L**., & Kier, M. W. (2012, April). *Flip for STEM Careers.* Presentation at the annual meeting of the National Science Teacher Association, Indianapolis, IN.

Blanchard, M. R., Kinton, J. H., Emig, B. R., Stevens, V. C., Childers, G., **Albert, J. L**., & Kier, M. W. (2012, April). *iTouch a STEM Career.* Presentation at the annual meeting of the National Science Teacher Association, Indianapolis, IN.

Blanchard, M. R. & **Albert, J. L**. (2012, February). *The STEM Career Interest Survey.* Presentation at the annual ITEST Summit, Washington, D.C.

Kier, M. W., Blanchard, M. R., **Albert, J. L**., & Stevens, V. C. (2011, November). *iTouch a STEM Career.* Presentation at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Albert, J. L. (2010, November). *The science house presents: Flipping for science.* Session presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Barrier, R. & **Albert, J. L.** (2010, November). *The science house presents: New database of safety sense rules and regulations.* Session presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Blanchard, M. R., **Albert, J. L.,** & Wagstaff, I. R. (2010, November). *No matter the weather, we'll measure together!* Session presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Albert, J. L. & Blanchard, M. R. (2010, March). *Connecting the dots: Using Elluminate and video-conferencing to stay connected to rural teachers.* Session presented at the annual national meeting of the National Science Teacher Association Meeting, Philadelphia, PA.

Sharp, J. L. (2009, November). *The science house presents: get a clue!* Session presented at the annual meeting of the North Carolina Science Teachers Association, Greensboro, NC.

Sharp, J. L., & Blanchard, M. R. (2009, March). *Rev your Engines: a Low Budget, High-Tech Middle School Automotive Lab.* Session presented at the annual national meeting of the National Science Teacher Association Meeting, New Orleans, LA.

Blanchard, M. R. , Grable, L. L., & **Sharp, J. L.** (2008). *Success stories: How we used probeware to explore real-life problems.* Session presented at the annual regional meeting of the National Science Teacher Association Meeting, Charlotte, NC.

Curriculum Projects

Blanton, M., Jocius, R., Joshi, D., & **Albert, J. L.,** (2020-2023). Making CT, The Citadel, https://www.makingct.com/

Blanton, M., Andrews, A., Jocius, R., & **Albert, J. L.,** (2017-2020). Mobile Maker Kits, The Citadel, http://www.mobilemakerkits.com/

Barnes, T., **Albert, J. L.,** Jocius, R., Joshi, D., Robinson, R., Catete, V., & Andrews, A. (2017-2022). Infusing Computing in STEM, The Citadel and NC State University, https://www.infusingcomputing.com/

Barnes, T., **Albert, J. L.**, Rindos, I., Peddycord, B. (2013 – 2015). The Beauty and Joy of Computing, NC State University, http://bjc-nc.github.io/bjc-course/curriculum/

Albert, J. L., Blanchard, M. R., & Kier, M. W., Stevens, V. C., Kinton, J. H. (2010-2013). STEM Career Awareness, NC State University. http://stemcareerawareness.wikispaces.com.

Albert, J. L., Blanchard, M. R., & Grable, L. L. (2006-2010). 21CTL and SMART for Teachers Materials, NC State University, The Friday Institute. http://stem.fi.ncsu.edu

EXTENSION AND OUTREACH

2023	CSPDWeek, 5 days, 220 teachers, The Citadel
2023	CML, 4 days, 29 teachers, The Citadel-virtual
2022	CSPDWeek, 5 days, 360 teachers, The Citadel-virtual
2022	CML, 4 days, 29 teachers, The Citadel-virtual
2021	CSPDWeek, 5 days, 300 teachers, The Citadel-virtual
2021	STEM+C PD, 4 days, 110 teachers, The Citadel-virtual
2020	CSPDWeek, 5 days, 200 teachers, The Citadel-virtual
2020	STEM+C PD, 4 days, 180 teachers, The Citadel-virtual
2019	*STEAM Camp*, 2 weeks, 60 students, The Citadel
2019	STEM+C PD, 4 days, 180 teachers, The Citadel
2018	*STEAM Camp*, 3 weeks, 100 students, The Citadel
2017	Minnie Hughes STEAM Camp, 2 weeks, 20 students, The Citadel
2018	STEM+C PD, 5 days, 118 teachers, The Citadel
2018	ITQ Teacher PD, 5 days, 20 teachers, The Citadel
2018	STEM Ambassadors PD, 5 days, 24 teachers, The Citadel
2017	ITQ Teacher PD, 5 days, 20 teachers, The Citadel
2017	STEM Ambassadors PD, 5 days, 24 teachers, The Citadel
2017	Minnie Hughes STEAM Camp, 2 weeks, 20 students, The Citadel
2017	*STEAM Camp*, 3 weeks, 100 students, The Citadel
2016	*STEAM Camp*, 3 weeks, 120 students, The Citadel
2016	*Beauty and Joy of Computing Workshop*, 5 days, 16 teachers, The Citadel
2015	*Beauty and Joy of Computing Workshop*, 15 days, 28 teachers, NC State University
2015	*Girls Code and Create Camp*, 5 days, 24 HS girls, NC State University – The Engineering Place
2014	*Girls Code and Create Camp*, 5 days, 24 HS girls, NC State University – The Engineering Place
2014	*Beauty and Joy of Computing Workshop*, 10 days, 18 teachers, NC State University
2013	*Beauty and Joy of Computing Workshop*, 2 days, 9 teachers, NC State University
2012	*STEM Career Awareness Technology Learning Workshops*, Four days, 30 teachers, Warren County Middle School, Warrenton, NC.

2012 *Trying On STEM Careers Workshop* for 60 middle school students in Greensboro, NC.

2011 *STEM Career Awareness Technology Learning Workshops*, Halifax, NC, Five days, 45 teachers, Weldon Middle School; Six additional online workshops via Elluminate, Fall & Spring.

2010 *Safety Sense: Train the Trainer Workshop*, Raleigh, NC.

2010 *SMART for Teachers Technology Learning Workshops*, Four days, 30 teachers, Chowan Middle School, Tyner, NC.

2009 *SMART for Teachers Technology Learning Workshops*, Five days, 30 teachers, Bertie Middle School, Windsor, NC.

2009 *RTOP Training Workshop* for 20 colleagues at The Friday Institute, Raleigh, NC.

2008 *SMART for Teachers Technology Learning Workshops*, Five days, 30 teachers, Chowan Middle School, Tyner, NC.

2008 *Are you a Suspect?* Technology forensics workshop for middle school science and math teachers, Expanding Your Horizons in Math, Science, and Technology Conference, North Carolina State University, Raleigh, NC.

2007 *Middle Grades in the 21st Century: Science & Mathematics Workshop*, Three days, 30 teachers, Gaston Middle School, Gaston, NC.

SERVICE TO THE CITADEL

Citadel

- Graduate Curriculum Committee (Fall 2020-current)
- Undergraduate Curriculum Committee (Fall 2017-Spring 2020)
- Online Task Force Ad Hoc Committee
- Faculty Fellow in Center for Cyber Intelligence, and Security Studies and Center for Excellence and Innovation in Teaching and Distance Education
- Sponsor of Sustainability Club – maintain hydroponic farm
- Judge for Spring STEM Research Forum
- Served on search committee for Assistant Professor of Library Services, Dean of the Zucker Family School of Education, and Assistant Provost for Research
- Our Mighty Citadel 2026 Strategic Initiative 4.3 & 6.2
- Leadership Day Volunteer

Zucker Family School of Education

- Serve on the Education Tenure and Promotion Committee (Fall 2021-current)
- Serve on Professional Education Board (Fall 2015-current)
- Serve on Development Advisory Board (Fall 2015-current)
- Advise STEM MEd students
- Served on Search Committees for Director of Educational Assessment, Assistant Professor of Social Studies Education, and Instructor positions

- Helped with SPA reports for Biology and Chemistry (for 2021 visit)
- Serve as a CAEP Site Visitor (team lead for Spring 2021 CIU visit)

SERVICE TO THE COMMUNITY

2020-current	School Board member for Charleston Charter School of Math and Science
2020-2023	Board Member - Charleston Women in Tech
2020-2022	SIC/Title 1 Committee Member at James Simons Montessori School
2019-2022	Advisory Board Member at ECPI
2018-current	South Carolina State Science Olympiad Director
2017-2020	SIC/Title 1 Committee Member at Burke High School
2016-2021	Member of the South Carolina Sea Grant Consortium's Coastal Education Advisory Committee
2016-2018	Advisory Board member for Palmetto Scholars Academy
2016-2020	Advisory Board member for Reforge Charleston
2016-2020	Advisory Board member for the Chamber of Commerce – Computer Science Education group (serving as co-chair as of September 2018)
2016-2020	Advisory Board member for the Lowcountry STEM Collaborative
2015-2020	Steering Committee member for Charleston STEM Festival
2009-2011	Coach and Event Leader for North Carolina Science Olympiad, Regional in Fayetteville, NC and State in Raleigh, NC
2007-2008	School Volunteer, Stough Elementary, Raleigh, NC. Assist with science nights.

SERVICE TO THE PROFESSION

2023	Associate Program Chair, Special Interest Group for Computer Science Education, Portland, OR, 2024
2023	NSF Grant Panel Reviewer
2022	Associate Program Chair, Special Interest Group for Computer Science Education, Toronto, Canada, 2023
2022-current	Member, SC AI Standards Design Team
2021-current	Member, AI4K12 South Carolina Planning Team
2021	NSF Grant Panel Reviewer (August)
2021	Member, ITEST AI Group
2020	Associate Program Chair, Special Interest Group for Computer Science Education, virtual
2020-current	ECEP State Leadership Team
2020	NSF Grant Panel Reviewer (June)
2020	NSF Grant Panel Reviewer (February)
2020-current	Article Reviewer for *International Journal of STEM Education* (1 review)
2019-current	Article Reviewer for *International Journal of Science Education* (3 reviews)
2019	NSF Grant Panel Reviewer

2019	Conference Reviewer, Special Interest Group for Computer Science Education, Portland, Oregon 2020
2018	Conference Reviewer, Special Interest Group for Computer Science Education, Minneapolis, MN, 2019
2018	Panel Moderator for the 2018 Citadel Intelligence & Cybersecurity Conference
2018	SC 9-12 Computer Science Standards Writing Team
2018-current	Treasurer of CSTA SC
2017-current	Curriculum Reviewer, SC Department of Higher Education
2017	Conference Reviewer, Special Interest Group for Computer Science Education, Baltimore, MD, 2018
2017	Program Committee, Reviewer, Society for Information Technology & Teacher Education, Austin, TX, 2017
2016-current	South Carolina Code.org Regional Partner
2016	Conference Reviewer, Special Interest Group for Computer Science Education, Seattle, WA, 2017
2016-2017	SC K-8 Computer Science Standards Writing Team
2016	NSF Grant Panel Reviewer
2016-current	Editorial Board of the *Journal of Science Teacher Education* (2 reviews)
2016-current	Article Reviewer for *Science Education* (top rated journal in field) (1 review)
2016-current	Article Reviewer for *Catalyst: A Social Justice Forum* (1 review)
2016-2019	ASTE Awards Committee Member
2015-current	Article Reviewer for *Computing in Science and Engineering* (1 review)
2015	Division C Conference Reviewer, American Educational Research Association, Washington, D.C., 2016.
2015	Conference Reviewer, National Association for Research in Science Teaching, Baltimore, MD, 2016.
2014	Program Committee, Reviewer, Society for Information Technology & Teacher Education, Las Vegas, NV, 2015
2014-current	Editorial Board of the *Contemporary Issues in Technology and Teacher Education – Science* (5 reviews)
2014-current	Article Reviewer for *Journal of Science Education and Technology*
2014-current	Article Reviewer for *NSTA's Science Scope* (32 reviews)
2014	Conference Reviewer, National Association for Research in Science Teaching, Chicago, IL, 2015.
2013	Book Reviewer "Teaching Students to Think Like Scientists"
2013-current	Article Reviewer for *Journal of Technology and Teacher Education* (21 reviews)
2013	Conference Reviewer, Association for Science Teacher Education, San Antonio, TX, 2014.
2013	Conference Reviewer, National Association for Research in Science Teaching, Pittsburgh, PA, 2014.

2012-2015	NARST Outstanding JRST Paper Award Committee Member
2012	Conference Reviewer, Association for Science Teacher Education, Charleston, SC, 2013.
2012	Conference Reviewer, National Association for Research in Science Teaching, Rio Grande, Puerto Rico, 2013.
2011	Conference Reviewer, National Association for Research in Science Teaching, Indianapolis, IN, 2012.
2010	Conference Reviewer, National Association for Research in Science Teaching, Orlando, FL, 2011.
2009	Conference Reviewer, National Association for Research in Science Teaching, Philadelphia, PA, 2010.
2009-current	Article Reviewer for *School Science and Mathematics* (16 reviews)
2008	Conference Reviewer, Association for Science Teacher Education, Hartford, CT, 2009.
2008	Strand 3 Conference Reviewer, American Educational Research Association, San Diego, CA, 2009.
2007-2015	Article Reviewer for *Meridian: A Middle School Computer Technologies Journal*

PROFESSIONAL ORGANIZATION MEMBERSHIPS/CONTRIBUTIONS

ASTE – Association of Science Teacher Education
SITE – Society for Information Technology & Teacher Education
AERA – American Educational Research Association
SIGCSE – Special Interest Group for Computer Science Education, Seattle
NARST – National Association for Research in Science Teaching
NSTA – National Science Teaching Association
SC2 – South Carolina Science Council