Lorraine A. Jacques

EDUCATION

Clemson University, Clemson, SC (2017), Ph.D. in Learning Sciences
>Dissertation: *Using App Inventor to Explore Low-achieving Students' Understanding of Fractions*
>Committee: Drs. Danielle Herro (chair), Nicole Bannister, Jennie Farmer, Brian Malloy

University of Bridgeport, Bridgeport, CT, (2008), 6th Year in Education Leadership

Rensselaer Polytechnic Institute, Troy, NY, (2004), M.S. in Computer Science
>Thesis: *Keeping the Minimal Spanning Tree Minimal: Using Approximation Algorithms for Adding and Removing Members in Multicast Routing*

Central Connecticut State University, New Britain, CT, (1994), B.A. in Mathematics, concentration in Computer Science

EXPERIENCE

University of Tampa, Tampa, FL, (2021 – present), Assistant professor, Computer Science
Louisiana Tech University, Ruston, LA, (2018 – 2021), Assistant professor, College of Engineering and Science: Computer Science, College of Education: Curriculum, Instruction, & Leadership
Clemson University, Clemson, SC, (2013 – 2017), Instructor and Research Assistant, College of Education
Connecticut Public Schools
>(2009 – 2013) Secondary mathematics coordinator, high school math department chairperson, math and computer science teacher
>(2004 – 2009) High school mathematics teacher
>(2003 – 2004) Middle school mathematics teacher

Various companies, CT, (1994 – 2001), Software engineer

SELECT SCHOLARLY ACTIVITY

Peer Reviewed Articles

Quigley, C. F., Herro, D., Shekell, C., Cian, H., & **Jacques, L.** (2020). Connected learning in STEAM classrooms: Opportunities for engaging youth in science and math classrooms. *International Journal of Science and Mathematics Education*, *18*(8), 1441-1463.

Jacques, L. (2020). Proximal processes while problem solving in formal and game environments. *Open Journal for Educational Research, 4*(1), 1-14.

Jacques, L., Cian, H., Herro, D. C., & Quigley, C. (2019). The impact of questioning techniques on STEAM instruction. *Action in Teacher Education*, 1-19.

Herro, D., Quigley, C., & **Jacques, L.** (2018). Examining technology integration in middle school STEAM units. *Technology, Pedagogy, and Education, 27*(4).

Jacques, L. (2017). What does project-based learning (PBL) look like in the mathematics classroom? *American Journal of Educational Research, 5*(4).

Herro, D. Qian, M., & **Jacques, L.** (2017). Increasing digital media and learning in classrooms through school-university partnerships. *Journal of Digital Learning in Teacher Education*, *33*(1).

Jacques, L. (2015). An analysis of *Plague, Inc.: Evolved* for learning. *Well Played Journal, 4*(2), 112-125.

Jacques, L. (2014). 12 steps to get students talking. *ASCD Express, 10*(5). Retrieved from http://www.ascd.org/ascd-express/vol10/1005-jacques.aspx.

Jacques, L. (2013). Using applets for inquiry. *Mathematics Teacher, 107*(5), 386 – 387.

Published Curriculum

Jacques, L. & Howle, H. (2020) Computational thinking high school course. *Cyber Innovation Center.* Retrieved from https://cyber.org/

Jacques, L. & Howle, H. (2019) Computational thinking for middle school core courses. *Cyber Innovations Center.* Retrieved from https://cyber.org/

Refereed Conference Presentations

Jacques, L. (2021, March). Flipgrid, flipped classroom, and formative assessment. In E. Langran & L. Archambault (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 156-161.

Jacques, L. (2020, April). Using the engineering design process to teach computational thinking. In Gary H. Marks & Denise Schmidt-Crawford (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 33-37.

Smith, C. & **Jacques, L.** (2020, April). A review of online computer science learning environments for high school students. In Gary H. Marks & Denise Schmidt-Crawford (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 586-591.

Jacques, L. (2019, March). Justin's path to learning fractions through coding. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 92-96.

Quigley, C., Herro, D., Cian, H., & **Jacques, L.** (2017, April). Examining STEAM instructional approaches in middle school classrooms. Paper presented at annual meeting of the *American Educational Research Association* (AERA), San Antonio, TX.

Cian, H., **Jacques, L.**, Quigley, C., Herro, D. (2017, April). The impact of questioning techniques on STEAM instruction. Paper presented at annual meeting of *National Association of Research in Science Teaching* (NARST), San Antonio, TX.

Herro, D., Quigley, C., **Jacques, L.**, & Baker, A. (2017, March). Examining technology integration in middle school STEAM units. Paper presented at the *Society for Information Technology in Teacher Education* (SITE), Austin, TX.

Jacques, L., Jacobs, J., Henline, J., & Fabrizio, R. (2016, March) Developing *Whole: A Fraction Game* from theory to prototype. In G. Chamblee & L. Langub (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference*, 2524-2527.

Jacques, L. (2015, March). Using applets to support reasoning in secondary math classrooms. In D. Rutledge & D. Slykhuis (Eds.), *Proceedings of SITE 2015--Society for Information Technology & Teacher Education International Conference*, 2670-2673.

Jacques, L. (2004, April). Keeping the minimum spanning tree minimal: Using approximation algorithms for adding or removing members in multicast routing. Paper presented at the annual *Rensselaer at Hartford Computer Science Seminar*, Hartford, CT.

GRANTS
Creating Infrastructure for Computer Science Education in Rural North Louisiana (2020-2025). National Science Foundation. $1,200,000. Co-PI.
Cyber Research for Empowering Women Experimenters, Google Explore CSR
    2019-2020, $18,000. PI.
    2018-2019, $28,000. Co-PI.

SERVICE
Society for Information Technology and Teacher Education – co-chair, math education SIG, 2019 – present
Girls Who Code – facilitator, Louisiana Tech University chapter, 2018 – 2021
Louisiana Center for Afterschool Learning – board member, 2018 – 2021
CIS Network, Deans for Impact – member, Louisiana Tech University College of Education, 2020 – 2021

Cyber Research for Empowering Women Experimenters – coordinator, 2020; co-coordinator, 2019 – funded by Google's Explore CSR program
Curriculum Committee, Louisiana Tech University College of Education – member, 2018 – 2020
Graduate Student Government, Clemson University – senator, 2015 - 2016
Playful Learning Summit – assistant coordinator, May, 2015; volunteer, May, 2014
Connecticut Council of Leaders of Mathematics – board member, 2011 - 2013

AWARDS/RECOGNITIONS
Leadership in Diversity Award, College of Engineering and Sciences, Louisiana Tech (2019).
Nominated for the Ada Lovelace Award in STEM Education (2019).
Nominated for the Outstanding Graduate Student Research Award, Clemson University (2017).
Best Paper, Rensselaer at Hartford Computer Science Seminar (2004).

PROFESSIONAL AFFILIATIONS
Association for Computing Machinery (ACM)
Society for Information Technology & Teacher Education (SITE)