Ronald Erdei, Ph.D.

Assistant Professor of Computer Science, University of South Carolina Beaufort

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Education

Ph.D.	Computer and Information Technology Purdue University, West Lafayette IN 47906	2016

Dissertation: An examination of the employment of the pair programming methodology as a collaborative instructional scaffold on college student procedural learning and programming self-beliefs.

M.S.	Computer and Information Technology Purdue University, West Lafayette IN 47906	2007
B.S.	General Sciences: Biology, Chemistry Purdue University, West Lafayette IN 47906	1994

Academic Appointments

Assistant Professor — 2017-present
University of South Carolina Beaufort, Department of Computer Science.

Limited Term Lecturer — 2016-2017
Purdue University, Department of Technology Leadership and Innovation.

Graduate Teaching Assistant (Instructor of Record) — 2011-2016
Purdue University, Department of Computer and Information Technology.

Limited Term Lecturer — 2009-2009
Purdue University, Department of Computer and Information Technology.

Industry Experience

Database Administrator — 2008-2011
Information Technology at Purdue (ITaP), Purdue University

Database Architect/Analyst/Programmer — 2005-2008
Housing and Food Services (HFS), Purdue University

Database Analyst — 2004-2005
Walker Information

Scholarship

Research Interests

Dr. Erdei's discovery efforts focus on the removal of barriers (i.e., valueless challenges) to learning, retention, and degree attainment in computing disciplines, particularly among first-generation college students and those traditionally underrepresented in computing disciplines. His research lies at the intersection of learning theory, instructional design, and computer science pedagogy.

Specific topics of interest include: computer science pedagogy; collaborative learning among college students; and educational design research. Of particular interest are the development and application of instructional practices that complement learning with additional secondary benefits (i.e., practices that yield desirable outcomes in addition to learning) such as increased self-efficacy, increased retention/graduation rate, increased matriculation into the workforce, and accelerated development of professional identity.

Peer-Reviewed Articles in Conference Proceedings

Morales, G. M., **Erdei, R**., & Mercado, W. R. (2021). *[Student Paper] Language Impacts of Early Child Education*. In Proceedings of the American Society for Engineering Education (ASEE) Middle Atlantic 2021 Conference (November 2021). Retrieved July 21, 2022 from https://peer.asee.org/language-impacts-of-early-child-education.pdf

Mercado, W. R., Morales, G. M., & **Erdei, R**. (2021). *[Student Paper] Iterative development of an IT solution supporting Early Learning Standards.* In Proceedings of the American Society for Engineering Education (ASEE) Middle Atlantic 2021 Conference (November 2021). Retrieved July 21, 2022 from https://peer.asee.org/work-in-progress-iterative-development-of-an-it-solution-supporting-early-learning-standards.pdf

McCord, B. E., **Erdei, R**., Whittinghill, D. M., & Exter, M. (2020). *Attendance and Social Interdependence in Game Development Labs*. In Proceedings of the American Society for Engineering Education (ASEE) 2020 Virtual Annual Conference (June 2020). Retrieved July 7, 2022 from https://peer.asee.org/attendance-and-social-interdependence-in-game-development-labs.pdf

Erdei, R., McCord, B., & Whittinghill, D. (2019). *Unreal Collaboration: Exploring the Use of Formal Collaborative Learning Strategy in Games Development Coursework*. In Proceedings of the American Society for Engineering Education (ASEE) 126th Annual Conference and Exposition, Tampa, FL (June 2019). Retrieved September 7, 2019 from https://peer.asee.org/unreal-collaboration-exploring-the-use-of-formal-collaborative-learning-strategy-in-games-development-coursework.pdf

Thomas, N., & **Erdei, R.** (2018). *Stemming Stereotype Threat: Recruitment, Retention, and Degree Attainment in STEM Fields for Undergraduates from Underrepresented Backgrounds*. In Proceedings of the ASEE Collaborative Network for Engineering and Computing Diversity (CoNECD) 2018 Conference, Crystal City, VA (April 2018). Retrieved May 30, 2018 from https://www.asee.org/public/conferences/113/papers/24244/view.

Erdei, R., Whittinghill, D., & Springer, J. (2017). *An Impact Comparison of Two Instructional Scaffolding Strategies Employed in our Programming Laboratories: Employment of a Supplemental Teaching Assistant versus Employment of the Pair Programming Methodology*. In Proceedings of the IEEE Frontiers in Education (FiE) 2017 Conference, Indianapolis, IN (October 2017). Retrieved January 12, 2018 from https://ieeexplore.ieee.org/abstract/document/8190650/ .

Erdei, R., Whittinghill, D. & Springer, J. (2014). *Collaboration While Programming: Observing Student Perceptions of Pair Programming in the Classroom*. In Proceedings of E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2014 (pp. 543-551). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE). Retrieved December 22, 2016, from https://www.learntechlib.org/p/148770.

Erdei, R., & Lutes, K. (2012). *Exploring Our Options: Modern Publishing Alternatives for Our Computer Programming Textbook*. In Proceedings of Informing Science & IT Education Conference (InSITE) (pp. 223–234). Montreal, Quebec, Canada: Informing Science Institute.

Erdei, R., & Slazinski, E. (2004). *Characteristics of Streaming Data Acquisition Management Systems*. In Proceedings for the 8th World Multi-Conference on Systemics, Cybernetics, and Informatics (pp. 283–288). Orlando, FL.

Conference Panels and Scholarly Presentations

Erdei, R., Farrell, C., Leaphart, A., Ricardo, L., Robinson, D., Skees, M. (2022). *Walking the Talk: Experiential Learning and Faculty Learning Communities.* Presented at the ITLC Lilly Conference on Innovative Strategies to Advance Student Learning, Asheville, NC (August 2022).

Ricardo, L., Kronenberg, K., Leep, J., **Erdei, R.**, Scott, J. (2020). *Making Sparks and Moving Forward: Interdisciplinary Combustion.* Presented at the Association for Theatre in Higher Education (ATHE) 2020 Virtual Conference (July 2020).

Halbert, L.A., & **Erdei, R.** (2019). *Creating More Than Just an Intersection: Interdisciplinary Partnering of College Courses to Increase Learner Proficiency, Self-Efficacy, and Professional Identity*. Presentation at the South Carolina Conference on Innovations in Teaching and Learning in Higher Education (SCCITL), Charleston, SC (July 2019).

Whittinghill, D.M., **Erdei, R**., McCord, B.E. (2019). *Challenges of student attendance in student-directed learning: A case study*. Presented at the Association for the Advancement of Computing in Education Annual Conference, New Orleans, LA (November 2019).

Chesley, A., Macdonald, L., Forte, J., **Erdei, R.,** & Mentzer, N. (2018). *The Labor of Interdisciplinarity: Teaching, Learning, and Research in an Integrated First-Year Experience Program.* Panel held at the 2018 Conference on College Composition and Communication, Kansas City, MO (March 2018).

Erdei, R. (2018). *An Interdisciplinary Approach to Building Necessary STEM Skills: A Hands-on Activity*. Presentation at the University of South Carolina Beaufort 2018 STEM Conference, Bluffton, SC (March 2018).

Ravai, G., Nunes, L., **Erdei, R**., & Kodam, S. (2017). *The Impact of our computer programming course redesign on Student Performance and Perceptions*. Presentation at the Women in Engineering ProActive Network's Change Leader Forum, Westminster, CO (June 2017).

Erdei, R., Whittinghill, D., & Springer, J. (2017). *Scaffolding through Pair Programming: A Cooperative Learning Strategy*. Presentation at the 18th Annual Midwest Scholarship of Teaching and Learning (SoTL) Conference, Indiana University South Bend, South Bend, IN (April 2017).

Ravai, G., **Erdei, R.,** Nunes, L., & Kodam, S. (2017). *The Introduction of Informal Cooperative Learning into our Programming Laboratories.* Presentation at the 18th Annual Midwest Scholarship of Teaching and Learning (SoTL) Conference, Indiana University South Bend, South Bend, IN (April 2017).

Schnell, M., **Erdei, R.,** Rogers, C., Brown, L., Lipps, E., & Mentzer, N. (2017). *Employing Undergraduate Teaching Assistants to Distribute Classroom Instructional Load*. Presentation at the 18th Annual Midwest Scholarship of Teaching and Learning (SoTL) Conference, Indiana University South Bend, South Bend, IN (April 2017).

Erdei, R., Springer, J., & Whittinghill, D. (2017). *Investigating the Use of a Collaborative Computer Programming Instructional Scaffold in Mitigating the Impact of Increased Class Size*. Presentation at the 2nd Annual Indiana STEM Education Conference, Purdue University, West Lafayette, IN (January 2017).

Erdei, R., Whittinghill, D., & Springer, J. (2015). *Collaboration While Programming: Observing Student Perceptions of Pair Programming in the Classroom*. Poster presented at the Purdue University Teaching Academy Day, West Lafayette, IN (September 2015).

Erdei, R., Springer, J., & Whittinghill, D. (2014). *Pair Programming as an Instructional Strategy in Database Programming*. Poster presented at the Purdue University Computer and Information Technology Undergraduate Research Open House, West Lafayette, IN (September 2014).

Erdei, R., Springer, J., & Whittinghill, D. (2014). *The Affective Impact of Pair Programming on Students Enrolled in a College Junior-Level Database Programming Course*. Poster presented at the Purdue College of Technology Faculty Convocation 10th Annual Poster Session, West Lafayette, IN (March, 2014).

Erdei, R. (2010). *SQL Injection: What It Is & Why It Matters to You*. Presentation at the Boilerweb 2010 Intra-University Conference, Purdue University, West Lafayette, IN (March, 2010).

Erdei, R. (2010). *Database Concepts: Objects, Owners, and Indexes*. Presentation at the Boilerweb 2010 Intra-University Conference, Purdue University, West Lafayette, IN (March, 2010).

Working Papers

Erdei, R., Whittinghill, D., Springer, J., & Donaldson, S. (In Manuscript). An Examination of the Employment of the Pair Programming Methodology as a Collaborative Instructional Scaffolding on College Student Procedural Learning.

Grantsmanship

Funded Grants and Awards

USCB Sea Island Institute Grant. Amount: $4,800.00. Project Title: *USCB & The Children's Center Early Learning Application*. PI.	May 2021 – December 2021
USCB Faculty Development Committee Award. Amount: $900.00. Project Title: *Presentation of one (1) paper at the Association for the Advancement of Computing in Education (AACE) 2019 World Conference on E-Learning (i.e., E-Learn 2019).*	November 2019
USCB Faculty Development Committee Award. Amount: $553.57. Project Title: *Presentation of two (2) papers at the 2019 American Society for Engineering Education (ASEE) Annual Conference.*	February 2019
USCB Faculty Development Committee Award. Amount: $1000.00. Project Title: *Presentation of one (1) paper at the 2018 Conference on College Composition and Communication (CCCC).*	November 2017

Declined Proposals

National Science Foundation (NSF). Amount: $1,499,738.00 (unfunded). Project Title: *Empowering the Underserved: Disrupting Educational Barriers in Cybersecurity.* PI.	2022
National Science Foundation (NSF). Amount: $2,481,659.00 (unfunded). Project Title: *S-STEM Research Hub of the Southeast: Enabling Advanced Digital Fluency for the Growing Innovation Economy. Co*-PI w/ Ji., Y. (PI).	2021
National Science Foundation (NSF). Amount: $533, 234.00 (unfunded). Project Title: *Collaborative Research: HDR DSC: Marine Biodiversity Observation and Research Network – Intensive Datasets to Monitor Environmental Conditions in Southeast Estuaries.* Co-PI w/ Montie, E. (PI).	2021
National Science Foundation (NSF). Amount: $999,936.00 (unfunded). Project Title: *Enabling the Future: Scholarships in Computational Science.* Co-PI w/ Ji., Y. (PI).	2018
University of South Carolina Center for Teaching Excellence (CTE). Amount: $500.00 (unfunded). Project Title: *Getting Started Teaching Online at USC Course and Grant.* PI.	2018

Teaching

Teaching Philosophy:

Dr. Erdei possesses a social-constructivist philosophy toward the process of learning, believing that individuals construct knowledge (i.e., learn) out of and through their personal experiences. The construction of knowledge is an active process, and Dr. Erdei believes it is best catalyzed through active endeavors that allow the learner to articulate and "work through" their still-forming understanding. Depending upon the context and learning environment, this articulation can take various forms. Forms common to computing disciplines include diagramming, computer coding, verbal articulation, drawing, and writing.

Dr. Erdei's approach to teaching reflects this constructivist view of learning. He (a) preferentially employs evidence-based instructional techniques (rather than traditional didactic lecture) that provide students with appropriately-challenging, well-scaffolded exercises followed by reflective activities that facilitate learning; and (b) intentionally cultivates a learning environment designed to complement learning with additional secondary benefits (i.e., an environment that catalyzes desirable outcomes beyond simply mastery of the course content), such as increased self-efficacy, increased sense of community, and accelerated development of professional identity.

Courses Taught

Course Number	Course Name	Students Enrolled	Average Course Evaluation Scale: 1-4	Term
CSCI B101-001	Introduction to Computer Concepts	10	3.89	Spring 2022
CSCI B101-002	Introduction to Computer Concepts	8	3.65	Spring 2022
CSCI B104-015	Computer Programming Techniques, Practices, and Tools	9	3.72	Spring 2022
ISAT B104-015	Computer Programming Techniques, Practices, and Tools	5	3.76	Spring 2022
ISAT B321-016	Database-Driven Applications Development	9	4.00	Spring 2022
CSCI B104-001	Computer Programming Techniques, Practices, and Tools	13	3.88	Fall 2021
ISAT B104-001	Computer Programming Techniques, Practices, and Tools	6	3.92	Fall 2021
CSCI B320-001	Database Systems and Management	16	3.74	Fall 2021
ISAT B320-001	Database Management Systems I	10	2.92	Fall 2021
ISAT B437-001	Information Technology Project Management	10	3.92	Fall 2021
CSCI B104-03X	Software Design and Development	18	3.17	Spring 2021
ISAT B104-03X	Software Design and Development	3	3.18	Spring 2021
CSCI B321-01X	Database-Driven Applications Development	3	3.85	Spring 2021
ISAT B321-01X	Database-Driven Applications Development	7	3.06	Spring 2021

ISAT B420-06X	Database Management Systems II	2	2.85	Spring 2021
CSCI B520-06X	Advanced Topics in Database Systems	4	3.81	Spring 2021
CSCI B104-0FX	Software Design and Development	11	3.69	Fall 2020
ISAT B104-0FX	Software Design and Development	7	3.47	Fall 2020
CSCI B320-0FX	Database Systems and Management	14	3.68	Fall 2020
ISAT B320-0FX	Database Management Systems I	9	3.39	Fall 2020
ISAT B437-01F	Information Technology Project Management	5	3.86	Fall 2020
CSCI B101-01M	Introduction to Computer Concepts	4	3.63	Summer 2020
CSCI B104-02X	Software Design and Development	23	3.78	Spring 2020
ISAT B104-02X	Software Design and Development	2	4.00	Spring 2020
CSCI B321-001	Database-Driven Applications Development	6	3.6	Spring 2020
CSCI B520-001	Advanced Topics in Database Systems	6	3.9	Spring 2020
CSCI B104-0X1	Software Design and Development	22	3.70	Fall 2019
ISAT B104-0X1	Software Design and Development	2	3.92	Fall 2019
CSCI B201-001	Introduction to Computer Security	18	3.76	Fall 2019
CSCI B320-001	Database Systems and Management	23	3.73	Fall 2019
CSCI B101-W41	Introduction to Computer Concepts	9	3.84	Summer 2019
CSCI B101-001	Introduction to Computer Concepts	19	3.82	Spring 2019
CSCI B101-W01	Introduction to Computer Concepts	32	3.88	Spring 2019
CSCI B104-001	Computing in MATLAB	14	3.71	Spring 2019
CSCI B101-001	Introduction to Computer Concepts	26	3.85	Fall 2018
CSCI B101-W01	Introduction to Computer Concepts	20	3.68	Fall 2018
CSCI B101-W02	Introduction to Computer Concepts	19	3.62	Fall 2018
CSCI B104-001	Computing in MATLAB	24	3.61	Fall 2018
CSCI B320-001	Database Systems Management	12	3.97	Fall 2018
CSCI B101-W41	Introduction to Computer Concepts	17	3.82	Summer 2018
CSCI B101-001	Introduction to Computer Concepts	23	3.83	Spring 2018
CSCI B101-W01	Introduction to Computer Concepts	32	3.48	Spring 2018
CSCI B104-001	Computing in MATLAB	23	3.60	Spring 2018
CSCI B101-001	Introduction to Computer Concepts	26	3.85	Fall 2017
CSCI B101-003	Introduction to Computer Concepts	27	3.75	Fall 2017
CSCI B104-001	Computing in MATLAB	15	3.92	Fall 2017

Academic Advising of USCB Undergraduates Majoring in Computing Disciplines

Term	Number of Advisees
Spring 2022	23
Fall 2021	25
Spring 2021	23
Fall 2020	25
Spring 2020	19
Fall 2019	16
Spring 2019	4

Graduate Student - Committee Membership

Matt Heightland M.S., Computer Science and Engineering May 2023 (expected)
University of South Carolina, Columbia, SC
Thesis: *Utilizing Cloud Technology for Rapid Deployment of Specialized Web Services*

Brantly McCord M.S., Computer Graphics Technology August 2020
Purdue University, West Lafayette, IN
Thesis: *Attendance and Social Interdependence in Game Development Laboratories*

Course and Curriculum Development

Curriculum Development

Bachelor of Science in Information Science and Technology Spring 2020
- Objective: Develop a curriculum map and assessment plan for the Bachelor of Science in *Information Science and Technology* (B.S. in ISAT) degree program at USCB.
- Outcome: As part of a 6-person curriculum development team, the following were developed:
  - Program-level learning objectives (i.e., goals) were developed for the BS in ISAT program; these objectives were compliant with the accreditation standards of both the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) and the Accreditation Board for Engineering and Technology (ABET).
  - Assessable learning objectives (i.e., outcomes) were identified for each course in the curriculum.
  - Data collection points for curriculum assessment were identified within the curriculum, and a map of specific courses to specific program-level learning objectives developed.

Master of Science in Computational Science Fall 2019
- Objective: Revise the curriculum map and assessment plan for the Master of Science in *Computational Science* (M.S. in CSCI) degree program at USCB to better align with SACSCOC accreditation standards.
- Outcome 1: As part of a 6-person curriculum development team, the following were revised:
  - Program-level learning objectives (i.e., goals) were revised for the MS in CSCI program; these objectives were compliant with the accreditation standards of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).
  - Assessable learning objectives (i.e., outcomes) were identified/revised for each course in the curriculum.
  - Data collection points for curriculum assessment were identified/revised within the curriculum, and a map of specific courses to specific program-level learning objectives developed.
- Outcome 2:
  - SACSCOC approved USCB's Level Change from a Level *II* (Baccalaureate degree) institution to a *Level III* (Master's Degree) institution (September 2020).
  - SACSCOC accredited the M.S. in CSCI program, and reaffirmed it for 10 years (September 2020)

Course Development

CSCI B520: Advanced Topics in Database Systems
(Prerequisite: CSCI 320, or consent) Advanced topics in database systems and their implementation using SQL and its programmatic extensions. Topics include: advanced querying, optimization, stored logic development, and database security.

CSCI B601: Principles of Computer Security
(Prerequisite: CSCI 201, or consent) Computer security principles and practice. Topics include: cryptographic tools, access control, database security, software security, network security, common attack vectors, intrusion detection, and security ethics.

CSCI B622: Data Management and Analytics
(Prerequisite: CSCI 320, or consent) The management and systematic computational analysis of data. Topics include: structured and unstructured data management, data wrangling, computational analytics methodologies, and data visualization.

CSCI/ISAT B401: Information Security Principles
(Prerequisite: CSCI/ISAT B201, or consent) This course extends fundamental computer security concepts, practices, and issues, introducing students in the broader field of information security. Topics include: common attack/threat vectors; information security planning; information security prevention, detection, and response tools and approaches; risk and risk assessment; human factors in information security; legal, ethical, and professional issues.

CSCI/ISAT B420: Database Management Systems II
(Prerequisite: CSCI/ISAT B320, or consent) This course explores advanced data manipulation and server-side programming techniques for use in enterprise Relational Database Management Systems (RDBMS). Topics include: platform specific programmatic extensions to Structured Query Language (SQL); stored procedure, function, and package implementation; trigger creation and usage; query optimization techniques; security considerations.

CSCI/ISAT B437: Information Technology Project Management
(Prerequisite: CSCI/ISAT B150, or consent) This course introduces students to project management concepts, techniques, and tools used by project managers to plan, initiate, manage and close information technology projects. Topics include: the systems approach to project management; application of a project management framework to the planning and management of scope, cost, people, expectations, risk, communications, and procurement; agile methodologies; project management software.

Course Redesign

CSCI B101: Introduction to Computer Concepts
Transformed the course from a traditional lecture format to a flipped-classroom format. Conceptual emphasis changed from Remembering (Bloom's Taxonomy I) to Understanding and Applying (Bloom's Taxonomy II and III), with increased emphasis on the social and societal impact of modern computer/information technologies. Practical emphasis increased in rigor, with focus placed upon developing software proficiency sufficient to create professional quality documents using industry-standard productivity software.

CSCI/ISAT B104: Computer Programming Techniques, Practices, and Tools
Transformed the course from a traditional lecture format to a flipped-classroom format.
Conceptual and practical (i.e., the ability to computer program) emphasis placed upon general
programming concepts, techniques, and practices with the aim of platform and language
transferability. Programming language changed from an expensive proprietary language
(MATLAB) to an open-source language (Python) that is free of licensing costs, more
appropriate for beginning programmers, and has more immediate marketability (Python is the
most popular engineering programming language in the world at the time of this writing).
Practical emphasis increased in rigor.

Mentorship

Undergraduate – Professional Development

Tgaja Johnson   Summer 2022
- Objective: Attend the *2022 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing* Conference.
- Outcome: Was awarded a Tapia 2022 Scholarships to finance conference registration, travel, and lodging; consequently, was able to attend the Tapia 2022 conference.

Tgaja Johnson   Spring 2022
- Objective: Attend the *2022 AnitaB.org / ACM Grace Hopper Celebration (GHC)* Conference.
- Outcome: Was awarded a GHC 2022 Scholarships to finance conference registration; consequently, was able to attend the 2022 GHC conference virtually.

Tgaja Johnson, Gabriela Morales, Aryss Gomez   Spring 2022
- Objective: Develop and deliver an age-appropriate computer programming exercise / learning activity for middle-school girls attending the 2022 American Association of University Women (AAUW) STEM Day in Beaufort, SC.
- Outcome: With no prior teaching or instructional design experience, created and subsequently led two (2) 2-hour hands-on computer programming exercises to ~ 70 participants, all middle-school aged females; event coordinators report the computer programming exercises were well-received by the participants.

Sage Hollis   Fall 2021
- Objective: Earn *Information Technology Infrastructure Library (ITIL) v4 Foundations* certification.
- Outcome: Successfully persuaded an intra-university partner, the Office of Information Technology Services and Support (ITSS) at USCB, to fund the certification costs; the AXIOS ITILv4 Foundations certification test was passed, and certification awarded, in December 2021.

Trevor Putnam   Fall 2021
- Objective: Earn *Information Technology Infrastructure Library (ITIL) v4 Foundations* certification.
- Outcome: Successfully persuaded an intra-university partner, the Office of Information Technology Services and Support (ITSS) at USCB, to fund the certification costs; the AXIOS

ITILv4 Foundations certification test was passed, and certification awarded, in November 2021.

William Mercado   Fall 2021
- Objective: Author and present an academic paper at a discipline-appropriate peer-reviewed conference.
- Outcome: despite never before having authored an academic paper, William authored a paper that was presented at the American Society for Engineering Education (ASEE) Middle Atlantic 2021 Conference on November 13th, 2021 entitled: *Iterative development of an IT solution supporting Early Learning Standards*; the paper is included in the conference proceedings, available online (see citation in the Scholarship section).

Gabriela Morales   Fall 2021
- Objective: Author and present an academic paper at a discipline-appropriate peer-reviewed conference.
- Outcome: despite never before having authored an academic paper, Gabriela authored a paper that was presented at the American Society for Engineering Education (ASEE) Middle Atlantic 2021 Conference on November 13th, 2021 entitled: *Language Impacts of Early Child Education*; this is a peer-reviewed conference; the paper is included in the conference proceedings, available online (see citation in the Scholarship section).

William Mercado (Summer Intern)   Summer 2021
- Objective: Increase proficiency in application development, human-centered design, and iterative design methodology through developmental work on 'The Children's Center Individual Child Assessment' (TCC-ICA) application.
- Outcome: Developed and deployed multiple database stored procedures (sprocs) that transformed complex raw-data into actionable reports readily understood by the client.
- Funding: this internship was funded by a USCB Sea Island Institute Grant (see Grantsmanship section).

Gabriela Morales (Summer Intern)   Summer 2021
- Objective: Increase proficiency in application development, human-centered design, and iterative design methodology through developmental work on 'The Children's Center Individual Child Assessment' (TCC-ICA) application.
- Outcome: Transformed an existing English-only report into a multi-language report (English and Spanish) that facilitated better communication between ESL-parents, teachers, and administrators.

Levi Arencibia   Summer 2018
- Objective: Attend the *2018 CMD-IT/ACM Richard Tapia Celebration of Diversity in Computing* Conference.
- Outcome: Was awarded a Tapia 2018 Scholarships to finance conference registration, travel, and lodging; consequently, was able to attend the Tapia 2022 conference.
  Note: at the time of award and attendance, Levi's legal name was 'Diana Arencibia'.

Undergraduate - Research

Kayla Johnson & Yessenia Bledsoe-Becerra (research team)   Spring 2022
- Research Project: *Examining Risk Behavior in Promiscuous Teens.*

- Outcome: Poster presented at the 2022 USCB Research and Scholarship Day.

Rachel Valvo & Nithish Nadham Dirisipamu (research team)   Spring 2022
- Research Project: *Distracted Driving in High School and Beyond*.
- Outcome: Poster presented at the 2022 USCB Research and Scholarship Day.

Samuel Cartier & Bianca Simpson (research team)   Fall 2021
- Research Project: *Relationship between Forced Sexual Acts and Suicide Attempts in Grade School Students.*
- Outcome: Poster presented at the 2022 USCB Research and Scholarship Day, winning 3rd place in its category.

Bradley Lamb & Matthew Holmes (research team)   Spring 2019
- Research Project: *An Application for Procuring and Analyzing Developmental Data for use by Non-profit Child Care Centers*.
- Magellan Scholarship applied for, but funding was not awarded (Spring 2019).
- Outcome: Poster presented at the 2019 USCB Research and Scholarship Day, winning 1st place in its category.

Carrie Rogers, Eric Lipps, & Lauren Brown (research team)   Spring 2017
- Research Project: *The Benefits of Employing Undergraduate Teaching Assistants to Support Instructors within an Active Learning Environment.*
- Outcome: Poster presented at the Purdue University Undergraduate Research and Poster Symposium, West Lafayette, IN.

Professional Development

Certifications

Certificate of Completion: *Entering Mentoring.* University of South Carolina Center for Teaching Excellence (CTE).   In Progress

Certification Renewal: *University of South Carolina – FERPA Complete Course (IPS).* Collaborative Institutional Training Initiative (CITI) Program.   February 2022

Certification: *Information Technology Infrastructure Library (ITIL) v4 Foundations.* Axelos Global Best Practices.   June 2021

Certificate of Completion: *Teaching Toward Inclusive Excellence.* University of South Carolina Center for Teaching Excellence (CTE).   March 2021

Certification: *University of South Carolina – Social and Behavioral Responsible Conduct of Researcher.* Collaborative Institutional Training Initiative (CITI) Program.   October 2018

Certification: *University of South Carolina – Researchers.* Collaborative Institutional Training Initiative (CITI) Program.   May 2018

Certification: *University of South Carolina – FERPA Complete Course (IPS).* December 2017
Collaborative Institutional Training Initiative (CITI) Program.

Conferences, Workshops, and Learning Communities

Faculty Learning Community Participant: *The Experiential Learner.* Fall 2021-Present
USCB Center for Teaching and Learning (CTL).

Workshop Participant: *Fundamentals of Program Assessment.* February 2022 –
The Accreditation Board for Engineering and Technology (ABET). March 2022
Professional Development Hours (PDHs) earned: 10.

Workshop Participant: *Research Data Management Basics for Students.* March 2022
University Libraries at the University of South Carolina.

Workshop Participant: *Safe Zone Ally Program.* University of South February 2022
Carolina Office of Multicultural Student Affairs.

Conference Attendee: *Teach, Play, Learn: An academic conference on game-* June 2021
based teaching and learning. Indiana University.

Workshop Participant: *Data Management Plans and the DMPTool.* April 2021
University Libraries at the University of South Carolina.

Workshop Participant: *Implementing Universal Design of Learning for All* March 2021
Students. University of South Carolina Center for Teaching Excellence
(CTE).

Workshop Participant: *Understanding the Correlation between* March 2021
Multicultural Education and Student Achievement. University of South
Carolina Center for Teaching Excellence (CTE).

Workshop Participant: *Culture Café: Las Familias, la Cultura y la* March 2021
Educacion. University of South Carolina Center for Teaching Excellence
(CTE).

Workshop Participant: *Talking Black in America.* University of South February 2021
Carolina Center for Teaching Excellence (CTE).

Conference Attendee: 2019 Association for the Advancement of November 2019
Computing in Education (AACE) Annual Conference.
Workshop Participant: *Supporting LGBTQ+ Students in your Classroom.* October 2019
University of South Carolina Center for Teaching Excellence (CTE).

Workshop Participant: *Developing Diversity in Classroom Discussions.* October 2019
University of South Carolina Center for Teaching Excellence (CTE).

Workshop Participant: *Facilitating Academic Writing Using Dialect in the* September 2019
Classroom. University of South Carolina Center for Teaching Excellence
(CTE).

Workshop Participant: *Inclusive Excellence at University of South Carolina.* University of South Carolina Center for Teaching Excellence (CTE). August 2019

Conference Attendee: South Carolina Conference on Innovations in Teaching and Learning in Higher Education (SCCITL) Annual Conference. July 2019

Conference Attendee: American Society for Engineering Education (ASEE) 126th Annual Conference and Exposition. June 2019

USCB Training & Certification: Driving University Vehicles (including 12-Person Vans). USCB Department of Public Safety (DPS). November 2018

Conference Attendee: 2018 Conference on College Composition and Communication (2018 CCCC). March 2018

Service

Department, College and University

Faculty Advisor, USCB Student Chapter of the *Association of Computing Machinery* (ACM@USCB) 2018-present

Chair, USCB *Courses and Curricula* Committee 2022-present

Member, USCB *Courses and Curricula* Committee 2019-2022

Member, USCB *Diversity, Equity, and Inclusion* Committee 2021-present

Member, USCB *Diversity, Equity, and Inclusion Policy* Committee 2020-2021

Member, USCB 2021-2022 *Public Health Faculty Search* Committee Spring 2022

Member, USCB Academic Affairs *Working Group Reviewing Organizational Structure* Spring 2021

Chair, USCB 2019-2020 *Computer Science Faculty Search* Committee 2019-2020

Member, *African American History Month @USCB* Planning Committee 2017-2020

Faculty Chaperone & Driver of the USCB Van, ACM@USCB Student Event: *Attend the USC Gamecocks Get Hired! Career Fair in Columbia, SC.* Feb. 18, 2020

Member, USCB 2018-2019 *Computer Science Faculty Search* Committee 2018-2019

Presenter, USCB Online Teaching with Blackboard Open-House Oct. 4, 2019

Member, USCB Strategic Plan Subgroup on Academic Excellence 2019-2022

USCB Representative, South Carolina Project Lead the Way Advisory Group 2019-2020

Faculty Chaperone & Driver of the USCB Van, ACM@USCB Student Event: *Tour of the Boeing Facilities in Charleston, SC.* Nov. 30, 2018

Faculty Chaperone, ACM@USCB Student Event: *Tour of the Gulfstream Aerospace Facilities in Savannah, GA.* Dec. 1, 2017

Discipline and Profession

Reviewer, ASEE *Computers in Education* (CoED) Journal 2017-present

Reviewer, ASEE 2020 Annual Conference: *Engineering Education - Une Celebration Internationale* 2020

Member, 2021 South Carolina Conference on Innovative Teaching and Learning (SCCITL) Selection Committee. Spring 2020

Reviewer, ASEE 2019 Annual Conference: *Charged Up for the Next 125 Years* 2019

Reviewer, Georgia Undergraduate Research Conference 2019 (GURC 2019) Fall 2019

Reviewer, University of South Carolina Magellan Scholarships 2019

Reviewer, ASEE 2018 Annual Conference: *125 Years at the Heart of Engineering Education* 2018

Reviewer, ACM SIGITE 2019 Conference on Information Technology Education 2019

Reviewer, ACM SIGITE/RIIT 2017 Conference on Information Technology Education: *Enabling the Future* 2017

Reviewer, Georgia Undergraduate Research Conference 2018 (GURC 2018) Fall 2018

Invited Speaker, Purdue Polytechnic Council of Graduate Students (COGS) Panel Discussion: *Surviving Graduate School* Fall 2018

Community

Application Developer, *TCC ICA.* Designed and developed a computer application for use by a community partner: The Children's Center (https://thechildrenscentersc.org/). The Children's Center is a local, non-profit day-care center. The application developed, known as *TCC ICA* for 'The Children's Center Individual Child Assessment', supports compliance with South Carolina Early Learning Standards. Support of the existing application is ongoing. A new version of the application with increased functionality and usability is in development. 2018-present

Instructor for the Computer Science Classroom Experience, USCB 2022 *Mathematics Opportunities in the Summer* (MOS) program July 14, 2022

Instructor for the Computer Science Classroom Experience, USCB 2021 *Mathematics Opportunities in the Summer* (MOS) program	July 15, 2021
Faculty Representative, USCB Junior Campus Day 2020	Feb. 29, 2020
Panel Member, USCB Student Success Panel: *Faculty are People Too*	Nov. 18, 2019
Faculty Representative, USCB Fall Campus Day (Bluffton) 2019	Oct. 26, 2019
Volunteer, USCB Move-In Day 2019	Aug. 18, 2019
Instructor for the Computer Science Classroom Experience, USCB Accepted Students Day 2019	April 6, 2019
Faculty Representative, USCB Spring Campus Day 2019	March 2, 2019
Panel Member, USCB Student Success Panel: *Faculty are People Too*	Nov. 26, 2018
Faculty Representative, Major and Minor Exploration Fair 2018	Sept. 27, 2018
Volunteer, USCB Move-In Day 2018	Aug. 19, 2018
Instructor for the Computer Science Classroom Experience, USCB Accepted Students Day 2018	April 21, 2018
Faculty Representative, USCB Virtual Tour (2018 Update)	April 12, 2018
Faculty Representative, USCB Spring Campus Day 2018	March 3, 2018

Professional Memberships

Association for Computing Machinery (ACM)	2013-present
Association for Computing Machinery: Special Interest Group for Information Technology Education (SIGITE)	2013-present
Association for Computing Machinery: Special Interest Group for Computer Science Education (SIGCSE)	2016-present
American Society for Engineering Education (ASEE)	2016-present
Consortium for Computing Sciences in Colleges (CCSC)	2022-present