Claudio de Freitas

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Claudio de Freitas | cfreitas07 | Google Scholar

Fort Wayne, IN - United States

OBJECTIVE

I am an engineering education scholar dedicated to advancing innovative pedagogies and educational technologies that enhance learning opportunities for diverse student populations. My research focuses on understanding the dynamics of student engagement in engineering and exploring how technological interventions can leverage the learning experience.

EXPERIENCE

- **Purdue University Fort Wayne [🌐]** *July 2022 - Current*
  Assistant Professor of First-Year Engineering Fort Wayne, IN - USA
  - Served as First-Year Engineering Course Coordinator, managing curriculum delivery and ensuring alignment with program objectives.
  - Led a comprehensive redesign of a First-Year Engineering (FYE) course (Engineering Fundamentals II), updating course content, implementing new assessment methods, and introducing innovative pedagogical strategies to enhance student engagement and learning outcomes.
  - Authored two textbooks and developed an educational tool tailored to the FYE program; established service-learning partnerships with local organizations to provide hands-on learning experiences for students.
  - Served as Technical Coordinator for outreach initiatives to increase interest in Electrical and Computer Engineering among middle and high school students.
  - Mentored and advised undergraduate students, supporting their academic growth and professional development through individualized guidance and research opportunities.
- **Youngstown State University [🌐]** *July 2021 - June 2022*
  Lecturer in Engineering Education Youngstown, OH - USA
  - Responsible for designing an introductory engineering course and teaching the Engineering Concepts course for first-year engineering students (Topics included: Excel, engineering design process, Fusion 360, and MATLAB)
  - Developed the assessment plan for a grant-funded project to train future engineers with expertise in microelectronics
  - Conducted qualitative analysis of multiple interviews and conducted qualitative data analysis to understand how to increase the number of nontraditional college students in Engineering
- **Purdue University [🌐]** *May 2020 - Feb 2021*
  Postdoctoral Research Associate West Lafayette, IN - USA
  - Performed design, data collection, and analysis of qualitative and quantitative research data.
  - Submitted multiple grants, conference papers, and journals and managed four doctorate students.
  - Utilized educational theories and human-centered design to develop and assess digital learning resources and technology tools.
  - Organized and managed mandatory reports, project deliverables, and conference/paper submissions to meet deadlines.
  - Collaborated with cross-national universities and companies to enhance educational technologies and advance technologies in neuroscience education in secondary schools.
  - Supported the research leader in the lab through multiple project management tasks and team self-development skills by coordinating lab meetings, mentoring sessions with doctorate students, administrative tasks, and research papers/grant writing.

- **Purdue University [🌐]** *Aug 2016 - May 2020*
  Graduate Research Assistant West Lafayette, IN - USA
  - Developed an award-winning educational technology for engineering education in remote areas and participated in multiple entrepreneurship programs (e.g., i-Corps NSF, MIT enterprise forum, etc.) to translate research and customer needs into final products.
  - Managed and mentored three doctorate and five undergraduate students in performing research tasks, such as implementing research methods, writing papers and grants, and presenting results in conferences and journals.
  - Co-designed, implemented and taught introductory engineering courses (including engineering design, electronics, programming, leadership, communication, teamwork, and 3D modeling) over three years to 90+ tertiary students in refugee camps in Kenya and Jordan.
  - Developed coding schemes and research design to assist multiple researchers in the project and support teaching professional development programs in traditional and non-traditional settings.
  - Developed educational material for introductory engineering courses and managed a team of 3 undergraduate students and two doctorate students during the development of open-resource materials (including video development, textbooks, rubrics, translation, and hands-on activities).
  - Served as author and co-author of multiple conference papers, journals, white papers, and grants.
- **Fiat Chrysler Automobiles [🌐]** *June 2014 - July 2016*
  Senior Product Engineer Recife - Brazil
  - Responsible for the implementation and development of the hardware-in-the-loop (HIL) capabilities in the FCA research innovation center in Recife, Brazil.
  - Managed over 1M+ dollars in HIL assets, including equipment and tool purchases, international shipping, implementation, and training.
  - Developed test scripts in Python to test and calibrate engine control units and meet functional testing procedures across a multinational team in Brazil, Italy, and United States.
  - Optimized and integrated plant models into real-time simulators with developing controllers using Simulink, MATLAB, and Embedded Coder.
  - Designed and implemented an automatic testing interface for different automotive platforms.
  - Trained and mentored ten recently hired engineering interns to assume several positions in our department related to test and validation procedures like Failure Model and Effects Analysis (FMEA), HIL applications, and multiple tools like Vector products and network interfaces (CANalyzer, CANdelaStudio, VNxx), ETAS INCA, ControlDesk.
- **Hitachi Automotive America [🌐]** *Oct 2013 - April 2014*
  Research and Development Engineering Intern Farmington Hills, MI - USA
  - Developed a platform for fast prototyping using Simulink, Embedded Coder, and Target Link.
  - Integrated HIL capabilities for testing and verifications of electronic systems and digital/analog applications using model-based design and debugged models to deploy it to hardware implementation.
  - Implemented real-time multiprocessors based on the co-simulation with dSPACE simulators.
  - Established communication models via CAN communication between engine control units and simulation models and developed control logic for various features in the powertrain using C/C++.
- **The University of New Mexico [🌐]** *Jan 2013 - May 2013*
  Visiting Graduate Researcher Albuquerque, NM - USA
  - Developed a prototype for a “smart” pillbox to enhance medication adherence, with functionalities for (1) patient reminders, (2) remote tracking of medication intake by healthcare providers, and (3) historical logging for drug efficacy analysis in research (in collaboration with K&A Wireless).
  - Designed and implemented algorithms for real-time medication detection and tracking using image processing techniques in MATLAB, leveraging embedded C/C++ for integration with microcontroller-based embedded systems.

- Conducted component selection and developed sensing algorithms to monitor pillbox usage, ensuring seamless communication between the pillbox and remote monitoring systems.
- Focused on optimizing artificial intelligence models for accurate recognition and logging of medication events, supporting future scalability for clinical trials.

- **GMFreezer** *Mar 2010 - Dec 2011*
  Electrical Engineering Intern Belem - Brazil
  - Operated as a Technical CAD Specialist, using AutoCAD to draft and revise complex electrical schematics for industrial, commercial, and residential projects, adhering to regulatory standards.
  - Designed and implemented a fully functional e-commerce platform using CSS, HTML, and JavaScript, improving online sales and user experience.
  - Conducted end-to-end development and analysis of electrical systems for diverse applications, including industrial facilities, churches, and residential buildings, ensuring compliance with safety and operational standards.
  - Programmed and tested PLCs (Schneider, WEG) for automated control systems, optimizing processes for reliability and efficiency in industrial environments.

- **Fapespa – Amazon Foundation for Support of Studies and Research[🌐]** *Oct 2010 - Oct 2011*
  Undergraduate Research Fellowship Belem - Brazil
  - Developed a character recognition system utilizing neural networks with backpropagation, implementing and optimizing algorithms in MATLAB and C++ for efficient pattern recognition.
  - Conducted comprehensive testing and validation of algorithms, analyzing results to improve the accuracy and performance of the recognition system.
  - Collaborated with research team members to refine models and optimize the backpropagation process, ensuring reliability in diverse testing conditions.
  - Documented findings and presented research progress to faculty mentors and stakeholders, contributing to advancements in machine learning applications.

EDUCATION

- **Purdue University** *Aug 2016 - May 2020*
  Ph.D. in Engineering Education West Lafayette, IN - USA
  - **Dissertation:** "Understanding Engineering Education in Displacement: A Qualitative Study of Localized Engineering in Two Refugee Camps"

- **State University of Campinas** *May 2014*
  M.Sc. in Electrical Engineering Campinas, Brazil
  - **Thesis:** "A Study on Palmprint Recognition Using Principal Component Analysis and Adaptive Local Thresholding"

- **Higher Education Institute of Amazonia** *Dec 2011*
  B.S. in Mechatronics Engineering Belem, Brazil
  - **Final Project:** "An Optimized Algorithm for Optical Character Recognition Using Neural Networks" (Funded by the State Research Department)

PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PATENT, S=IN SUBMISSION, T=THESIS

[J.6] Freitas, C. C. S. 2025. **(Submitted)** Using Storytelling to Leverage Project-Based Learning in First-Year Engineering. *The International Journal of Electrical Engineering and Education*.

[J.5] Delaine, D. A., Redick, S., Radhakrishnan, D., Shermadou, A., Smith, M. M., Kandakatla, R., Wang, L., **Freitas, C.**, Dalton, C. L., Dostilio, L. D., & DeBoer, J. (2023). **A Systematic Literature Review of Reciprocity in Engineering Service-Learning Community Engagement**. *Journal of Engineering Education*, Wiley.

[J.4] **Freitas, C.**, & DeBoer, J. (2022). **A Framework for Engineering Education for Tertiary Learners in Displacement**. *International Journal of Engineering Education*, 38(5), 1472-1483.

[J.3] DeBoer, J., Radhakrishnan, D., & **Freitas, C.** (2021). **Localized Engineering in Displacement: An Alternative Model for Out-of-School Youth and Refugee Students to Engineer Their Own Solutions for Their Communities**. *Advances in Engineering Education*, 10(1), 1-37.

[J.2] **Freitas, C.**, & DeBoer, J. (2020). **Engineering Design with Syrian Refugees: Localized Engineering in the Azraq Refugee Camp, Jordan**. *Australasian Journal of Engineering Education*, 25(1), 17-30.

[J.1] Evenhouse, D., Zadoks, A., **Freitas, C.**, Patel, N., Kandakatla, R., Stites, N., Prebel, T., Berger, E., Krousgrill, C., Rhoads, J. F., & DeBoer, J. (2018). **Video Coding of Classroom Observations for Research and Instructional Support in an Innovative Learning Environment**. *Australasian Journal of Engineering Education*, 23(2), 95-105.

[C.22] **de Freitas, C. C. S.** (2025). **(Accepted)** Using Inquisitive AI Feedback to Enhance Formative Assessment in First-Year Engineering. 2025 IEEE World Engineering Education Conference (EDUNINE), Uruguay.

[C.21] **de Freitas, C. C. S.** (2024). **(Accepted)** Scaffolding Storytelling in Project-Based Learning using Learning Management Systems: A Case Study. 2025 IEEE World Engineering Education Conference (EDUNINE), Uruguay.

[C.20] Qasmi, S., & **de Freitas, C. C. S.** (2025). **(Accepted)** Development of a Modular and Integrated Electronic Kit for First-Year Engineering. 2025 IEEE World Engineering Education Conference (EDUNINE), Uruguay.

[C.19] **Freitas, C.** (2024). **Narrative Integration in Engineering Education through Story-Based Pedagogy: Preliminary Lessons from a First-Year Engineering Case Study**. 2024 ASEE - North Central Section Conference, Kalamazoo, MI, USA.

[C.18] Mokhtarpour, A., & **Freitas, C.** (2023). **Engaging First-Year Engineering Students: A Technology-Based Approach Using Story-Based Learning and AI-Generated Content**. 2023 IEEE Global Humanitarian Technology Conference, Radnor, PA, USA, pp. 358-365.

[C.17] Haney, C., **Freitas, C.**, Gage, G. J., & DeBoer, J. (2021). **Lab Kits and the Self-Beliefs and STEM Beliefs of Students at a Black Majority High School**. CoNECD Conference, USA.

[C.16] **Freitas, C.**, & DeBoer, J. (2019). **A Mobile Educational Lab Kit for Fragile Contexts**. 9th IEEE Global Humanitarian Technology Conference, Seattle, WA, USA.

[C.15] **Freitas, C.**, Beyer, Z., & DeBoer, J. (2019). **EngStarter: An Open-Hardware and IoT Integrated Education Kit for Increasing Community-Developed Solutions**. 8th Research in Engineering Education Symposium, Cape Town, South Africa. (Awarded Duncan Fraser Award for Best Paper)

[C.14] Olayemi, M., **Freitas, C. C. S.**, Radhakrishnan, D., Dridi, M. A., & DeBoer, J. (2019). **Improving Course Retention Rates in Engineering Education in Refugee Settings: Lessons from Two Case Studies**. Research in Engineering Education Symposium, Cape Town, South Africa.

[C.13] **Freitas, C. C. S.** (2018). **Social Empowerment through Engineering Education in Developing Countries**. 2018 World Engineering Education Forum - Global Engineering Deans Council (WEEF-GEDC), pp. 1-5.

[C.12] **Freitas, C. C. S.**, Beyer, Z. J., & DeBoer, J. (2018). **Fostering Engineering Thinking in a Democratic Learning Space: A Classroom Application Pilot Study in the Azraq Refugee Camp, Jordan**. 2018 ASEE Annual Conference and Exposition, Salt Lake City, UT, USA.

[C.11] Evenhouse, D., **Freitas, C. C. S.**, Patel, N., Kandakatla, R., Zadoks, A., Prebel, T., Krousgrill, C., & DeBoer, J. (2017). **Development of a Video Coding Structure to Record Active, Blended, and Collaborative Pedagogical Practice**. Research in Engineering Education Symposium, Bogota, Colombia.

[C.10] Kandakatla, R., Packhem, J., Radhakrishnan, D., Dekaine, D., **Freitas, C. C. S.** (2014). **Insight to Global Engineering Challenges: Study and Analysis**. SEFI 42nd Annual Conference, Birmingham, UK.

[C.9] **Freitas, C. C. S.**, Larico, R. F., & Iano, Y. (2013). **A Study of Performance Using PCA and Pattern Recognition under Illumination Change**. Congresso de Matematica Aplicada e Computacional, Brazil. (Published in Portuguese)

[C.8] **Freitas, C. C. S.**, Larico, R. F., & Iano, Y. (2012). **A Study of Performance Using PCA and Pattern Recognition under Illumination Change**. VIII Workshop de Visão Computacional, Goiânia, Brazil. (Published in Portuguese)

[C.7] **Freitas, C. C. S.**, Larico, R. F., & Iano, Y. (2012). **Proposal of a Multibiometric System Using Face and Gesture Recognition**. Congresso de Matemática Aplicada e Computacional - Nordeste, Natal, Brazil. (Published in Portuguese)

[C.6] **Freitas, C. C. S.**, Pereira, C. E., Farias, V. J. C., Sousa, C. M., & Mesquita, B. D. R. (2011). **SBA Jovem - Student Chapter of the Brazilian Automation Society: A New Approach to the Education of Control Engineering in Brazil**. 18th World Congress of the International Federation of Automatic Control (IFAC), Milan, Italy.

[C.5] **Freitas, C. C. S.**, & Mesquita, B. D. R. (2010). **Using MATLAB as a Tool for the Teaching of Nonlinear Systems in Engineering: The Case of the Inverted Pendulum**. Dynamics Days South America - International Conference on Chaos and Nonlinear Systems, São José dos Campos, Brazil.

[C.4] **Freitas, C. C. S.**, & Farias, V. J. C. (2010). **Representações Estudantis de Sociedades Científicas como Forma de Promover e Integrar Estudantes e a Engenharia**. INTERTECH 2010 International Conference on Engineering and Technology Education, Ilhéus, Brazil. (Published in Portuguese)

[C.3] Freitas, C. C. S., Mesquita, B. D. R., & Farias, V. J. C. (2010). **Engineering Education Development: Approaches Based on Experiences and Observations**. V CONNEPI, Maceio, Brazil. (Published in Portuguese)

[C.2] **Freitas, C. C. S.**, Mesquita, B. D. R., & Andrade, R. V. C. S. (2010). Development of a Low-Cost Device for Temperature Monitoring. V CONNEPI, Maceio, Brazil. (Published in Portuguese)

[C.1] **Freitas, C. C. S.**, & Mesquita, B. D. R. (2009). **Methods and Tools Used in Digital Image Processing: Monochromatic Applications**. IV Congresso de Pesquisa e Inovação da Rede Norte e Nordeste de Educação Tecnológica - CONNEPI, Belém, Brazil. (Published in Portuguese)

GRANTS

- **FoodBOX: An Open-Source Agricultural STEM Platform** *2025*
  2025 Collaborative Research Grant - $ 15,000 [🌐]
  - This proposal supported the launch of EngStarter's first module, called Food Box, which builds on the past decade of lessons learned in teaching and learning within displaced communities. If successful, Food Box will serve as a model for how STEM tools can foster immediate problem-solving and long-term empowerment for displaced youth.

- **Brightspace Narratives: Igniting Engineering Education with Story-Based Pedagogy** *2023*
  Brightspace Innovation Grant - $ 10,101 [🌐]
  - In this AI era, understanding how current technologies can adopt new pedagogies is more important than ever. This project aims to make use of Brightspace's technological affordances to incorporate an innovative narrative pedagogy grounded in Story-Based Pedagogy in the engineering classroom.

- **MATLAB Engineering Challenges: Peer Learning Repository** *2023*
  Course Hero Teaching Award - $ 2,000 [🌐]
  - Engineering students will employ the MATLAB programming language to detect, create models for, and scrutinize engineering challenges. Working together with their instructors, they will utilize their projects to construct an online repository. This repository will foster ongoing peer-centered learning and knowledge sharing.

- **Using Storytelling to Promote Service Learning in First-Year Engineering** *2023*
  Service-Learning fellows program - $ 2,000 [🌐]
  ◦ This project focused on integrating service-learning in the first-year engineering curriculum and use engineering design to address a problem from a local community.

HONORS AND AWARDS

- **PFW Sigma Xi Teacher of the Year Award** *2025*
  Sigma Xi Purdue University Fort Wayne [🌐]
  ◦ Recognized for innovative teaching practices implemented in the first-year engineering program at Purdue University Fort Wayne.
- **ETCS Dean's Choice Award** *2025*
  Purdue University Fort Wayne (PFW) Student Research and Creative Endeavors Symposium [🌐]
  ◦ Recognized for best paper among Engineering and Technology and Computer Science posters.
- **Best Paper Award** *2019*
  Research in Engineering Education Symposium, South Africa [🌐]
  ◦ Recognized for best paper among international submissions, showcasing innovative research in engineering education.
- **Susan Bulkeley Butler Center for Leadership Excellence Travel Grant** *2019*
  Purdue University, USA [🌐]
  ◦ Provided travel support for professional development and conference participation.
- **Winning Innovation** *2019*
  MIT Innovate for Refugees, Jordan [🌐]
  ◦ 'Engineering For Social Good' won the 'Idea Track.' Project: EngStarter.
- **2nd Place - Data of Things Challenge** *2018*
  USA
  ◦ Secured 2nd place in the national competition focused on data-driven technology solutions. Project: Smart Pillbox.
- **Finalist for Best Idea - RICS Challenge** *2018*
  London, UK [🌐]
  ◦ Achieved one of the top 12 positions out of 1250 submissions worldwide. Project: IoT Water Management System.
- **Finalist for Best Project - Thought for Food Challenge** *2018*
  Brazil [🌐]
  ◦ Ranked among the top 10 out of 750 submissions in a global food security competition. Project: IoT Water Management System.
- **People's Choice Award** *2017*
  Dawn or Doom Conference, USA
  ◦ Voted by attendees for impactful and engaging presentation.
- **Leadership Award** *2013*
  Ibero-American Science and Technology Education Consortium, Colombia
  ◦ Recognized for leadership representing SPEED and ISTEC.
- **Young Scientist Award** *2013*
  International Society for Engineering Education, Russia
  ◦ Honored for research excellence and potential in engineering education.
- **Future Entrepreneur Award** *2013*
  RedEmprendia, Spain
  ◦ Awarded for entrepreneurial potential in technology and innovation.

- **Finalist of "2013 REI Award" in two categories: Light Vehicles and Autoparts** *2013*
  Automotive Business Magazine, Brazil
  ◦ The Unicamp E-Racing Team was one of the five finalists of the 2013 REI Award (Recognition for Excellence and Innovation) in two categories: Light Vehicles and Autoparts. The REI Award was created by Automotive Business magazine to recognize the best initiatives in the automotive industry.
- **Acknowledgement for Academic Performance** *2013*
  University Council of Unicamp, USA
  ◦ Letter from the Rector, on behalf of the University Council of Unicamp (CONSU), acknowledging the important and dedicated work that led to the victory of the Unicamp E-Racing Team in the Formula SAE Electric Competition, in 2013, in the city of Lincoln - NE - United States of America.
- **1st Place - Formula SAE Electric Competition** *2013*
  Society of Automotive Engineers, USA
  ◦ First place in international electric vehicle design competition.
- **Santander Research Fellowship** *2013*
  Brazil
  ◦ Awarded fellowship to support engineering research project at the University of New Mexico (USA).
- **1st Place - Formula SAE Electric Competition** *2012*
  Society of Automotive Engineers, Brazil
  ◦ Achieved first place nationally, showcasing expertise in electric vehicle design.
- **CNPq Thesis Dissertation Grant** *2012-2014*
  Brazil
  ◦ Funded by the National Council for Scientific and Technological Development (CNPq) to support master thesis research.
- **Best Student Initiative for Engineering Students** *2011*
  Cengage Learning, Portugal
  ◦ Recognized for exemplary student-led engineering project: SBA Jovem - A student chapter of the Brazilian Automation Society (Co-Founder).

Leadership and Service Experience

- **IEEE Code Clash Hackathon Judge** *2024 - Current*
  IEEE Student Chapter, Purdue University Fort Wayne [🌐]
  ◦ A Hackathon where undergraduate students solve problems using machine learning techniques.
- **Sci-TEC Technical Lead** *2024 - Current*
  Sci-TEC Academy, Purdue University Fort Wayne [🌐]
  ◦ The Sci-TEC Academy is a career and leadership network for students in grades 6–12. I currently develop activities related to electrical and computer engineering for middle and high school students.
- **Advisory Board Member** *2024 - Current*
  Research Symposium - Purdue Fort Wayne, Purdue University Fort Wayne [🌐]
  ◦ Member of the Advisory Board Committee of the Research Symposium at PFW. In charge of collaborating with strategic decisions about poster submissions, evaluations, and presentations.
- **FIRST LEGO League Judge** *2023*
  PFW FIRST LEGO League Northern Indiana Semi-State Tournament [🌐]
  ◦ Judged robot designs and the engineering design process used to complete their final designs.
- **Curriculum Review Subcommittee Member** *2023 - 2024*
  Purdue University Fort Wayne
  ◦ Participated in pedagogical decisions about new courses being proposed and implemented at PFW (Campus level).

- **ETCS Award Committee Chair** *2023 - 2024*
  Purdue University Fort Wayne
  ◦ Participated and led the team responsible for coordinating department awards and scholarships (Department level).
- **Outreach Coordinator** *2019 – 2020*
  American Society of Engineering Education (ASEE) Student Chapter, Purdue University
  ◦ Organized and led outreach initiatives to engage local communities with engineering education.
  ◦ Increased participation in outreach events by 25% through targeted promotion and partnerships.
  ◦ Developed interactive workshops for K-12 students, fostering early interest in STEM fields.
- **Tech Task Team Member** *2019 – 2020*
  Inter-Agency Network for Education in Emergencies (INEE) [🌐]
  ◦ Contributed to the development of technology-based strategies for educational programs in crisis settings.
  ◦ Collaborated with international stakeholders to enhance access to quality education in emergencies.
  ◦ Provided technical insights on engineering education for displaced and marginalized communities.
- **Regional Coordinator** *2018 – 2019*
  Thought for Food Foundation (TFF) [🌐]
  ◦ Coordinated regional initiatives promoting innovative solutions for food security challenges.
  ◦ Facilitated workshops and mentoring sessions for participants, enhancing regional engagement by 30%.
  ◦ Led outreach efforts and established connections with local universities to expand TFF's impact.
- **President & Chartering Member** *2010 – 2014*
  Student Platform for Engineering Education Development (SPEED) [🌐]
  ◦ Elected President in 2013, leading the organization in expanding global partnerships and member engagement.
  ◦ Spearheaded organizing committees for the 7th to 9th Global Student Forum events, impacting over 500 students globally.
  ◦ Collaborated with ASEE to co-organize the 8th and 9th Global Colloquia on Engineering Education.
- **Powertrain Team Member** *2012 – 2013*
  Unicamp Formula SAE Electric Team [🌐]
  ◦ Contributed to the design and development of the powertrain system for a Formula SAE electric vehicle.
  ◦ Enhanced vehicle performance through optimized component selection and testing.
  ◦ Collaborated with a multidisciplinary team to achieve competition goals.
- **President & Co-Founder** *2009 – 2011*
  Student Chapter of the Brazilian Automation Society (SBA Jovem) [🌐]
  ◦ Co-founded and led the first student chapter of the Brazilian Automation Society, promoting automation and control engineering among students.
  ◦ Organized technical workshops and events, increasing chapter membership and engagement by 50%.
  ◦ Established partnerships with industry leaders to support student-led projects and initiatives.

KEYNOTE SPEAKER, PRESENTATIONS, AND WORKSHOPS

- **Enhancing Self-Regulated through Inquisitive AI Feedback** *2024*
  The Alliance Showcase, USA
- **The Role of AI in Storytelling in First-Year Engineering for Effective Learning and Assessment** *2023*
  2023 System-Wide Forum, USA
- **Innovations in Electronic Engineering Laboratory Education (Invited Speaker)** *2023*
  Munster Technological University, Kerry, Ireland
- **Innovations in Teaching Introductory Programming in the Age of AI** *2023*
  The Alliance Showcase, USA
- **Service-Learning in the Classroom** *2023*
  2023 Fort Wayne Teaching and Learning Conference
- **Engineering Education in Displacement** *2019*
  Virginia Tech, USA
- **Workshop facilitator: Smart Cities and Peace Engineering** *2018*
  World Engineering Education Forum, USA
- **Developing a Global Voice for Creativity and Innovation in Engineering Education** *2013*
  9th Global Student Forum, Colombia
- **Engineering education and community engagement** *2012*
  International Symposium on Project Approaches in Engineering Education, Brazil
- **Engineering Education for Sustainable Development and Social Inclusion** *2012*
  8th Global Student Forum, Argentina
- **Connecting Engineering Students Around the World** *2011*
  FLEEI - El Foro Estudiantil, Colombia
- **Connecting students globally** *2011*
  World Engineering Flash Week, Portugual
- **Student Voice in Engineering Education** *2011*
  XVII ISTEC General Assembly, Brazil
- **Introduction to Image Processing and Neural Networks** *2010*
  National Conference of Automation, Brazil

PEER REVIEW

- **Reviewer/Referee**, Journal of Engineering Education *2023*
- **Reviewer/Referee**, Frontiers in Education *2023*
- **Reviewer/Referee**, 26th Annual Student Research and Creative Endeavor Symposium *2023*
- **Reviewer/Referee**, The 23rd IEEE International Conference on Advanced Learning Technologies *2023*
- **Reviewer/Referee**, Frontiers in Education Conference, California, USA *2018*
- **Reviewer/Referee**, The Annual Conference, American Society for Engineering Education *2018*
- **Reviewer/Referee**, The Annual Conference, American Society for Engineering Education *2017*
- **Reviewer/Referee**, World Engineering Education Forum, Florence, Italy *2015*
- **Reviewer/Referee**, Brazilian Technology Symposium, Campinas, Brazil *2014*

THESIS AND DISSERTATIONS COMMITTEES

- **Committee Member (Thesis)** *"An Efficient Video Classification Deep Learning Algorithm for Object Detection"*
  Riyaz Shaik, Purdue Fort Wayne November 2024, Fort Wayne, IN, USA
- **Committee Member (Thesis)** *"Design and Implementation of an Active Cell Balancing of a Battery Module"*
  Lukmon Otunubi, Purdue Fort Wayne June 2024, Fort Wayne, IN, USA
- **Committee Member (Thesis)** *"The Application of Collective System Design in Service Industry"*
  Di Xu, Purdue Fort Wayne December 2023, Fort Wayne, IN, USA

PROFESSIONAL MEMBERSHIPS

- **IEEE**, Membership ID: 98793142 *Nov 2023 - Present*

CERTIFICATIONS

- **Certificate in Qualitative Research, Purdue University** *May 2020*
- **Higher Education in Emergencies, InZone** *Nov 2019*

ADDITIONAL INFORMATION

Languages: English (Fluent) and Portuguese (Native)

SKILLS

- **Programming Languages:** Python, C++, MATLAB, C, HTML, CSS
- **Web Technologies:** HTML, CSS, JavaScript
- **Database Systems:** MySQL, SQLite
- **Data Science & Machine Learning:** TensorFlow, Keras, Scikit-learn, Pandas, NumPy, MATLAB
- **DevOps & Version Control:** Git, GitHub
- **Specialized Areas:** Embedded Systems, Hardware-in-the-Loop (HIL) Simulation, Control Systems, Image Processing
- **Mathematical & Statistical Tools:** MATLAB, R, SPSS, STATA, Excel (Advanced)
- **Other Tools & Technologies:** Simulink, dSPACE, AutoCAD, LabVIEW, ETAS INCA
- **Research Skills:** Qualitative Analysis, Quantitative Analysis, Grant Writing, Technical Writing, Experimental Design, Data Visualization