

CONTACT INFORMATION

2008 Tulane Drive,
Richardson, TX 75081
USA

Phone: (214) 396-1343
Email: eva@cosoroaba.ro

RESEARCH INTERESTS

Engineering education, specifically effects and improvement possibilities of project based learning in students of all levels
Electric machine modeling, design and control methods
Optimization algorithms and their applications in engineering
Consumer and industry attractive renewable energy solutions

TEACHING INTERESTS

Fostering critical, independent, and creative thinking in students, necessary to become successful engineers and members of society
Employ project and team based learning to prepare students for the current job market as well as graduate level research
Efficiently transfer electrical engineering knowledge to students, enabling them to understand state of the art research in the field
Strengthen students technical communication skills, crucial for a successful career regardless of final

RESEARCH EXPERIENCE

TEACHING EXPERIENCE

Simulink Tutorial

March 2017

Designed and held an interactive graduate level tutorial on power electronics simulations using MATLAB/Simulink in the frame of the graduate course on power electronics simulations needed for class projects and included student immediate feedback through real-time polling. Topics were prepared to address specific student interest according to a preceding survey held via eLearning.

Short Invited Lecture

June 2016

Prepared and lectured on electric drive simulations in MATLAB/Simulink in the frame of the graduate course on electric drive simulations at the University of Texas at Dallas. The talk focused on the efficient combined use of these engineering tools and illustrated different simulation approaches with help of examples.

Graduate Teaching Assistant, The University of Texas at Dallas

January 2015 - May 2016
January 2017 - May 2017

Created homework problems and solutions for Electric Network Analysis (Undergraduate Level) and Control, Modeling and Simulation of Power Electronics (Graduate Level)
Organized, structured, and lead extracurricular problem solving sessions as well as material review sessions for Electric Network Analysis (UG)
Assisted students working on their degree capstone project in the Senior Design Project course (UG)
Analyzed the needs and proposed workshop content to facilitate a successful Senior Design Project, considering input from a former students focus group
Guided and facilitated students to complete laboratory projects for Microprocessor Systems (G), Electric Network Analysis (UG), and Electronic Circuits (UG)
Graded homework and held office hours for several subjects such as Electric Network Analysis (UG), Nonlinear control (G), and Control, Modeling and Simulation of Power Electronics (G)
Administered and supervised exams
Collected assessment data for course owners

Volunteer, The Shoulders of Giants, Inc.

October 2013 . present

Supported primary school aged children of diverse background to complete experiments and follow the scientific method as part of science outreach summer programs on topics including biology, electromagnetism, and chemistry

PROFESSIONAL EXPERIENCE

Intern, Intelligent Buildings, Romania

July . August 2012

Programmed automated, wireless actuators and sensors of light and HVAC applications
Assisted with on-sight installation

Intern, Bosch Solar Energy AG, Germany

June . October 2011

Generated monthly departmental production reports
Guided potential business partners through the solar cell production plant, offering detailed explanations for every process in English and German

Intern, Continental Automotive, Romania

July . September 2010

Determined the cycle times of every machine in the production line of automatic double clutch control electronics
Observed the production process and searched for optimization possibilities to increase production

Tourist Guide, Lutheran Church of Cisnatie, Romania

Mai 2006 . September 2008

Lead visitor groups of all sizes, from various countries, through the church castle of Cisnatie and Cisnadioara, providing insight on the history and culture of the Transylvanian Saxons (a German minority living in Romania) tailoring the presented material according to the visitors interest

PROFESSIONAL MEMBERSHIP

Member of the Institute of Electrical and Electronics Engineers (IEEE)

2014 . present

Member of IEEE Young Professionals

2014 . present

Member of IEEE Women in Engineering

2014 . present

Member of IEEE Education Society

2016 . present

Member of the American Society for Engineering Education

2017 . present

SERVICE

Journal and Conference Reviewer, IEEE (Institute of Electrical and Electronics Engineers)

2014 . present

Transactions on Vehicular Technology and on Energy Conversion
Conference on Electromagnetic Field Computation, CEFC
International Conference on Electrical Machines, ICEM
International Electric Machines and Drives Conference, IEMDC
Transportation Electrification Conference and Expo, ITEC
Applied Power Electronics Conference and Exposition, APEC

Secretary, IEEE Industry Application Society, UT Dallas Chapter October 2013 - June 2015
Maintained an orderly record of the societies paperwork, participated in University mandated meetings and helped organize project work and internal meetings

Conference Volunteer, Annual Conference of the IEEE Industrial Electronics Society
October 2014

Conference Volunteer, International Conference on Optimization of Electrical and Electronic Equipment
May 2012

SOFTWARE SKILLS

Finite element simulation

FEMM
Maxwell (Ansys)
Comsol

CAD software

