Good morning,
You are invited to attend our weekly ECE Graduate Seminar.

Old Dominion University
College of Engineering and Technology
Department of Electrical and Computer Engineering

All lectures to be held at 3:00pm on Fridays online at
https://vs.prod.odu.edu/kvs/interface_webex/?cid=202010_ECE7831VS_91606
For more information, contact Dr. Chung Hao Chen at (757) 683-3475 or email cxchen@odu.edu.

Friday, September 4, Seminar Topic:
THE WIEN FILTER SPIN ROTATOR ENERGY UPGRADE AT JEFFERSON LAB by Gabriel Palacio Serrano, PhD Candidate in the Department of Electrical & Computer Engineering at Old Dominion University

Abstract:

The Wien filter with its elegant simplicity has proven to be a very useful tool for studying phenomena related to charged particles. Its principle of operation based on static electromagnetic fields and its effect on the electron spin make it an essential component at the Jefferson Lab Continuous Electron Beam Accelerator Facility. The nuclear physics experiments carried out in this laboratory require an electron beam with a high degree of spin polarization; furthermore, the spin angle must be precisely controlled in the injector to provide a beam with the characteristics required by each of the four experimental halls. In this presentation, I will address the basics of the Wien filter, its unintended effect on the electron beam orbit and the work in progress to implement an energy upgrade version of it at Jefferson Lab.

Bio:

Gabriel Palacios Serrano is a foreign student from Mexico City. He received his bachelor's degree in Physics Engineering from the Autonomous Metropolitan University Azcapotzalco in Mexico City, a master's degree in Physics at ODU, and is currently a PhD candidate in Electrical and Computer Engineering in the Electrical & Computer Engineering department at ODU. His research focuses on accelerator physics, working with the Jefferson Lab electron source group. He mainly works on design, simulation and characterization of electromagnetic devices for the polarized electron sources, specifically Wien filters and high voltage cathode electrodes.