

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=202020_ECE731ECE831VS_94044

For more information, contact Dr. Chung Hao Chen at (757) 683-3475 or email cxchen@odu.edu.

Friday, March 5, 2021 Seminar Topic:

COMMISSIONING & CHARACTERIZATION OF MAGNETIZED GRIDDED THERMIONIC ELECTRON SOURCE by Mark Stefani, PHD Candidate in the Department of Electrical & Computer Engineering at Old Dominion University

Abstract:

Collaborative efforts to design and fabricate a magnetized gridded thermionic electron source has been conducted between Xelera and Jefferson National Laboratory. Commissioning and characterization of the gun fabricated by Xelera was done to benchmark the viability of future electron source designs and capabilities. The work involved simulation, installation, troubleshooting, modifications of the design, commissioning, characterization, and magnetization of the electron beam produced. Finally, the gun was used to demonstrate a previously unachieved current of magnetized electron beam from a gridded thermionic source of this uniquely compact size. This thesis addresses the following scientific and technological challenges: building a compact gridded thermionic electron sources, production of high current magnetized electron beam, and demonstration of novel characterization measurements for magnetized beam.



Bio:

Mark Stefani is a Ph.D. Candidate in the ECE Department at Old Dominion University. He received his Bachelor's and Master's degrees in Physics from Old Dominion University. His publications include two publications in the journal Physical Review: Accelerator & Beams with another paper being sent for review. Published proceedings at 3 international particle accelerator conferences. Third place award in American Vacuum Society student poster competition. Pursuing a career in Therapeutic Medical Physics.