ECU CSE3 Newsletter

Summer 2023

Upcoming Events

"Energy Efficiency in a Manufacturing Enterprise" Webinar - Dr. Sanjeev K. Khanna
Tuesday, December 5th, 2-3PM EST

Free to register:
go.ecu.edu/CSE3webinar/EnergyEfficiencyManuEnterprise

"Reducing Food Waste in the Supply Chain: Greenhouse Gas Benefits" - Dr. Valerie M. Thomas
Thursday, December 7th, 2-3PM EST

Free to register:
go.ecu.edu/CSE3webinar/ReducingFoodWasteGHGBenefits

Undergrad Spotlight

I worked for Gaylor Electric in Charlotte, North Carolina as a virtual design associate. I collaborated with teams to look over electrical designs. We would create, develop and improve on designs and models that would then be used in building structures. Using Revit and Autodesk, I learned a lot about the software used in these designs as well as gained experience from visiting the build sites. It was exciting to spend my internship working alongside professionals that have been in their respective fields for decades.

Meet Dr. Randall Etheridge

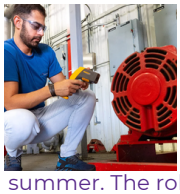
Dr. Randall Etheridge, P.E- teaches environmental core and engineering courses. Dr. Etheridge plays a pivotal role here at ECU and CSE3 both in and out of the classroom. His new research undertaking has pointed him towards assisting Greenville Utilities Wastewater Treatment Plant in remediating offloaded wastewater decant and effluent to reduce nitrogen and phosphorus. This project utilizes pretreatment of gravel, zeolite, crushed concrete, and woodchips to assist in the removal of large solids, ammonium, phosphate and nitrate prior to the final floating treatment wetland cell for further reduction of nitrogen and phosphorus. The project includes multi-disciplined faculty and over 15 undergraduate and graduate students.

ECU engineering graduate student Emre Ugur Bal said the chance to intern at Hyster-Yale Group was a great learning experience.

A Warm Welcome!

CSE3 is thrilled to welcome Melissa Nolan to the team! She will be joining us as our Pollution Prevention Specialist and Coordinator. Melissa comes to us with a wealth of knowledge in environmental health and STEM education. Melissa will be coordinating CSE3 activities and partnerships, as well as overseeing our grant work, in partnership with the EPA.

Summer 2023 Internships



Behzad Zeinolabedini, an ECU engineering graduate student, interned with LS System USA. Zeinolabedini was one of seven pollution prevention interns this summer. The role allowed him to look at the company's facility and explore its use of energy in everything from the manufacturing machines to the refrigerator in the breakroom. He conducted calculations and cost analysis in order to present a final report to company and CSE3 staff. We are proud that 100% of our cooperating partners would hire their student engineering interns into full-time roles, after graduation!

Scan the QR code for current events, social media, research, and internship opportunities!

linktr.ee/ecu.cse3

Congratulations Ken!

CSE3 sends our congratulations to Ken Weddle! He recently graduated with his masters degree in mechanical engineering. His skills and expertise has been invaluable to our center over the past two years. His thesis was titled, "Heat transfer characteristics of a heat exchanger in a solar assisted, supercritical Brayton cycle for power generation". We are so proud of Ken for graduating and landing a full-time job as a Systems Engineer with Raytheon Technologies in Tucson, Arizona.

Energy Assessment at the Bragging Rooster Brewery

CSE3 was thrilled to partner with the Bragging Rooster brewery in Warrenton, NC to conduct an energy assessment this past season. Thank you to the owner, RJ for allowing us to come out, and for supporting sustainable, lean, and green manufacturing practices.

Graduate Research

Behzad Zeinolabedini is conducting on Experimental and Numerical Investigation of Residential Furnace Performance with Blends of Natural Gas and Green Hydrogen. This research aims to investigate the performance of a residential furnace using various blends of green hydrogen and natural gas (H2/NG) and to determine the optimum H2/NG ratio without any furnace modifications.

ECU SUSTAINABLE ENERGY AND ENVIRONMENTAL ENGINEERING

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