

EDUCATION

Kennesaw State University B.S. Mechanical Engineering

Graduation: Fall 2021

LEADERSHIP

Association of Energy Engineers (AEE)

Student Chapter President..... *April 2019- Present*

Student Chapter Vice President..... *April 2018- April 2019*

The President co-ordinates presentations, marketing promotions, and outreach. He also introduces the speakers to chapter meetings, established meeting locations and has helped spread the word to students about the AEE and their involvement on campus. In the event when the President requires assistance with booking speakers or networking, the Vice President steps in and elevates chapter in order to provide impactful and educational campus involvement.

EXPERIENCE

Krones AG: Rosenheim, Germany..... *Engineering Apprentice May 2018—Aug 2018*

Overview: Familiarized and acclimated to German work culture, expectations, and performance.

-Redesigned single-acting pneumatic actuator into a dual-acting linear drive for beverage carriers, and registered an international patent under this new design.

-Presented new machine at Bad Aibling Vocational School to mechanical engineering students.

Skills learned: Assembly Development, Intercultural Communication Skills, Hand Skills/Machining

University of California, Berkeley: Berkeley, California..... *Engineering Advisor May 2017—July 2017*

Overview: Demonstrated a real-life, hands-on exposure of engineering through structural design challenges, robotics and circuitry workshops, as well as a capstone project development for gifted high school students from around the world.

-Helped shape an experience for students by framing the day with activities and expectations.

-Interacted with and supervised students to provide a safe and productive learning environment.

Skills Learned: Leadership/Mentoring, Event Coordination, Team building, Role Playing/Acting

PUBLICATIONS

U.S. Clean Carbon Costs: An Investigation of Georgia Markets and Solar Technology

Date: Apr 15, 2019

Journal of Student Research

Description: This paper investigates how geographical variations affect energy costs throughout the United States by using a Levelized Cost of Energy (LCOE) model. The objective was to deconstruct a nationwide LCOE model and investigate the assumptions that are made on a state level; in this case, Georgia was the chosen sample to exhibit how challenges in solar technology affect the cost of clean carbon energy.

Numerical Modeling of Fluid Flow in a Molten Salt Reactor

Date: Nov 11, 2018

Digital Commons Network

Description: Molten Salt Reactors (MSRs) are a generation IV reactors that have been selected by the World Nuclear Association for its potential in the advancement of reactor sustainability, economics, safety, reliability, and proliferation-resistance. Literature shows differing mixed composition of uranium and fluoride salts being utilized in the reactor core. Depending on the mixed composition, each mix has different effects on the core overall temperature distribution. Computational Fluid Dynamics (CFD) was used as a tool to study the influence of the different mixes on temperature distribution and geometry in homogenizing the flow velocity within the reactor. This research may lead to a more reliable, efficient and safer MSR reactor design.

CERTIFICATIONS

Green Building Certification Inc. LEED Green Associate

Issued: Sept 2020

MEDIA APPEARANCES

The American Reporter

Published: July 21, 2020

“Educator Carnell Tate Helps Failing Students Tap Into Their Academic Potential”

AWARDS & HONORS

- AEE International Al Thumann Scholarship Recipient: \$4,000 (September 2020)

- AEE Atlanta Chapter Scholarship Recipient: \$1,000 (September 2020)

Association of Energy Engineers International Student Chapter Awards

- Best Community Service (September 2020)
- Outstanding Student Chapter Member (September 2020)
- Best Student Chapter Member Meeting (September 2020)
- Best Overall Student Chapter Performance (September 2019)
- Best Student Chapter Member Meeting (September 2019)

- Bagwell Center Undergraduate Research Fellowship Award: \$1,200 (April 2019)

- Best Overall Student Chapter Performance (September 2018)

Association of Energy Engineers International Student Chapter Awards

- Reade Scholarship Recipient : \$4,000 (August 2016)

- 1st place winner (September 2016)

University of North Georgia National Parliamentary Debate Association Championship