

Lauren Mary Garrison

Graduate Institution: University of Wisconsin-Madison

Graduate Discipline: Nuclear Engineering

Hometown: Charleston, IL

Relevant SC Research: Fusion Energy Sciences



Research Interest:

I am a member of the Inertial Electrostatic Confinement (IEC) fusion research group at the University of Wisconsin-Madison (UW). There are currently four experimental devices in the IEC-UW laboratory. Three of the devices are IEC fusion experiments and the fourth is the Materials Irradiation Experiment (MITE-E). The MITE-E irradiates samples with helium ions at high temperatures to simulate the conditions experienced by materials in fusion reactors. I use the MITE-E to test materials for viability as plasma facing components in fusion reactors.

My undergraduate major was in the Nuclear, Plasma, and Radiological Engineering Department at the University of Illinois at Urbana-Champaign. This first peaked my interest in the use of plasmas for surface modification of materials. Since then I have become more informed and more interested in fusion plasmas for power generation. Additionally, I am interested in uses of fusion for non-power applications such as neutron sources, medical isotope production, and detection of explosives.

About Me:

At the UW I am in the Nuclear Engineering and Engineering Physics Department and pursuing a technical minor in Materials Science. With support from the SCGF program I have been able to present my research at several conferences in my field including the Technology of Fusion Energy Conference and the International Conference on Fusion Reactor Materials.

Upon completing my PhD I hope to continue research either in academia or at a national lab.

I am currently a member of the American Nuclear Society, Alpha Nu Sigma honor society, Institute of Electrical and Electronics Engineers, and Materials Advantage. When not studying or doing research I enjoy reading, playing video games, gardening, and spending time with my two rabbits.



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