

Lauren Garrison



Graduate Institution: University of Wisconsin

Location: Madison, Wisconsin

Graduate Discipline: Nuclear Engineering

Hometown: Charleston, Illinois

Research Interests:

I am a member of the Inertial Electrostatic Confinement (IEC) fusion research group at the University of Wisconsin-Madison (UW). Several years ago the group began testing materials in its gridded IEC chambers for fusion applications. As more attention in the fusion community turned to materials research, so too did the IEC group expand its materials research program. Over the last year a new device specifically designed for simulating fusion conditions for materials testing was constructed. This Materials Irradiation Experiment (MITE-E) is what I now use 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. These are three topics that have also been researched in the IEC group at UW.

About me:

At the UW I am in the Nuclear Engineering and Engineering Physics Department and pursuing a technical minor in Materials Science. I just completed my second year of study and am looking forward to becoming more active in the scientific community. For instance, I have submitted abstracts to two conferences for the upcoming year and am anticipating making my first presentation at a research conference this fall. 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 and vice president of the Alpha Nu Sigma honor society chapter at UW. When not studying or doing research I enjoy exploring Madison, WI. The city boasts two large lakes and more restaurants per capita than any other city in the United States so there is always something to see and do.



U.S. DEPARTMENT OF
ENERGY

Office of
Science