

## **Biographical Summary**

Dr. Schmidt is a member of the scientific staff at Lawrence Livermore National Laboratory, working in the area of plasma physics. Additionally, she is the Accelerator Group Leader within the Engineering directorate and APL of Pulsed Power Fusion Plasmas within the Physics Division. She is leading a team of 20 scientists working on several projects to engineer dense plasma focus (DPF) Z-pinch devices for multiple applications. The group is using both experiments and particle-in-cell (PIC) simulations to better understand and optimize these devices. One of their key capabilities is fully kinetic modeling of these devices using a particle-in-cell code which can predict neutron yield from first principles. They also have 100-J and 1 kJ scale table-top DPF experiments which can be used for code validation, rapid prototyping, and diagnostic development. They are in the process of designing and building a MJ scale DPF experiment. The team is also helping develop flow z-pinches for fusion energy, developing compact neutron sources with field ionizer ion sources, and modeling high power magnetron sputtering plasmas.