Understanding Materials at Extreme Conditions

Dynamic Compression Summer School: July 30 - August 4, 2023

Dynamic compression experiments subject materials to unique thermodynamic conditions – very large compressions, high temperatures, and large deformations – on short time scales resulting in a rich array of physical and chemical changes. Understanding the material response at these extreme conditions is of central importance to fundamental science and spans the disciplines of Physics, Chemistry, Materials Sciences, Geo/Planetary Sciences, and Solid Mechanics.

Research activities related to the dynamic compression of materials are extremely diverse and challenging. The Shock Wave Academic Partnership aims to strengthen ongoing efforts to enhance the long-term intellectual vitality of this field, which is uniquely suited for studying material response under extreme conditions.

The Dynamic Compression Summer School provides an overview of dynamic compression science appropriate for upper-level undergraduates and first-year graduate students. The four and a half days of activities will introduce students to the scientific fundamentals, contemporary research activities including informal discussions, and career opportunities within this exciting field.

The Dynamic Compression Summer School is sponsored by the Shock Wave Academic Partnership:

Caltech | PRINCETON UNIVERSITY | WASHINGTON STATE UNIVERSITY

Location

Dynamic Compression Sector ,
Advanced Photon Source, Argonne National Laboratory

Dates

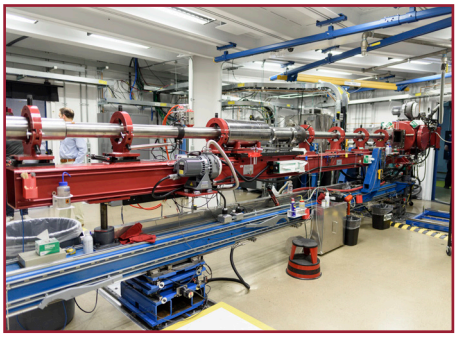
July 30 - August 4, 2023

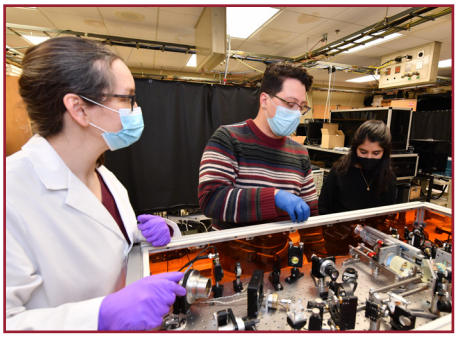
Curriculum

- Introduction to dynamic compression science and the fundamentals of matter at high pressure.
- Explore opportunities available in dynamic compression science within the Shock Wave Academic Partnership.
- Receive an overview of career opportunities in dynamic compression science by speakers from Lawrence Livermore, Los Alamos, and Sandia National Laboratories.
- Experience hands-on learning and discover the applications of dynamic compression to address scientific problems across multiple disciplines.
- Tour the state-of-the-art facilities at the Dynamic Compression Sector, the Advanced Photon Source, and Argonne National Laboratory.

How to Apply

To apply, visit:
shock.wsu.edu/dcss





Enrollment and Support Details

- Enrollment is limited to 25 students.
- Lodging and meals provided.
- Travel support up to $500.

We are planning for a robust, in-person summer school.
All local COVID-19 health and safety protocols will be followed, and are subject to change based on updated guidance.

Questions? Contact Chelsea Jendro: (509) 335-7217, shockphysics@wsu.edu

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