The Institute for Shock Physics (ISP) at Washington State University (WSU) is a multidisciplinary research organization, within the College of Arts and Sciences (CAS), with a focus on understanding the response of materials under extreme conditions. WSU and three outstanding academic partners – Princeton University, California Institute of Technology, and Stanford University – conduct substantive research leading to advances/innovations in the field of Dynamic Compression Science. Research activities involving students, postdocs, and faculty members from different academic disciplines at the four participating institutions are emphasized to comprehensively address the exciting scientific challenges. In addition, meaningful and mutually beneficial collaborations are undertaken with scientists at the NNSA Laboratories: Los Alamos, Lawrence Livermore, and Sandia.

We have openings for postdoctoral research associates and are looking for creative, self-motivated experimentalists who have the ability and interest to pursue challenging, interdisciplinary problems in a fast-paced research environment. These positions are located on the WSU Campus in Pullman, WA.

The scientific objectives for the postdoctoral research associate positions are listed below. Prior experience in shock wave research is not required. However, strong hands-on experimental skills and temperament to perform single event experiments are essential.

**Dynamic Compression of Condensed Matter:** Understanding structural changes and inelastic deformation mechanisms in solids subjected to high stress dynamic compression. Although a broad range of solids – from single crystals to heterogeneous/architected materials – are of interest, the choice of the particular material to be examined will depend on the academic/research background of the individual hired in this position. Time-resolved (ns resolution) laser-interferometry measurements in single event experiments and their analysis will provide the basis for understanding the dynamic material response. This position would be ideal for an experimentalist with an academic background in Solid Mechanics, Materials Science or Solid State Physics and research background related to the mechanical response of materials.

**X-ray Studies:** Investigate the properties of dynamically compressed materials using *in-situ* x-ray probing in single event experiments. The scientific objectives are to provide an understanding of time-dependent condensed matter phenomena at multiple length scales under shock compression. This position would be idea for an experimentalist with an academic background in Condensed Matter Physics, High Energy Density Physics, Optical Physics, or Physical Chemistry and research interests in conducting x-ray measurements (e.g. x-ray diffraction or phase contrast imaging) or using optical probing techniques. This work will involve travel to conduct experiments at the Dynamic Compression Sector (DCS), located at the Advanced Photon Source, Argonne National Laboratory, Argonne, IL. More details about the DCS may be found at [www.dcs-aps.wsu.edu](http://www.dcs-aps.wsu.edu).
**Optical Spectroscopy**: Examine condensed matter phenomena – at the microscopic level – under dynamic compression, using time-resolved (ps-ns resolution) optical spectroscopy and laser-interferometry in single event experiments. The scientific objectives are to relate shock wave induced physical/chemical changes in condensed systems to the underlying atomic/molecular mechanisms. This position would be ideal for an experimentalist with an academic background in Physics or Physical Chemistry with hands-on research experience in laser-spectroscopy or related optical measurements to probe condensed matter phenomena.

**Only applicants who are currently in the U.S.** and meet the following minimum qualifications will be considered for these positions:

- A recent Ph.D. degree in the Physical Sciences or Engineering that is relevant to the postdoctoral position of interest.
- Strong academic and hands-on, experimental research background with excellent problem-solving skills.
- Graduate or post-graduate experience at a U.S. Academic Institution or National Laboratory.
- Ability to work independently and in a team environment, as needed.
- Personal attributes should include critical thinking; excellent communication skills, both oral and written; sound judgment; clear sense of purpose; and attention to detail.

**APPLICATIONS**
Applicants should submit the following information via email at ispjobs@wsu.edu:

- The position of interest in the subject line and the body of your email containing your application materials
- Cover letter explicitly addressing the qualifications for this position and date of availability
- Detailed curriculum vitae
- Contact information for three professional references

We will begin reviewing submissions immediately and will continue to do so until the positions are filled. Please contact Sheila Heyns, Senior Manager of Administration and Operations with questions (ispjobs@wsu.edu, 509-335-5345).

Due to the large volume of applications, we will contact only those selected for next steps.

**Additional information about the Institute for Shock Physics and Washington State University follows:**
The Institute has ongoing research activities at the following three locations:

- **Institute for Shock Physics - Pullman, WA**: Combining research innovations and rigorous education (shock.wsu.edu)
- **Dynamic Compression Sector - Argonne, IL**: Frontier of dynamic compression science (first-of-a-kind worldwide user facility) located at the Advanced Photon Source, Argonne National Laboratory (dcs-aps.wsu.edu)
- **Applied Sciences Laboratory - Spokane, WA**: Transforming science into practical solutions (asl.wsu.edu)
Washington State University

Washington State University, one of the two research universities in the state, was founded in 1890 as the state’s land-grant institution and is located in Pullman with regional campuses in Spokane, Vancouver, the Tri-Cities, and Everett. Due to its strong emphasis on excellence in research and education, the Carnegie Classification™ has designated WSU as R1/Tier 1: Doctoral University – Highest Research Activity. Current enrollment is approximately 31,600 undergraduate, graduate, and professional students. The University offers 98 majors, 86 minors, and 100+ in-major specializations for undergraduates, 78 master’s degree programs, 65 doctoral degree programs, and 3 professional degree programs. Academically, the University is organized into 11 colleges (Agriculture, Human, and Natural Resource Sciences; Arts and Sciences; Business; Communication; Education; Engineering and Architecture; Honors; Medicine; Nursing; Pharmacy and Pharmaceutical Sciences; and Veterinary Medicine) and a Graduate School. For more information, please visit wsu.edu.

WSU is an EO/AA Educator and Employer.