

## NOTICE OF VACANCY

### Postdoctoral Research Position in Material Strength at High Pressures

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.** We are seeking a Postdoctoral Research Associate to conduct research activities related to material strength and phase transitions in matter at high pressures and extremely high strain rates.

ISP researchers use dynamic loading (shock wave and shockless compression and combined compression and shear) to achieve the most extreme thermodynamic states of matter in the laboratory. These experiments subject materials to unique conditions (dynamic compression and shear, high temperatures, and large deformations) on very short time scales (picosecond to microsecond), resulting in a rich array of physical and chemical changes. Research activities related to dynamic behavior of materials are extremely diverse and challenging. As such, the Institute for Shock Physics aims to strengthen ongoing efforts to enhance the long-term intellectual vitality of dynamic compression science, a field uniquely suited for studying/understanding condensed matter response under extreme conditions.

Prior experience in dynamic compression science is not required. The ISP provides in-depth training in dynamic compression science; however, strong hands-on experimental skills and a temperament to perform single event experiments are essential. WSU graduates and postdoctoral research associates in the field of shock physics have moved on to successful professional careers, particularly at the National Laboratories (NNSA and DoD).

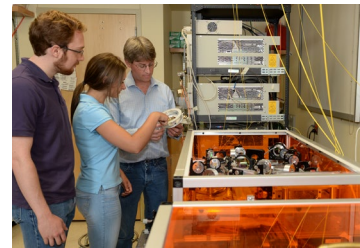
Only applicants who meet the following minimum qualifications will be considered for this position:

- A recent Ph.D. degree in Mechanical Engineering, or related field.
- Strong academic and hands-on, experimental research background with excellent problem-solving skills.
- Experience with design and execution of dynamic single event experiments and material modeling using commercial software, e.g. ABAQUS.
- 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 [WSUJobs](#). (Posting R-5456). The application package should include:

- Cover letter explicitly addressing the qualifications for this position and date of availability
- Detailed curriculum vitae
- Contact information for three professional references



We will review applications until the position is filled. Please contact Sheila Heyns, Senior Manager of Administration and Operations with questions ([ispjobs@wsu.edu](mailto: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](http://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](http://dcs-aps.wsu.edu))
- *Applied Sciences Laboratory - Spokane, WA*: Transforming science into practical solutions ([asl.wsu.edu](http://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](http://wsu.edu).



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