

NOTICE OF VACANCY

Postdoctoral Research Position in Materials Strength at High Pressures



WASHINGTON STATE UNIVERSITY
Institute for Shock Physics

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 dynamic response of materials under extreme conditions.** We are seeking a Postdoctoral Research Associate to conduct research related to accelerated design and development of advanced ceramics in extreme thermo-mechanical environments.

Research activities related to dynamic behavior of materials are extremely diverse and challenging. 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 (high pressure and high strain rate 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 phenomena.

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).



Applicants who meet the following qualifications will be given preference for this position:

- A recent Ph.D. degree in Mechanical Engineering, Materials Science and Engineering, Experimental Physics, or a 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, ANSYS, DYNA, etc.
- Graduate or Post-graduate research experience at a U.S. Academic Institution or U.S. 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; and attention to detail.

APPLICATIONS

Applicants should submit the following information via the [WSU Jobs Site](#). The application package should include:

- Cover letter to the attention of Dr. Vikas Prakash explicitly addressing the qualifications for this position and date of availability.
- Detailed curriculum vitae
- Contact information for three professional references.

The salary range is \$66,000 - \$72,000 per year, commensurate with experience and qualifications. Other benefits include health/dental insurance, vacation/sick leave, retirement plans, and access to University facilities.

Please contact Ms. Sheila Heyns 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.
- [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.
- [Applied Sciences Laboratory](#) - Spokane, WA: Transforming science into practical solutions.

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.