

NOTICE OF VACANCY

Laser / Optical Physicist Dynamic Compression Sector at the Advanced Photon Source, Lemont, Illinois



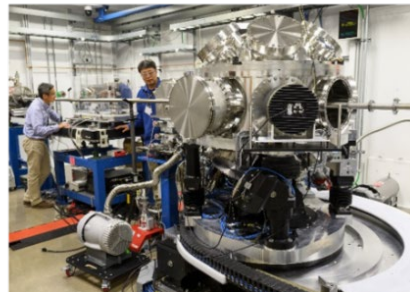
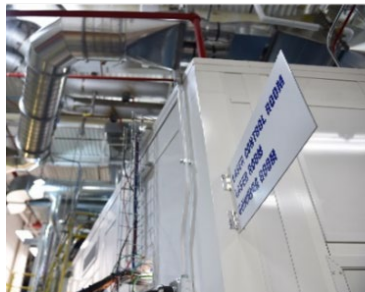
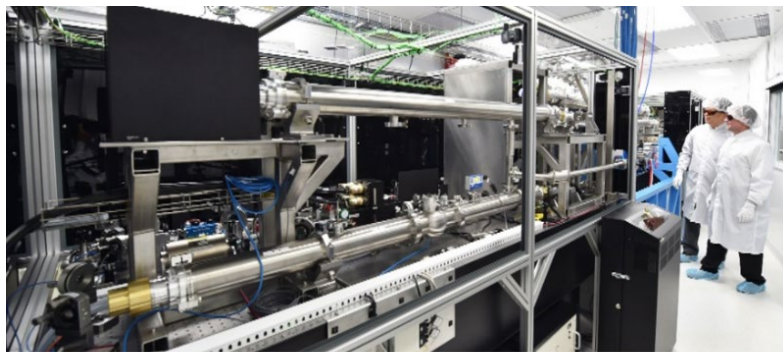
WASHINGTON STATE UNIVERSITY
Institute for Shock Physics

Washington State University (WSU) is seeking to hire a strongly self-motivated, talented experimentalist to work with scientists and engineers at a first-of-a-kind experimental user facility: The Dynamic Compression Sector (DCS) at the Advanced Photon Source (APS), Argonne National Laboratory. The DCS constitutes a new paradigm for understanding the dynamic compression and deformation response of materials subjected to extreme conditions on short time-scales. Real-time, atomistic-scale investigations of condensed matter phenomena are undertaken in single event, dynamic compression experiments through time-resolved, in-situ measurements utilizing the tunable, high energy X-ray capabilities at the APS.



Advanced Photon Source

We are looking to hire a Laser / Optical Physicist who enjoys hands-on work and problem solving in a fast-paced, research environment and will work with a team of physicists responsible for the operation and maintenance of the DCS 100J laser System to ensure optimal performance,



develop new capabilities, and conduct state-of-the-art scientific experiments on behalf of users. Additionally, many of the experiments performed at the DCS utilize a wide variety of lasers that are integral to characterizing/understanding the shock compressed state of materials and wide array of optical detection and analysis approaches are utilized. While the primary responsibility of this position will be for the 100J laser, the successful candidate will also be expected to operate and maintain additional optical systems, as needed for a broad range of user experiments.

The salary range is \$85,000 - \$130,000, commensurate with the candidate's experience and qualifications. Other benefits include health/dental insurance, vacation/sick leave, and retirement plans.

Representative Responsibilities:

- Participate in the operation of the 100-Joule laser for laser-shock research activities, contribute to the design and conduct of laser-shock experiments, and work with scientific users. This also includes quantifying and archiving the laser performance for each shot.
- Work with other laser experts, document and maintain safe operating procedures related to the laser and its control areas at the DCS.
- Work with the DCS users to prepare for experiments in advance. This includes providing guidelines for experimental design, as well as personnel safety and equipment operating procedures.
- Contribute effectively to all aspects of the various research projects including assistance to DCS users; optimal and safe operations of the experimental facilities; ensure availability of experimental components, equipment, and supplies; enhancement of experimental capabilities; and working effectively in a team setting to advance the DCS research mission.
- Independently define and complete experimental projects and tasks; conduct and analyze research experiments and prepare reports and publications as appropriate.

Required Qualifications:

- A Ph.D. degree in Physics or a related field with a strong background in lasers and optics.
- Demonstrated strong hands-on ability with the design and optimization of nonlinear optical systems and associated diagnostic equipment.
- Strong interest in being involved in all aspects of DCS user experiments.
- Good familiarity with hardware and software required to support user experiments on a large-scale laser.
- Good computer skills, including experience with programs for instrument control and analysis, such as LabView and Matlab. Experience with optical design software is useful but not required (e.g. Zemax).
- Excellent communication skills, both oral and written.
- Ability to work independently and in a team environment, as needed.
- Personal attributes should include critical thinking, good judgment, clear sense of purpose, attention to detail, ability to work effectively in a team, and accountability.
- Must be able to obtain a badge at U.S. Department of Energy National Laboratories to gain access to restricted areas.

Applications

Applicants should submit the following information to dcs.admin@wsu.edu:

- Cover letter to the attention of Dr. Paulo Rigg explicitly addressing the qualifications for this position and date of availability
- Detailed curriculum vitae
- Contact information for three professional references (name, email, and phone number)

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](#) - Lemont, 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 and the Tri-Cities. Due to its strong emphasis on excellence in research and education, the Carnegie Classification™ has designated WSU as R1: Doctoral University – Highest Research Activity. Current enrollment is approximately 31,478 undergraduate, graduate, and professional students. The University offers more than 200 fields of study, with 95 majors for undergraduates, 79 master's degree programs, 63 doctoral degree programs, and 4 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 Veterinary Medicine) and a Graduate School. For more information, please visit wsu.edu.



WASHINGTON STATE UNIVERSITY IS AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EDUCATOR AND EMPLOYER. Members of ethnic minorities, women, special disabled veterans, veterans of the Vietnam-era, recently separated veterans, and other protected veteran, persons of disability and/or persons age 40 and over are encouraged to apply.

WSU employs only U.S. citizens and lawfully authorized non-U.S. citizens. All new employees must show employment eligibility verification as required by the U.S. Citizenship and Immigration Services.

WSU is committed to providing access and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation in the application process, contact Human Resource Services: 509-335-4521 (v), Washington State TDD Relay Service: Voice Callers: 1-800-833-6384; TDD Callers: 1-800-833-6388, 509-335-1259(f), or hrs@wsu.edu.