

NOTICE OF VACANCY

Research Engineer – Computational Biomechanics for the ISP/Applied Sciences Laboratory



Institute for

Shock Physics

WASHINGTON STATE UNIVERSITY

Description of Position

The Spokane-based Applied Sciences Laboratory (ASL) of the Institute for Shock Physics (ISP) at Washington State University is a contract research organization that emphasizes multidisciplinary research activities in the physical sciences, engineering, and biomedical applications to undertake a broad range of applied science and technology projects for government agencies and corporations, including technology transfer for commercial applications. The scientific underpinnings to address the multidisciplinary challenges involve physics, materials science, chemistry, mechanics of materials, and computational modeling and simulations.



We have an immediate opening for a Research Engineer in Computational Biomechanics. The responsibilities of this position are related to biomechanics research and more specifically, computational analysis of joint mechanics, which requires programming skills, critical thinking, and a strong background in mechanics. The successful candidate will work on projects related to a community based assessment of reproducibility in knee modeling, as well as additional projects that aim to develop expedited simulation of joint mechanics.

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

1. A Bachelor's degree in Engineering, Computer Science, or other closely related field that addresses the mechanics of biological structures.
2. Strong academic and research background related to simulation of musculoskeletal mechanics.
3. Hands-on experience and background in programming.
4. Ability to work independently and in a team environment, as needed.
5. Personal attributes should include critical thinking; excellent communication skills, both oral and written; sound judgment; clear sense of purpose; attention to detail; and accountability.



Preferred qualifications

- M.S. degree in Engineering, Computer Science, or other closely related field that addresses the mechanics of biological structures.
- Experience in Physics-based simulation and numerical analysis; specific experience in simulation of joint mechanics; surrogate modeling and/or machine learning techniques; and reliability assessment.

The salary structure is both attractive and nationally competitive. Other benefits include health/dental insurance, vacation/sick leave, and retirement plans.

Applications

To apply, please submit application materials via the WSU Human Resource Services website: <https://www.wsujobs.com/postings/48027>. Applicants should submit a cover letter addressing the required and preferred qualifications for this position, a detailed resume, and the names and contact information for three professional references to the attention of Dr. Jason Halloran.

To ensure consideration, please specify the position (Research Engineer – Computational Biomechanics) for which you are applying. We will begin reviewing applications immediately and will continue to do so until the position is filled. Please contact Ms. Sheila Heyns with inquiries regarding this position (ispjobs@wsu.edu, 509-335-1861). For more information, please visit <https://asl.wsu.edu/>.

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 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 31,500 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. The Colleges of Medicine, Nursing, and Pharmacy are located on the WSU Health Sciences Spokane campus. For more information, please visit www.wsu.edu.



WSU is an EO/AA Educator and Employer.