

We invite you to apply to our full-time open-rank Research Scientist position available developing ultrafast laser techniques at our Compact X-ray Free-Electron Laser (CXFEL) laboratory at Arizona State University (ASU).

Our CXFEL facility comprises 12,000 sq. ft. of state-of-the-art laboratory space in the new Biodesign C building at the Tempe campus. ASU has embarked on a multi-phase project to develop powerful x-ray beams, beginning with the compact x-ray light source (CXLS) that is now under construction. CXLS uses a compact electron accelerator and high power lasers to produce x-rays via inverse Compton scattering (ICS). Our CXFEL laboratory is equipped with a Yb:KGW femtosecond laser system that provides ultrashort UV pulses for electron injection, and a Yb:YAG thin-disk regenerative amplifier capable of delivering 200 mJ pulses at 1kHz repetition rate for ICS, to produce X-rays tunable between 100eV to 40 keV. The ultrafast x-ray sources will be employed for time-resolved studies of atomic and molecular processes, quantum materials, chemical dynamics, and biological phenomena.

Required Qualifications

- Applicants must have a Ph.D. in Physics, Optical Sciences, Electrical Engineering or a closely related field
- Expertise in ultrafast laser science and familiarity with x-ray technology
- Excellent verbal, presentation, and technical report writing skills
- Ability to work within multidisciplinary project team

Desired Qualifications

Preference will be given to candidates who have experience in one or more of the following areas: high intensity and high power laser science, applications of lasers in an accelerator or XFEL laboratory, development of ultrafast laser and parametric sources,

timing and synchronization of lasers with microwave equipment, and light-matter interactions.

In this position, you will take on a leadership role in the operation of laser systems, femtosecond synchronization of multiple laser amplifiers with accelerator RF systems, and sophisticated controls and diagnostics of photon and electron beams using optical techniques. Implement plans for OPA/OPCPA schemes to generate tunable femtosecond and picosecond laser pulses spanning UV, visible, and mid-infrared spectral regions. Conduct time-resolved x-ray studies in solid, gas, and liquid targets. Work in multidisciplinary teams, in different research areas and academic units to perform cutting-edge experiments. Train and supervise graduate students, develop protocols and prepare reports. Review the scientific literature to develop sound research plans, interpret results, and publish the scientific findings. Devise or help to draw up new research proposals for funding along with producing content for research publications and presentations.

Instructions to Apply:

Please submit to okedhiring@asu.edu as a single pdf document the following materials with subject line: “**Application for Open Rank Research Scientist in Ultrafast Laser Science**”.

1. A cover letter specifying relevant qualifications and training,
2. Curriculum Vitae or Resume
3. Statement of current research interests and expertise (2-page maximum)
4. Contact information for at least three professional references, and 5)
5. List of recent publications.

Initial review of applications will begin on **August 26, 2019**. As long as the position is not filled, review will continue every week thereafter until the search is closed. A background check is required for employment. The initial appointment will be for one year with possible extension to two years contingent on performance. The salary will be commensurate with achievements and experience. Questions should be addressed to Dr. William Graves at wsg@asu.edu

ASU Knowledge Enterprise advances research, innovation, strategic partnerships, entrepreneurship, and international development. Our success arises from

solutions-focused, interdisciplinary research; an entrepreneurial approach that is embedded in every school and department; and a commitment to transform society in a positive way. <http://research.asu.edu/>

For the fourth year in a row, ASU has been named the most innovative school in the nation, recognizing the university's culture of groundbreaking research and partnerships, as well as its commitment to helping students thrive in college and beyond. U.S. News and World Report has named ASU as the most innovative university all four years the category has existed.

Arizona State University is a new model for American higher education, an unprecedented combination of academic excellence, entrepreneurial energy and broad access. This New American University is a single, unified institution comprising four differentiated campuses positively impacting the economic, social, cultural and environmental health of the communities it serves. ASU serves more than 80,000 students in metropolitan Phoenix, Arizona, the nation's fifth largest city. ASU champions intellectual and cultural diversity, and it welcomes students from all fifty states and more than one hundred nations across the globe. ASU is in the Phoenix metropolitan area in Tempe, Arizona and is one of the largest universities in the U.S. The Academic Rankings of World Universities has included ASU in the top-100 list of research universities and ASU tops the 2015 thru 2018 U.S. News & World Report list of most innovative schools in the US.

Arizona State University is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law.