



CHESS X-ray Lead Scientist Senior Research Associate (SRA)

October 2021

Cornell University embraces diversity and seeks candidates who will contribute to a climate that supports students, faculty and staff of all identities and backgrounds. If you don't meet 100% of job qualifications, but see yourself contributing, please submit an application. We strongly encourage individuals from underrepresented and/or marginalized identities to apply. We're a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.

The Cornell High Energy Synchrotron Source (CHESS) is one of the most advanced scientific facilities in the world, and its pioneering capabilities are helping to keep the United States at the leading edge of scientific research. Located on the central campus of Cornell University, CHESS is internationally recognized for providing high intensity X-ray beams and advanced instrumentation to scientists and students around the world. The lab is comprised of seven state-of-the-art beamlines, each of which routinely hosts world-leading research in physics, chemistry, biology, environmental sciences, materials science, cultural heritage, and engineering. CHESS is a world leader in innovation for complex sample environments including in situ heating and loading, accelerators, detectors, and x-ray optics and plays a key role in many medical discoveries and scientific breakthroughs, including research that received Nobel Prizes in Chemistry in 2003 and 2009. The recent CHESS-U upgrade has expanded the lab's capabilities to allow scientists to address the most pressing global challenges facing our society. CHESS is committed to engaging with industry, academia and government through its funding from the National Science Foundation, Air Force Research Lab, National Institutes of Health, and New York State.

The CHESS X-ray Lead Scientist partners with the CHESS Director and the Senior Leadership Team, including the Technical Director and Program Directors, providing scientific and technical leadership for the x-ray beamline systems. Expected to contribute to the mission of the laboratory by participating in and/or managing any of the following activities: 1) planning, conducting, and reporting on original research, 2) identifying and developing new experimental facilities and methods, 3) collaborating with local and outside scientists to adapt or refine methods to achieve research results, 4) working with technical and facility staff to build and support necessary research infrastructure, 5) contributing to outreach and educational goals and mentoring graduate students, and 6) formulating ideas and assisting proposal writing activities seeking support for facility research programs.

Responsibilities

- Primary responsibility for conceptual, schematic, and detailed design of x-ray beamline systems.
- Working with dedicated beamline scientists to plan and execute beamline performance measurements and devise optimization procedures.
- Working with technical staff leaders, the X-ray Technical Director and X-ray Operations Manager, to coordinate the construction, upgrades, operations, and maintenance of x-ray beamlines.
- Planning, conducting, and reporting on technical innovations that enable new research.
- Providing expert consultation throughout the laboratory and helping to identify potential problems and possible solutions.
- Presenting results to the broad scientific community through participation in workshops, conferences, and journal articles.
- Collaborating with local and outside scientists to adapt or refine methods to achieve research results.

- As needed, helping with tangible aspects of visiting scientists, including but not limited to preparing and/or reviewing necessary documents, preparing experimental facilities, and assisting with training and data collection strategies.
- Working with technical and facility staff to build and support necessary research infrastructure.
- Contributing to programs targeting outreach and educational goals, including but not limited to preparing printed materials, providing tours and explanations of supported research, and interfacing with groups of students and general citizens.
- Mentoring graduate students in fields related to expertise.
- Participating in grant application processes targeted to expand or support new facility research programs.
- Helping to make decisions pertaining to purchase of new or replacement of equipment within areas of specialty.
- Contacting vendors for availability, pricing and return authorizations of needed parts for equipment construction, repair and maintenance.
- May originate purchase agreements (quotes, specifications) and expedite processing, delivery and installation.

What we need:

- Specialized education, training and experience as well as general laboratory skills to support scientific research in an x-ray laboratory setting, including experience with computer, mechanical, and electronic equipment.
- Carries out independent scientific research projects, assists visiting scientists, and provides guidance and supervision to staff, so good communications and people skills needed.
- Ph.D. degree or equivalent in a scientific or technical field with at least ten years of laboratory experience beyond degree.
- Ability to analyze issues, develop solutions, and implement actions independently and in a timely manner. Ability to work well under pressure.
- Proven effective verbal and written communication skills.

What we would prefer:

- Experience designing, building and/or managing synchrotron x-ray beamline(s).

Applications should be submitted at <https://academicjobsonline.org/ajo/jobs/20263>

Applications received before December 15, 2021 are guaranteed full consideration.

A complete application will include the following material:

1. Cover letter
2. Curriculum Vitae
3. List of Publications
4. Statement of Research Interests
5. Three (3) letters of recommendation

Effective immediately, all new Cornell hires, regardless of work location, must be fully vaccinated with an FDA- or WHO-authorized or approved COVID-19 vaccine or have obtained a university-approved disability/medical or religious exemption by December 8, 2021, or before their start date if after December 8, 2021.

Cornell provides great benefits that include comprehensive health care options, generous retirement contributions, educational benefits (Employee Degree, Tuition Aid, Cornell Children’s Tuition Assistance Programs), access to wellness programs, and employee discounts with local and national retail brands. Our leave provisions include three weeks of vacation and 13 holidays, including winter break from December 25th through January 1st.

Cornell has been nationally recognized as an award-winning workplace for our health, wellbeing, sustainability, and diversity initiatives. For more information, follow the link: [Benefits at Cornell](#).

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans and Individuals with Disabilities. We also recognize a lawful preference in employment practices for Native Americans living on or near Indian reservations. Cornell University is an innovative Ivy League university and a great place to work. Our inclusive community of scholars, students, and staff impart an uncommon sense of larger purpose, and contribute creative ideas to further the university's mission of teaching, discovery, and engagement.