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## X-Ray Beamline Design Group Lead

March 2022

*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 the 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 X-Ray Beamline Design Group Lead position contributes to the mission of the laboratory by participating in and/or managing any of the following activities: 1) identifying and developing new experimental facilities and methods, 2) collaborating with local and outside scientists to adapt or refine methods to achieve research results, up to and including planning, conducting, and reporting on original research, 3) working with technical and facility staff to build and support necessary research infrastructure, and 4) formulating ideas and assisting proposal writing activities seeking support for new facility research programs.

### **About Our Lab:**

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### **Key Job Responsibilities:**

The X-ray Beamline Design Group Lead draws upon 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. This person can carry out independent scientific research projects, assist visiting scientists, and provide guidance and supervision to staff.

**Specific duties include:**

- Conceptualizing schematic and detailed design of x-ray beamlines
- Working with CHESS Technical Director to identify and lead a team designing new X-ray beamlines and subcomponents
- Working with dedicated beamline scientists to plan and execute beamline performance measurements and devise optimization procedures.
- Working with technical staff leaders and operations managers to coordinate the construction, upgrades, operations and maintenance of x-ray beamlines.
- Plans, conducts and reports on technical innovations that enable new research
- Provides expert consultation throughout the laboratory and help identify potential problems and possible solutions
- Presents results to broad scientific community through participation in workshops, conferences, and trade journal articles
- Collaborates with local and outside scientists to adapt or refine methods to achieve research results
- Works with technical and facility staff to build and support necessary research infrastructure.
- Participates in grant application processes targeted to expand or support new facility research programs.

**What We Need:**

- Ph.D. degree or equivalent in a scientific or technical field
- At least ten years laboratory experience beyond degree
- Hands-on experience with experimental equipment and x-ray procedures necessary, aided by experience with motion control systems, automated data collections and/or mechanical design and assembly.
- Strong communication and people skills
- Ability to carry out independent scientific research projects, assist visiting scientists, and provide guidance and supervision to staff

**What We Would Prefer:**

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

Please apply online at: <https://academicjobsonline.org/ajo/jobs/21481>

**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

Cornell University requires all employees, whether they work on campus or work fully remotely, to be fully vaccinated against COVID-19, or to have obtained a university-approved medical or religious exemption. For additional information on this requirement, visit:

<https://hr.cornell.edu/covid/university-response/vaccination>

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](#).