



Post-doctoral Research Associate

The National Center for Supercomputing Applications (NCSA) advances discovery and innovation through extreme-scale computing, science-enabling software, and the skills of our expert staff. The center is part of the flagship University of Illinois at Urbana-Champaign—a world leader in research, teaching, and public engagement—and is located in a micro-urban community that combines cultural vibrancy with affordability and quality of life.

NCSA has three or more full-time (100%) Postdoctoral Researcher Positions open within the NCSA Astronomy and Astrophysics Group. Some positions may be filled with joint positions in the Astronomy or Physics departments.

The NCSA Astronomy and Astrophysics Group (<http://astro.ncsa.illinois.edu>), in close collaboration with the University of Illinois at Urbana-Champaign Astronomy Department, has diverse research interests across astrophysical phenomena and disciplines within astronomy, astrophysics and relativity, touching on theory (gravitational waves), computational (star formation, galaxy formation, numerical relativity), and observational (DES, LSST, CARMA, SKA). In addition to scientific topics, the NCSA Astronomy and Astrophysics Group is actively engaged in next-generation scientific practices, such as development of cyberinfrastructure (e.g., Cactus, yt, and Enzo), enabling open access, fostering reproducibility, and data topics spanning from the development of observational pipelines to the architecting of the National Data Service. The group is particularly interested in new science insight and challenges around multi-messenger astronomy, data synthesis and community data services.

The NCSA Astronomy and Astrophysics group is composed of numerous researchers from NCSA, the Department of Astronomy and the Department of Physics and has connections throughout the university such as with Computer Science and the Krannert Art Center. Postdocs hired under this solicitation will work most closely with Ed Seidel, Gabrielle Allen, and Matthew Turk, although collaborations with the DES, LSST, and other groups are supported and encouraged.

The National Center for Supercomputing Applications is a leader in supercomputing as well as computational and data science. NCSA hosts the NSF-funded Blue Waters supercomputer, and leads the NSF XSEDE project. Recently, NCSA has expanded its research activities and strengthened connections to the UIUC campus through new faculty-led thematic areas, including Computing and Data Sciences, Physics and Astronomy, Bioinformatics and Health Sciences, Culture and Society, Materials and Manufacturing, and Earth and Environment.

Responsibilities:

Successful candidates will play key roles in research activities of one or more projects related to numerical relativity, multi-messenger astronomy, hydrodynamic simulations of star and galaxy formation, and visualization and analysis of data from both simulations and observations. Specific responsibilities include: preparing peer-reviewed publications, participating in community-focused open source development of scientific tools (such as yt, the Einstein Toolkit, and Enzo), participating in grant proposal writing, giving presentations at professional meetings. Researchers are encouraged to further their own research interests in collaboration with the broad range of projects ongoing at NCSA. Individuals experienced in yt, Enzo, and the Einstein Toolkit are especially sought, particularly individuals with experience developing and applying those pieces of software.

More information about the NCSA Astronomy and Astrophysics group can be found at: <http://astro.ncsa.illinois.edu/> . For more information about these opportunities, please contact Matthew Turk at mturk@ncsa.illinois.edu.

Qualifications: Applicants should have received a recent Ph.D. in Astrophysics, Physics, computer science, or a related field by the start of the position. Research experience in the areas of one of the target areas is desirable.

The appointments are expected to have two-year periods and are expected to be renewed beyond that contingent upon availability of funding and performance.

Salary is competitive and commensurate with experience and relevant research.

Start Date: As soon as possible and no later than September 1, 2015.

Application Process: To ensure full consideration, qualified candidates must prepare:

- Cover letter
- Curriculum Vitae
- Brief (2 page) statement of past research and future goals
- Contact information of three references

This information should be submitted via e-mail to mturk@ncsa.illinois.edu with the subject heading "NCSA Postdoc Application" by the closing date of February 1, 2015. All requested information must be submitted for your application to be considered. Incomplete information will not be reviewed. Applications may be reviewed prior to the closing date while the search may continue until the positions will be filled.

Illinois is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, age, status as a protected veteran, or status as a qualified individual with a disability. Illinois welcomes individuals with diverse backgrounds, experiences, and ideas who embrace and value diversity and inclusivity. Visit www.inclusiveillinois.illinois.edu.