Postdoctoral Research Associate Position in Bioimage Informatics at the University of Illinois Urbana­ Champaign

We are excited to announce an opening for a postdoctoral research associate to work in large

scale bioimage informatics and computational imaging at the Department of Bioengineering within The Grainger College of Engineering at the University of Illinois Urbana-Champaign (UIUC). Our laboratory is located at the Beckman Institute for Advanced Science and Technology, a leading institution for biomedical imaging. We are looking for a highly motivated individual to join our multidisciplinary team to advance precision medicine through cutting-edge multiscale optical microscopy, artificial intelligence (AI), and large-scale bioimage informatics. Our imaging techniques span seven orders of magnitude-from the nanoscale to the mesoscale-enabling transformative advancements in scientific discovery and clinical translation. For more information on our ongoing research and publications, you can visit <https://bioengineering.illinois.edu/people/liuy46>.

In this role, the incumbent will be engaged with challenging yet immensely rewarding projects that push the boundaries of multi-scale spatial biology, artificial intelligence, genomics, and morphodynamics. This contribution will drive forward our understanding of clinical challenges and shape the next generation of precision medicine solutions. Among the transformative projects are our efforts to (1) improve early cancer detection, where we will work on predictive analysis of cancer progression in precancerous lesions aiming to offer early interventions and improved patient outcomes; (2) inflammatory bowel diseases (IBD), where we will utilize immune and epigenomic profiling to predict the risk of relapse in IBD, aiding in tailored patient care and management; and (3) overcoming drug resistance, where we will identify factors contributing to drug resistance in cancer treatments, aiming for more effective, adaptive therapeutic approaches.

Eligible candidates must have obtained a Ph.D. in Bioengineering, Electrical and Computer Engineering, Bioinformatics, Computational Biology, or a closely related field within 10 years of the start date of the position. It is essential to have demonstrated experience in image processing, computational imaging, large-scale image informatics, or bioinformatics. Proficiency in programming languages such as Python, R, and MATLAB is required. Working knowledge of spatial biology methodologies, and genomic data analysis such as ATAC-seq and RNA-seq is preferred. Knowledge of epigenetics, cancer biology, and immunology would also be highly desirable. Additionally, candidates must have strong communication abilities and a history of effective collaboration.

We have the best bioimage data from our unique state-of-the-art imaging systems. We offer a supportive and collaborative environment to carry out impactful research, with some of the leading experts in the imaging field. The incumbent will also have access to state-of­ the-art equipment and computational resources and ample opportunities for continuous learning and professional growth. We appreciate and welcome candidates’ diverse experiences and perspectives.

The Postdoctoral Research Associate is a full-time, benefits-eligible position appointed on a 12-month service basis. The initial appointment is for one year with the possibility of extension based on performance and funding. The anticipated start date is as soon as possible but negotiable. Salary is commensurate with experience and qualifications.

Candidates eager to contribute to this exciting intersection of biology and computation can apply for this position, by sending a cover letter outlining their research experience and interests, a CV, and names and contact information for three references to Prof. Yang Liu by email (liuy46@illinois.edu). Applications will be accepted until the position is filled.

The University of Illinois System is an equal opportunity employer, including but not limited to disability and/or veteran status, and complies with all applicable state and federal employment mandates. Please visit [Required Employment Notices and Posters](https://www.hr.uillinois.edu/cms/one.aspx?portalId=4292&pageId=5705) to view our non-discrimination statement and find additional information about required background checks, sexual harassment/misconduct disclosures, and employment eligibility review through [E-Verify](https://www.e-verify.gov/sites/default/files/everify/posters/EVerifyParticipationPoster.pdf).