



Assistant/Associate/Full Professor in Cryo-Electron Microscopy Image Analysis

Morgridge Institute for Research, Madison, WI
and Departments of Biochemistry and of Biostatistics and Medical Informatics
University of Wisconsin-Madison

The Organization

As an independent research organization, the [Morgridge Institute for Research](#) explores uncharted scientific territory to discover tomorrow's cures. In affiliation with the University of Wisconsin-Madison, we support researchers who take a fearless approach to advancing human health in emerging fields such as regenerative biology, metabolism, virology and medical engineering. Through public programming, we work to inspire scientific curiosity in everyday life.

The Opportunity

The Morgridge Institute for Research, in collaboration with the University of Wisconsin-Madison Departments of Biochemistry and of Biostatistics and Medical Informatics (BMI), seek a tenure track assistant/associate/full professor to develop and collaboratively apply cutting-edge computational and statistical image analysis approaches to advance the use of cryo-electron microscopy (Cryo-EM) in structural and cell biology research. This position is part of a major campus cryo-EM expansion, comprising new faculty hires in experimental and computational cryo-EM, and a facility to house four new cryo-microscopes including Thermo Fisher's 300 kV Titan Krios, 200 kV Talos Arctica, 120 kV Talos L120C, and Aquilos cryo-FIB-SEM.

The successful candidate will bring exceptional potential to advance these goals and will join a dynamic, expanding community of cryo-EM investigators and an image analysis community spanning light and electron microscopy imaging. This new hire will carry out a vigorous, collaborative, externally funded research program at the forefront of developing and applying cryo-EM image analysis. S/he will also teach graduates and undergraduates, and participate in professional, university, and community service appropriate to rank.

In keeping with Madison traditions of collaboration and highly successful joint appointments, the interactive partner units in this hire will mutually support this position with substantial computational facilities, diverse biological collaborators and computational colleagues, high quality students, and other resources. Following proven, attractive models, the successful candidate will become a Morgridge Institute Investigator and a UW-Madison faculty member, providing many synergistic benefits.

The Morgridge Institute, a private interdisciplinary research institute and UW partner, combines deep computational strengths with leading groups in multi-scale imaging, virology, stem cells, and more. The UW appointment will include support from Biochemistry and BMI, with primary department affiliation determined with input from the candidate. Biochemistry, ranked in the top two US departments in the field, houses the new cryo-EM facility. BMI is home to an NIH Center of Excellence in Big Data Computation. UW-Madison is a world-class academic institution ranking sixth in the nation in science and engineering expenditures, which are over \$1 billion and growing. The city of Madison provides a vibrant, culturally rich environment highly ranked in national surveys for quality of life.

Qualifications

Candidates should have a PhD and productive track record in computer sciences, math, physics, statistics, computational biology or another relevant area, demonstrated ability to work in a collaborative, interdisciplinary environment, and deep motivation to advance image analysis to match recent cryo-EM developments. Examples of relevant approaches include but are not limited to image analysis, machine learning, computer vision, and data visualization. Current analytical challenges in cryo-EM include, e.g., particle heterogeneity, automated atomic modeling, molecular dynamics simulations, sub-tomogram averaging, object recognition and automated tomogram segmentation.

Qualified individuals interested in this opportunity should submit a letter of interest, CV, names and contact information for 3 references, a 3-4 page statement of prior research accomplishments and future research interests, and a 1 page statement of teaching philosophy via email to Cryo-EM@morgridge.org. In addition, *applicants must also arrange for each of their three references to submit letters of reference on their behalf to this email address.*

To ensure full consideration, applications should be received by **December 15, 2018**; however, the search will remain open and application will be considered until the position is filled. AA/EOE. Women and minorities are encouraged to apply. Unless confidentiality is requested in writing, information regarding the applicants must be released upon request. Finalists cannot be guaranteed confidentiality