

UNIVERSITY OF TORONTO
DEPARTMENT OF PHYSICS
Faculty Position in Computational Quantum Many Body Theory

The Department of Physics at the University of Toronto (St. George Campus) invites applications for one tenure-stream appointment in the area of Computational Quantum Many Body Theory. This appointment will be at the rank of Assistant Professor and will commence on July 1, 2018.

We seek candidates with expertise in the development and application of novel computational approaches – examples include Density Matrix Renormalization Group, Quantum Monte-Carlo techniques, Tensor Network Methods, Machine Learning Algorithms, Dynamical Mean Field Theory, etc. – to the physics of quantum many-body problems in condensed matter, ultra-cold quantum gases, quantum information, and/or quantum field theory. Preference will be given to candidates who can demonstrate a capability to work on a range of problems, spanning two or more of these sub-disciplines.

Applicants must have completed a Ph.D. in Physics or a related field by the date of appointment or shortly thereafter. Candidates must provide strong evidence of excellence in both research and teaching. The successful candidate will be expected to mount an independent, innovative and competitive research program. Evidence of excellence in teaching is demonstrated through teaching accomplishments, performance as a teaching assistant, experience leading successful workshops or seminars, student mentorship, conference presentations, as well as strong letters of reference and a teaching statement which should include creative suggestions for incorporating computational physics into teaching at all levels. Excellence in research is demonstrated by publications in top-ranked and field-relevant academic journals, or a research pipeline that is at a high international level, presentations at major conferences, awards and accolades, and strong endorsements by referees of high international standing.

The successful candidate will have the opportunity to interact with existing theoretical and experimental groups in the Department of Physics in condensed matter physics, quantum information/optics and high energy physics, as well as researchers in the Department of Computer Science, the Department of Mathematics, and the Canadian Institute for Theoretical Astrophysics. Computational facilities include SciNet, the most powerful university-based facility in Canada. For more information about the Department of Physics, please visit us at <http://www.physics.utoronto.ca/>.

Salary will be commensurate with qualifications and experience.

All qualified candidates are invited to apply by clicking the 'apply online' link below.

Applications should include a cover letter, a curriculum vitae, a statement outlining current research interests, and a teaching statement that describes teaching philosophy, teaching experience, and creative suggestions for incorporating computational physics into teaching at all levels. In addition, applicants should ask at least three referees to send reference letters directly to the Department Chair, Stephen Julian, via email to chair@physics.utoronto.ca. Review of

applications will begin on January 22, 2018 and applicants should endeavor to have all materials submitted by then, however applications will be accepted until the position is filled.

Submission guidelines can be found at: <http://uoft.me/how-to-apply>. We recommend combining documents into one or two files in PDF/MS Word format.

If you have questions about this position, please contact chairsec@physics.utoronto.ca.

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.

As part of your application, you will be asked to complete a brief Diversity Survey. This survey is voluntary. Any information directly related to you is confidential and cannot be accessed by search committees or human resources staff. Results will be aggregated for institutional planning purposes. For more information, please see <http://uoft.me/UP>.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.