

Assistant Professor – Quantum Information

The Department of Physics and the Department of Computer Science in the Faculty of Arts & Science at the University of Toronto invite applications for a full-time tenure stream position in the area of Quantum Information. The successful candidate will be jointly appointed in the Department of Physics (51%) and the Department of Computer Science (49%) at the rank of Assistant Professor. The appointment will commence on July 1, 2020, or shortly thereafter.

Applicants must have earned a PhD degree in Physics, Computer Science, or a related field by the time of appointment, or shortly thereafter, with a demonstrated record of excellence in both research and teaching. We seek candidates with expertise in quantum information, and whose research and teaching interests complement the existing strengths of both departments (see <https://www.physics.utoronto.ca/research> and <https://web.cs.toronto.edu/research/areas>). In particular, we are seeking a theorist who is conversant with both the fundamental physics and the information theory relevant to the field.

The successful candidate will be expected to mount an independent, innovative, internationally competitive, and externally funded research program; to have a strong commitment to undergraduate and graduate teaching; and to contribute to the enrichment of undergraduate and graduate programs in both departments. The candidate will help bridge the gap between the computer scientists and mathematicians who study the theory of quantum computation and the physicists and engineers who study the implications of quantum information for fundamental science and develop devices and architectures for harnessing it.

The Department of Computer Science has a long history of pioneering computational science, and the Department of Physics is a world-leading centre in the study of cold atoms, quantum optics, and condensed-matter physics, all key fields that play central roles in quantum information. Building on this, we plan to introduce a quantum information course suitable for third-year undergraduates in both physics and computer science. The successful candidate will be expected to interact and collaborate with the quantum groups, theoretical and experimental, contributing a computer-science perspective.

Candidates must provide evidence of research excellence, indicative of a developing research program that is at the highest international level, as demonstrated by publications in highly-ranked and field-relevant academic journals, presentations at significant conferences, awards and accolades, a forward-looking research statement, and strong letters of endorsement from referees of high international standing.

Excellence in teaching should be demonstrated through teaching accomplishments as described in the teaching dossier, including a statement of teaching philosophy, evidence of superior performance in teaching-related activities submitted with the application, and strong letters of reference. Evidence of superior performance in teaching-related activities may include experience as a teaching assistant, experience in curriculum development, sample syllabi, teaching evaluations, participation in delivering successful workshops or seminars, student mentorship, or publications and/or presentations related to pedagogical innovation.

Salary will be commensurate with qualifications and experience.

The successful candidate will complement and have the opportunity to collaborate with the vibrant research groups in the [Department of Physics](#) and the [Department of Computer Science](#), and with the University of Toronto's growing group of quantum information researchers. The research setting at the University of Toronto is further enriched by the existence of the interdisciplinary [Centre for Quantum Information and Quantum Control](#), the [Quantum Stream in the Creative Destruction Lab](#), and the [Vector Institute](#). Computational facilities include [SciNet](#), the most powerful university-based advanced research computing facility in Canada. The Canadian Federal Government is currently considering a major nationwide investment in quantum information research, and the successful candidate will be fully able to take advantage of this exciting new funding initiative.

We encourage applicants to review both academic units' research and teaching activities prior to applying. For more information about the Department of Physics see our website at <https://www.physics.utoronto.ca/>. For more information about the Department of Computer Science see our website at <https://web.cs.toronto.edu/>.

All qualified candidates are invited to apply by clicking the 'Apply Online' link at: <https://utoronto.taleo.net/careersection/10050/jobdetail.ftl?job=1904624>

Applicants must submit a cover letter; a current curriculum vitae; a research statement outlining current and future research interests; a recent writing sample (of no more than 15 pages); and a teaching dossier to include a teaching statement that describes teaching philosophy and teaching experience, and evidence of excellent performance in relevant teaching-related activities as listed above.

Applicants must also arrange to have three letters of reference sent directly by the referee via email (on letterhead and signed) to the Department of Physics Chair, Kimberly Strong, at jobs@physics.utoronto.ca, by the closing date.

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.

All application materials, including reference letters, must be received by the **closing date of January 22, 2020**.

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.