

Tenure-Track Faculty Position at the Intersection of AI, Theoretical Physics and Mathematical Foundations

***Department of Applied Mathematics, University of Waterloo, and
Perimeter Institute for Theoretical Physics***

The Department of Applied Mathematics at the University of Waterloo and the Perimeter Institute for Theoretical Physics invite applications for a tenure-track faculty position at the intersection of Artificial Intelligence, Theoretical Physics and Mathematical Foundations. The position is at the Assistant Professor level. In exceptional cases, an appointment at the rank of Associate or Full Professor may be considered.

The successful candidate will hold a joint appointment as a Faculty Member at the University of Waterloo and as an Associate Faculty Member at the Perimeter Institute. The new faculty member will also be part of the Physics of Information and AI lab that was established in the Department of Applied Mathematics through generous support from the Dieter Schwarz Foundation.

We are seeking an outstanding and creative researcher with wide-ranging scientific interests whose work lies at the intersection of mathematics, physics, and artificial intelligence, broadly construed. Candidates may approach this intersection from any point along the spectrum.

Specific **areas of interest** include: (1) AI and quantum information science; (2) AI and theoretical physics; (3) AI and its mathematical and physical foundations.

We are particularly interested in candidates who combine depth in their own research area with breadth of curiosity and a collaborative spirit, and who wish to engage with colleagues across diverse research communities—from theoretical physics to applied mathematics, and from quantum information to experimental AI.

The new faculty member will benefit from and contribute to a uniquely rich scientific eco-system in Waterloo as well as to the Bildungscampus and Innovation Park Artificial Intelligence (IPAI) in Heilbronn, Germany.

The successful candidate will be expected to develop an internationally recognized research program, supervise graduate students, and teach at both the undergraduate and graduate levels.

Review of applications will start on **January 31, 2026**, and applications will be accepted until the position is filled.

The **Department of Applied Mathematics** is one of four departments that, together with the School of Computer Science, comprise the Faculty of Mathematics at the University of Waterloo. With more than 300 faculty members, 8,000 undergraduate students and more than 1,000 graduate students in mathematics and computer science, Waterloo's Faculty of Mathematics is a global powerhouse in research, education and innovation. The Applied Mathematics department

has 30 regular faculty members, over 100 graduate students, and strong undergraduate programs in applied mathematics, scientific computing and mathematical physics. Research in the department is enhanced by close links to interdisciplinary institutes including the Perimeter Institute, the Waterloo Artificial Intelligence Institute, the Centre for Computational Mathematics, and the Institute for Quantum Computing. More information about the department can be found at <https://uwaterloo.ca/applied-mathematics/>.

Perimeter Institute is a leading global centre for fundamental research in theoretical physics. The Institute offers an exceptional research environment and is currently staffed with 28 Research Faculty, 19 Research Associate Faculty, and more than 150 Postdoctoral Researchers and Graduate Students. The Institute's very active visitor, seminar, conference, and workshop programs attract over 1,800 visitors each year. Perimeter's research efforts include quantum matter, cosmology, mathematical physics, quantum fields and strings, quantum foundations, quantum gravity, quantum information, strong gravity, and particle physics. Visit <https://perimeterinstitute.ca/> for more information and to view the list of Perimeter Institute researchers.

Interested candidates must have a PhD or equivalent in Applied Mathematics, Theoretical Physics or a related field. The salary range for this position is \$130,000-\$160,000CAD. Salary will be commensurate with qualifications, experience, and research record. Negotiations beyond this salary range will be considered for exceptionally qualified candidates. The effective date of appointment is July 1, 2026. Interested individuals should apply using AcademicJobsOnline (<https://academicjobsonline.org/ajob/jobs/31254>). Complete applications should include a cover letter, a curriculum vitae, research and teaching statements, teaching evaluation summaries (if available) and up to three reprints/preprints. Applicants are welcome to include a diversity statement. In addition, applicants should arrange to have at least three reference letters submitted on their behalf by January 31, 2026.

If you have any questions regarding the position, please contact: Prof. Hans De Sterck, Chair, Department of Applied Mathematics, University of Waterloo, Canada (hdesterck@uwaterloo.ca) or Prof. Freddy Cachazo, Deputy Director, Perimeter Institute (fcachazo@perimeterinstitute.ca).

The University values the diverse and intersectional identities of its students, faculty, and staff. The University regards equity and diversity as an integral part of academic excellence and is committed to accessibility for all employees. The University of Waterloo seeks applicants who embrace our values of equity, anti-racism and inclusion. As such, we encourage applications from candidates who have been historically disadvantaged and marginalized, including applicants who identify as Indigenous peoples (e.g., First Nations, Métis, Inuit/Inuk), Black, racialized, a person with a disability, women and/or 2SLGBTQ+.

The University of Waterloo is committed to accessibility for persons with disabilities. If you have any application, interview or workplace accommodation requests, please contact Alicia Hanbidge (ahanbidge@uwaterloo.ca). If you have any questions regarding the application process, assessment process, or eligibility, please contact Alicia Hanbidge (ahanbidge@uwaterloo.ca).

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

Three Reasons to Apply: <https://uwaterloo.ca/faculty-association/why-waterloo>.

Why Choose Perimeter: <https://perimeterinstitute.ca/workplace-culture-perimeter-institute>.

The University of Waterloo and Perimeter Institute acknowledge that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. The main University of Waterloo campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is centralized within our Indigenous Initiatives Office (<https://uwaterloo.ca/human-rights-equity-inclusion/indigenousinitiatives>).