

Research Assistant Professor, Physics of Information and AI Lab

Department of Applied Mathematics, University of Waterloo

The Physics of Information and AI Lab led by Achim Kempf at the University of Waterloo, with generous funding from the Dieter Schwarz Foundation, is seeking exceptional junior scientists for up to four non-tenure track Research Assistant Professor positions.

These positions are for a 3 + 2-year term. The intention is to provide a long-term runway for ambitious research and for applying for tenure-track positions. The start date for these positions is July 1, 2026, or as negotiated.

The lab's research spans a wide spectrum, from foundational questions to applied technologies. Current topics include:

- Quantum information in quantum gravity
- Relativistic Quantum Information
- Computational complexity in adiabatic quantum computation
- AI to boost quantum technologies (e.g., machine learning for quantum error prevention/mitigation/correction)
- Quantum machine learning
- Quantum cloud technologies

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/>.

The lab is based in the Department of Applied Mathematics at the University of Waterloo, with strong connections to the Department of Physics, the Institute for Quantum Computing (IQC), and the Perimeter Institute for Theoretical Physics (PI). Successful applicants will benefit from a highly inspiring and supportive environment and be part of the rich research activity at IQC and PI. The positions offer academic freedom, the opportunity to teach if desired, funding for travel and equipment, and top local pay.

The successful candidate must have a PhD in Applied Mathematics, Theoretical Physics, or a related field. Evidence of an actively developing research program is required.

The salary range for this position is \$90,000 - \$95,000 CAD per year. In addition, the position includes a \$14,000 CAD per year research grant. Negotiations beyond this salary range will be considered for exceptionally qualified candidates.

Applications must be submitted via <https://academicjobsonline.org/ajo/jobs/31551>. Complete applications should include a cover letter, a curriculum vitae (including a link to Google Scholar), a research statement (max 2 pages), and three letters of recommendation. Review of applications will start on February 20, 2026, and applications will be accepted until the positions are filled.

If you have any questions regarding the position, please contact: Prof. Achim Kempf (akempf@uwaterloo.ca) or Riley Herriman (r2herrim@uwaterloo.ca). If you have any questions regarding the application process, assessment process, or eligibility, please contact Riley Herriman (r2herrim@uwaterloo.ca).

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>).

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, people with disabilities, 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 Riley Herriman (r2herrim@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>.