Assistant/Associate Professor Quantum Information Science - Mathematics

The Department of Mathematics as part of the College of Science at Purdue University invites applications for possibly multiple positions in Quantum Information Science (QIS) to begin August 2022. These positions will be at the assistant/associate professor level based on scholarly record. When appropriate, successful candidates may be considered for joint and interdisciplinary appointments across the College.

QIS is at the frontier of several traditional research disciplines in pure and applied mathematics; computer science and information theory; condensed matter, atomic, molecular, and optical physics; and chemistry. QIS strives to harness the unusual quantum mechanical properties of superposition and entanglement to provide breakthrough advances for computing, secure communications, and novel device functionalities. As such, QIS is part of a large-scale interdisciplinary hiring effort across key strategic areas in the departments of Chemistry, Computer Science, Mathematics, and Physics & Astronomy.

The College of Science is Purdue’s second-largest college, comprising the physical, computing, and life sciences—these positions come at a time when the College is under new leadership and with multiple commitments of significant investment. The College of Science is especially seeking to enhance our existing strengths in research at the interface of Chemistry and Physics in tandem with Computer Science and Mathematics through strategic hiring of creative scientists to be part of the cutting-edge interdisciplinary environment provided by Purdue University.

**Target areas:** Successful candidates will have interdisciplinary research interests that can help build a comprehensive suite of capabilities in quantum algorithm research, information theoretic analysis and topological quantum computing. This includes quantum topology, quantum algebra, and applied mathematics, such as computational methods and algorithms, related to QIS.

**Qualifications:** Candidates must have a PhD in mathematics, or a closely related field, with outstanding credentials in research related to QIS, an excellent track record of publications and potential for developing a vibrant research program, as well as a strong commitment to excellence in teaching. Successful candidates are expected to develop an outstanding research program supported by extramural funding and teach courses at the undergraduate and/or graduate level.

**The Department and College:** The Department of Mathematics has over 70 tenured and tenure-track faculty, 130 graduate students, and over 750 undergraduate students. Over the last years there has been a significant investment in key areas of discovery. The College and the Departments have launched initiatives in new emerging areas, such as Data Science and Quantum Information Science, and committed the resources necessary to make the new growth impactful. In QIS 7 faculty members have been hired in the past 2 years. For more information, see [http://www.math.purdue.edu/](http://www.math.purdue.edu/). Purdue is one of the nation’s leading land-grant universities, with an enrollment of over 49,000 students primarily focused on STEM subjects. For more information, see [https://www.purdue.edu/purduemoves/initiatives/stem/index.php](https://www.purdue.edu/purduemoves/initiatives/stem/index.php).

**Application Procedure:** Applications must be submitted through mathjobs [https://www.mathjobs.org/](https://www.mathjobs.org/) and must include (1) a cover letter (including a discussion of diversity efforts as indicated below), (2) a complete curriculum vitae with publication list, (3) a brief statement of present and future research plans, and (4) a statement of teaching philosophy. In addition, candidates should arrange for at least 4 letters of reference, one of which discusses the candidate’s teaching qualifications. Questions regarding the position and search should be directed to rkaufman@purdue.edu. Applications completed by December 15, 2021 will be given full consideration, although the search will continue until the position is filled.

Purdue University’s Departments of Mathematics is committed to advancing diversity in all areas of faculty effort, including scholarship, instruction, and engagement. Candidates should address at least one of these areas in a separate Diversity and Inclusion statement, indicating their past experiences, current interests or activities, and/or future goals to promote a climate that values diversity and inclusion. A background check will be required for employment in this position.
Purdue University is an EEO/AA employer. All individuals, including minorities, women, individuals with disabilities, and veterans are encouraged to apply.