Virginia Tech Department of Mathematics Faculty Position in
Mathematics of Quantum Algorithms, Coding, or Cryptography

The Department of Mathematics at Virginia Tech (http://www.math.vt.edu/) invites applications for a tenure-track faculty position in Mathematics of Quantum Algorithms, Coding, or Cryptography with a start date of August 10, 2022, at its Blacksburg, VA, campus. The successful candidate will have a strong background in post-quantum cryptography, cryptanalysis of post-quantum cryptosystems, quantum error correction, quantum algorithms, or related topics in quantum information theory. Possible specialties include but are not limited to applied algebra, algebraic geometry, combinatorics, number theory, coding theory, cryptography, or a closely related area.

Appointment as an Assistant Professor of Mathematics is anticipated, but exceptional senior candidates will be considered for Associate Professor of Mathematics or Professor of Mathematics positions. Job requirements include a Ph.D. in mathematics or a related field at the time of appointment and an active research program, or, for a new Ph.D., strong promise for developing an active research program. The successful candidate will be expected to establish a distinguished research program and to provide effective instruction and advising to a diverse population of undergraduate and graduate students. Additional responsibilities include continuing development of professional capabilities and scholarly activities, including travel to attend conferences and meetings, participation in department, college, university, and professional service. The position requires occasional travel to attend conferences and meetings. The successful candidate will have the opportunity to engage in interdisciplinary research, curriculum development, or outreach initiatives with other members of the Virginia Tech faculty.

This position builds on existing strengths and plans to expand quantum information science and engineering and align with state-wide investments in data sciences and cybersecurity. The successful candidate will have the opportunity to be a part of the newly established Virginia Tech Center for Quantum Information Science and Engineering (VTQ) and may be especially interested in the Commonwealth Cyber Initiative (CCI), the Computational Modeling and Data Analytics Program (CMDA), and the Ted and Karyn Hume Center for National Security and Technology (Hume) within the National Security Institute. CCI is a $20 million annual Virginia initiative coordinated by Virginia Tech to position Virginia as a world leader in cybersecurity. CCI is carrying out its mission of research, innovation, and workforce development at the intersection of data, autonomy, and security by engaging over 300 researchers at 41 institutions of higher education in the Commonwealth of Virginia. The successful candidate may develop and teach cryptography courses that support the Department of Mathematics and the CMDA major's Cryptography & Cybersecurity Option. Hume cultivates the next generation of national security leaders by developing and executing research and experiential learning opportunities to engage students. Research programs support graduate assistantships through sponsored research with defense and intelligence organizations.

The Mathematics Department is committed to building an inclusive community of mathematical scientists through programs and activities woven into the department's research, teaching, and outreach efforts. This commitment is illustrated by programs such as our: Broadening Engagement and Participation in Undergraduate Research; Mathematics: Opportunities in Research and Education; professional development activities organized by the Virginia Tech Chapter of the Association for Women in Mathematics, winner of the 2021 AWM Student Chapter Award for Scientific Excellence; and the Blacksburg Math Circle. The diversity statement required in our application process gives candidates opportunities to bring to our attention their qualifications for and interest in contributing to efforts to diversify our discipline. Strong statements will demonstrate informed awareness of the rewards and challenges arising from efforts to provide equitable opportunities for all. Specific examples of experiences, activities, or plans will help us identify candidates who can support or extend our department's commitment to inclusive excellence.

Virginia Tech is committed to supporting the success of its faculty members through policies that include the modification of duties, the extension of tenure clocks, mentoring, proposal-writing guidance, and dual-career accommodations, depending on individual circumstances. Interviewed candidates will meet with a work-life liaison for a confidential conversation about the details of these policies.

An online application is required. To apply, please visit www.jobs.vt.edu, select "Apply Now," and search by posting number 518394. Please include a cover letter, a CV, a research statement, a teaching statement, and a diversity statement as part of the online application. Additional information about position requirements and responsibilities can be found at the following URLs: http://www.hr.vt.edu or https://www.math.vt.edu. The faculty handbook (at https://faculty.vt.edu/faculty-handbook.html) gives a complete description of faculty responsibilities. The successful candidate will be required to have a criminal conviction check and documentation of COVID 19 vaccination or receive approval from the university for a vaccination exemption due to a medical condition or sincerely held religious belief. Questions about the search may be addressed to: qacc21@math.vt.edu.

Applications received by 11:59 pm EST on December 16, 2021, will receive full consideration.

About Virginia Tech

Dedicated to its motto, Ut Prosim (That I May Serve), Virginia Tech pushes the boundaries of knowledge by taking a hands-on, transdisciplinary approach to preparing scholars to be leaders and problem-solvers. A comprehensive land-grant institution that enhances the quality of life in Virginia and throughout the world, Virginia Tech is an inclusive community dedicated to knowledge, discovery, and creativity. The university offers more than 280 majors to a diverse enrollment of more than 36,000 undergraduate, graduate, and professional students in eight undergraduate colleges, a school of medicine, a veterinary medicine college, Graduate School, and Honors College. The university has a significant presence across Virginia, including the Innovation Campus in Northern Virginia; the Health Sciences and Technology Campus in

Roanoke; sites in Newport News and Richmond; and numerous Extension offices and research centers. A leading global research institution, Virginia Tech conducts more than $500 million in research annually.

Virginia Tech does not discriminate against employees, students, or applicants on the basis of age, color, disability, sex (including pregnancy), gender, gender identity, gender expression, genetic information, national origin, political affiliation, race, religion, sexual orientation, or military status, or otherwise discriminate against employees or applicants who inquire about, discuss, or disclose their compensation or the compensation of other employees or applicants, or on any other basis protected by law. If you are an individual with a disability and desire accommodation, please contact Kayla Perkins at kaybc8@vt.edu during regular business hours at least ten business days before the event.