



## Tenure-Track Faculty Position in Defects in Materials *or* Nuclear Materials

Department of Mechanical and Materials Engineering  
Stephen J.R. Smith Faculty of Engineering and Applied Science at  
Queen's University, Kingston, Canada  
January 2025

*Queen's University is situated on traditional Anishinaabe and Haudenosaunee Territory.*

The Department of Mechanical and Materials Engineering in the Stephen J.R. Smith Faculty of Engineering and Applied Science (Smith Engineering) at Queen's University invites applications for a tenure-track faculty position at the rank of Assistant Professor with specialization in **Defects in Materials *or* Nuclear Materials**. The preferred start date for the appointment is July 1, 2025, or January 1, 2026.

The successful candidate will be expected to participate in the initiatives and goals of the recently established [Canada Excellence Research Chair \(CERC\) in Impact of Radiation in Energy and Advanced Technologies](#). The position will expand the highly successful Nuclear Materials research effort at Queen's, which currently includes 6 full-time faculty, 1 emeritus professor, 4 adjunct research faculty, and over 50 graduate students and postdoctoral fellows.

### Qualifications

The successful candidate must have a Ph.D. in Mechanical Engineering, Materials Engineering, or a related discipline, by the start date of the appointment. Professional engineering licensure in Canada, or the eligibility to obtain licensure, is also a requirement. Note that all forms of engineering licensure in Canada from any province are considered acceptable (e.g., P.Eng., limited engineering license, provisional engineering license, etc.).

The main criteria for selection are:

- Demonstrated excellence in research, including a strong publication record commensurate with years since PhD obtained and expertise that complements the CERC program and existing research areas in the Department;



- Evidence of high-quality scholarly output that demonstrates potential for independent research leading to peer assessed publications, and the securing of external research funding. Consideration will also be given to other measures of research output, e.g. patents, industrial reports, etc.;
- Demonstrate an ongoing commitment to academic and pedagogical excellence in support of the department's programs;
- Evidence of an ability to work collaboratively in an interdisciplinary and student-centered environment; and
- A high potential for excellence in teaching courses at both the undergraduate and graduate levels.

The successful candidate will also be expected to make contributions through service to the department, the Faculty, the University, and/or the broader community.

Salary will be commensurate with qualifications and experience.

This position is made possible by a transformative \$30M investment by Bruce Mitchell (Sc'68, DSc'20). The successful candidate will receive direct research support for the first 5 years of their tenure from the Bruce Mitchell Research Program, including resources to support the recruitment of multiple postdoctoral researchers/students. Decreased teaching and administrative responsibilities will be associated with this position to enable the candidate to develop a world-class research program.

### **Vaccination Requirements**

Prior to May 1, 2022, the University required all students, faculty, staff, and visitors (including contractors) to declare their COVID-19 vaccination status and provide proof that they were fully vaccinated or had an approved accommodation to engage in in-person University activities. These requirements were suspended effective May 1, 2022, but the University may reinstate them at any point.

### **The Faculty and Department**

As one of Canada's leading research-intensive universities, Queen's University is focused on being the quality leader in Canadian higher education and is dedicated to promoting research and scholarship of national and international distinction. The Department of Mechanical and Materials Engineering is comprised of approximately 30 faculty members, 700 undergraduate students and 200 graduate students. Research excellence in the Department is supported by five research chairs: a [Canada Excellence Research Chair \(CERC\) in Impact of Radiation in Energy and](#)



[Advanced Technologies](#), a Tier 1 Canada Research Chair (CRC) in Mechanics of Materials, a Tier 1 CRC in Cell Mechanics and Mechanobiology, [a University Network of Excellence in Nuclear Engineering \(UNENE\) Research Chair in Nuclear Materials, and a UNENE Research Chair in Corrosion Control and Materials Performance](#). The Department boasts a number of world-class experimental research facilities, including the Reactor Materials Testing Laboratory ([RMTL](#)) and the Optical Towing Tank for Energetics Research Laboratory (OTTER Lab), along with strong ties to [Ingenuity Labs Research Institutes](#) and the [Centre for Health Innovation \(CHI\)](#). The Department is also currently home to the [Chair for Women in Engineering](#). More details about the Department can be found at [smithengineering.queensu.ca/mme](http://smithengineering.queensu.ca/mme).

Our rapidly changing world presents unprecedented opportunities and significant challenges. Smith Engineering is changing the face of [engineering education](#), so future engineers can be leaders in the face of complex and multidisciplinary global issues. This new model of engineering education will be technically rigorous, experientially focused, socially conscious and creatively inspired. It will ensure graduates have the knowledge and tools to not only create our technology and processes but to guide their evolution, and how they integrate with society and the world. To promote on-going teaching success, there is support for course development and delivery provided by the [Engineering Teaching and Learning Team](#), the [Queen's Centre for Teaching and Learning](#), the Department of Mechanical and Materials Engineering and Smith Engineering.

Smith Engineering delivers 10 undergraduate programs to over 3000 undergraduate students, and 5 graduate programs to over 500 graduate students. The Faculty is well known for its record of leadership in interdisciplinary engineering education, including being one of the first engineering schools in Canada to establish an Integrated Learning Centre, significant community service learning modules in First-Year instruction, an interdisciplinary "design spine" coordinated across all undergraduate programs in the Faculty, and a course in Technology Engineering and Management that draws students from engineering, business, arts and science, and law.

Among our top priorities in Smith Engineering is providing opportunities for early career academics to develop exceptional research and teaching contributions while fostering an inclusive environment where all faculty can thrive. Support for faculty to develop strong research programs includes Special Research Grant opportunities, grant writing workshops and review services, and one-to-one mentorship from experienced colleagues. Smith Engineering understands that we need to focus on



making [Engineering for Everyone](#) and is working toward a more diverse and inclusive community in an effort to make our learning and working environment better, and to advance the practice of engineering. The Faculty strives to make a difference through commitments such as the establishment of a [Chair for Women in Engineering](#) to improve the proportional representation of women in engineering, the new [Engineering Strategic Plan](#), and the dynamic outreach programs including [Indigenous Futures in Engineering](#) and [Black Youth in STEM](#). Visit [Inclusive Queen's](#) for more information on equity, diversity and inclusion resources and initiatives.

## Institution

[Queen's University](#) has a long history of scholarship, discovery, and innovation that shapes our collective knowledge and helps address some of the world's most pressing concerns. Home to more than 25,000 students, Queen's offers a comprehensive research-intensive environment. Diverse perspectives and a wealth of experience enrich our students and faculty while a core part of our mission is to engage in international learning and research.

In 2024, for the fourth year in a row, Queen's University has [ranked in top 10 globally Times Higher Education Impact Rankings](#), securing the position of eighth worldwide and second in North America, the only Canadian university to achieve this milestone since the rankings launched in 2019. The rankings measured over 2,100 institutions on their work to advance the United Nations' Sustainable Development Goals (SDGs).

From Nobel Prize-winning research exploring the building blocks of the universe to cancer care and treatment to sustainable technologies, our university is tackling humanity's most pressing challenges.

A member of the U15 group of Canadian research universities, Queen's is home to a vibrant research community that includes 33 Canada Research Chairs and over 20 research institutes who work in partnership with communities, governments, and industry to advance research and innovation, making a measured impact on Canada and the world.

Faculty and their dependents are eligible for an extensive benefits package including prescription drug coverage, vision care, dental care, long term disability insurance, life insurance and access to the Employee and Family Assistance Program. Employees also participate in a pension plan. Tuition assistance is available for qualifying employees, their spouses and dependent children. Queen's values families and is pleased to provide a 'top up' to government parental leave benefits for eligible employees on maternity/parental leave. In addition, Queen's provides



partial reimbursement for eligible daycare expenses for employees with dependent children in daycare. Details are set out in the Queen's-QUFA Collective Agreement. For more information on employee benefits, see [Queen's Human Resources](#).

## The City

The University is situated on the traditional territories of the Haudenosaunee and Anishinaabe, in historic Kingston on the shores of Lake Ontario. Queen's is an integral part of the Kingston community, with the campus nestled in the core of the city, only a 10-minute walk to downtown. Kingston's residents enjoy an outstanding quality of life with a wide range of cultural and creative opportunities, with access to many natural areas and proximity to vibrant First Nations Communities including Tyendinaga and Akwesasne. Kingston is a unique Canadian city of 125,000 with a distinct blend of history, recreation, industry, and learning. Kingston offers unique waterfront living with many recreational opportunities. It is within a two-and-a-half hour drive (two-hour train ride) to the commercial, industrial and political hubs of Toronto, Montreal, and the nation's capital, Ottawa, and a thirty minute drive from the international bridge linking Ontario and upstate New York. The city is also the origin of the historic Rideau Canal system – a UNESCO International Heritage site, and is close to Frontenac Provincial Park, the Thousand Islands National Park, and the Frontenac Arch UNESCO World Biosphere Reserve. The [Queen's University Biological Station](#), north of the city, encompasses 34 km<sup>2</sup> of diverse lands, affording premier learning and research opportunities.

## How to Apply

The University invites applications from all qualified individuals. Queen's is strongly committed to employment equity, diversity and inclusion in the workplace and encourages applications from Black, racialized/visible minority and Indigenous people, women, persons with disabilities, and 2SLGBTQ+ persons.

In accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority, including any qualified individuals who have a valid legal work status in Canada. Please indicate in your application if you have a valid legal work status in Canada. Applications from all qualified candidates will be considered in the applicant pool.

In addition, the impact of certain circumstances that may legitimately affect a nominee's record of research achievement will be given careful consideration when assessing the nominee's research productivity. Candidates are encouraged to provide any relevant information about their experience and/or career interruptions.



The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs. If you require accommodation during the interview process, please contact the Department Administrative Assistant at [mmeadmin@queensu.ca](mailto:mmeadmin@queensu.ca).

Those interested in this position should submit a complete application package, including the following documents:

- a cover letter, indicating whether or not you have a valid legal work status in Canada;
- a current Curriculum Vitae, including a list of publications;
- a statement of research interests;
- a statement of teaching interests and experience;
- a statement of commitment to – as well as ideas and experience on how to – ensure the facilitation and promotion of Indigenization, equity, diversity, inclusion, anti-racism, and accessibility; and
- the names and contact information of three referees.

The deadline for applications is **February 28, 2025**. However, applications will continue to be received until the position has been filled. Applicants are encouraged to send all documents in their application packages electronically as PDFs to the Mechanical and Materials Engineering Administrative Assistant at [mmeadmin@queensu.ca](mailto:mmeadmin@queensu.ca) although hard copy applications may be submitted to:

Dr. Keith Pilkey  
Professor and Head  
Department of Mechanical and Materials Engineering  
Room 201, McLaughlin Hall  
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Academic staff at Queen's University are governed by a Collective Agreement between the University and the Queen's University Faculty Association (QUFA), which is posted at [Collective Agreements / LoU's / MoA's | Faculty Relations Office \(queensu.ca\)](#) and at <http://www.qufa.ca>.