

SOLID MECHANICS

The Department of Mechanical and Mechatronics Engineering at the University of Waterloo, invites applications from outstanding scholars and researchers for **two** tenure track positions at the **Assistant Professor** level with a focus in **Solid Mechanics** with an anticipated start date in **July 2023**. In the case of an exceptional candidate, an appointment at the rank of Associate or Full Professor will be considered. The successful candidates must have excellent communication skills and hold a PhD in Mechanical Engineering or a closely related discipline.

For the first position, ideal candidates should have a demonstrated research strength in **Mechanics of Light Weight Materials and Structures** with a focus on the **fabrication and/or impact/crash performance of lightweight materials (metals, polymer matrix composites, hybrids), components and structures**. Applicants with expertise in **experimental testing and computational methods within these focus areas, including constitutive and failure behaviour (plasticity, fracture, impact)** among others, are encouraged to apply. Research expertise combining these focus areas with other disciplines, such as **machine learning and data-driven simulations**, is also welcome. Successful candidates will be well-placed to benefit from the major infrastructure for mechanical testing and strong industry partnerships already in place at Waterloo.

For the second position, ideal candidates should have a demonstrated research strength in **Solid Body Mechanics and Design** with experimental and/or numerical expertise that complement or fit with the Solid Body Mechanics and Mechanical Design group. Current research areas include **advanced manufacturing (e.g. cold spray additive manufacturing), materials characterization, fatigue, biomechanics, composites, dynamics and vibration**. Candidates who can leverage existing infrastructure will be prioritized.

Duties also include the teaching of undergraduate and graduate courses in the area of solid mechanics (e.g., statics, dynamics, mechanics of materials, kinematics and dynamics of machines, design workshop, machine design, numerical methods, finite element, fatigue and fracture analysis, continuum mechanics), supervising graduate and undergraduate students, and undertaking an active research program.

The salary range for this position is \$100,000 to \$150,000 CAD. Applications will be accepted until **November 30, 2022**. The successful applicants are expected to have an engineering license for practice in Canada, or to apply for a Canadian engineering license within the first year of joining the university, and must be registered as a Professional Engineer within 5 years from the start of their appointment.

To apply, individuals are to complete an online application form that includes loading a single pdf containing: a cover letter, full curriculum vitae, concise 1-page research vision (short term and long-term vision) and 1-page teaching vision statements (qualification, methods, and topics), and copies of three publications related to the previously described research. Three letters of reference will be requested for applicants invited for an interview.

The link to apply is here: <https://uwaterloo.ca/engineering/application-faculty-opening-solid-mechanics>

The cover letter to be addressed to:

Dr. Michael Collins
Chair, Department of Mechanical and Mechatronics Engineering
University of Waterloo

Information about the Faculty, Department and Research Group can be found at the following links: <https://uwaterloo.ca/engineering/> and <https://uwaterloo.ca/mechanical-mechatronics-engineering/> and <https://uwaterloo.ca/mechanical-mechatronics-engineering/research/solid-bodies-mechanics-and-mechanical-design>

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg and Haudenosaunee peoples. Our main 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/indigenousoinitatives>).

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, email MME-SolidMechanics@uwaterloo.ca

If you have any questions regarding the position, the application process, assessment process, or eligibility, please email MME-SolidMechanics@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>