Posting Date: December 17, 2018

University of Toronto
Faculty of Applied Science and Engineering
Mechanical and Industrial Engineering Department

Area of Research: Medical Microrobotics

Description of Duties: The Microrobotics Lab at the University of Toronto seeks highly qualified applicants for a postdoctoral position in microrobotics which will advance the research priorities of our group. The applicant will undertake theoretical and experimental research on this and related topics supporting the research vision of our group, which is to develop wirelessly actuated smart robots at small scales. These microrobots will enable a radical new class of non-invasive surgical, diagnostic and therapeutic procedures.

The project involves the design of a microrobotic capsule for sampling and diagnosis in the human GI tract. Research duties include:

- Mechanical design, modelling, optimization and fabrication of a pill robot for the human GI tract. Actuation of the robotic device will use magnetic fields and smart material actuators.
- Experimental testing of the design in laboratory and field (animal study) conditions in the labs of collaborators.
- Working with computational biologists to study the human microbiome in animal studies.
- Preparation of research publications and presentation of results at conferences.

Required Qualifications: Applicants should hold a PhD in mechanical engineering or similar. Applicants with a strong background as indicated by a robust publication record in the areas of mechanical design, robotics, magnetic actuation, medical devices, or other relevant topics are encouraged to apply. Candidates should be highly motivated, with an interest in developing next generation robotic biomedical devices.

Excellent communication skills, strong independent research skills, and leadership skill or promise are also required. The candidate will be expected to work independently, provide leadership to an interdisciplinary team of graduate students, and produce publishable results.

Salary: Minimum $40,000/year plus benefits

Expect start date: **Spring 2019 or as early as possible**

Term: 1-year term with possible renewal

FTE: 100%

The normal hours of work are 40 hours per week for a full-time postdoctoral fellow (pro-rated for those holding a partial appointment) recognizing that the needs of the employee's research and training and the needs of the supervisor's research program may require flexibility in the performance of the employee's duties and hours of work.

Application Instructions: The application package (to be emailed to Eric Diller) should include a cover letter and CV, 1 writing and research excellent example, and contact information of 3 professional references.

Supervisor: Dr. Eric Diller, Assistant Professor
Dean's Catalyst Professor of Mechanical Engineering
Department of Mechanical & Industrial Engineering
Faculty of Applied Science & Engineering
University of Toronto
5 King's College Road
Toronto, ON Canada M5S 3G8
Phone: +1 (416) 978-1214
Fax: +1 (416) 978-7753
Email: ediller@mie.utoronto.ca
Website: http://microrobotics.mie.utoronto.ca/

Closing Date: January 31st, 2019

Employment as a Postdoctoral Fellow at the University of Toronto is covered by the terms of the CUPE 3902 Unit 5 Collective Agreement.

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The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons/ persons of colour, women, Indigenous/ Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas.