Miniature magnetorheological (MR) actuators for humanoid robot hands

Record number : OPR-768

Overview

RESEARCH DIRECTION

Jean-Sébastien Plante, Professeur - Department of Mechanical Engineering

INFORMATION

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ADMINISTRATIVE UNIT(S)

Faculté de génie
Département de génie mécanique
Institut interdisciplinaire d'innovation technologique (3IT)

LEVEL(S)

2e cycle
3e cycle

LOCATION(S)

3IT - Institut interdisciplinaire d'innovation technologique

Project Description

CONTEXT
Université de Sherbrooke is a pioneer and leader in the development of magnetorheological (MR) fluid actuators. This technology is now commercialized in the aerospace and automotive sectors.

PROJECT
Ongoing research aims to develop miniature actuators for the hands of humanoid robots. The student will take part in dynamic modelling, design, fabrication and experimental characterization of prototypes on test benches. The student will also help integrate this technology into various robotics projects carried out in collaboration with Exonetik (www.exonetik.com).

TEAM AND ENVIRONMENT
The student will join the Createk research group (www.createk.co), made up of 9 professors, 15 professionals, 1 technician and more than 80 students, all passionate about developing the technologies that power tomorrow's machines.

DESIRED PROFILE
• Bachelor's or master's degree in mechanical engineering or a related field
• Creative, passionate and action-oriented, with hands-on experience
• Strong team spirit

CONDITIONS
• Start at any time of the year
• Scholarship of $20,000/year (master's) or $27,000/year (PhD)
• Possibility of MITACS internships in industry

INTERESTED?

Send your CV and transcript to info@createk.co.

Discipline(s) by sector

Sciences naturelles et génie

Génie mécanique

Funding offered

Yes

$ 17 500

Partner(s)

Exonetik

The last update was on 30 October 2026. The University reserves the right to modify its projects without notice.