McMaster University
ENGINEERING

MCMASTER EXOSKELETON

SPONSORSHIP PROPOSAL

McMASTER
EXOSKELETON

2024/2025

McMASTER
EXOSKELETON

ABOUT US

The McMaster Exoskeleton Team is a student-led initiative affiliated with the McMaster Engineering Society. We focus on developing a wearable lower-body robotic suit designed to augment the user's strength and mobility. Comprised of a multidisciplinary team, the project unites students from various fields to collaboratively create innovative biomedical solutions with real-world applications. This endeavor not only enhances the abilities of individuals but also pushes the boundaries of assistive technology.

Mission and Vision

Mission

The McMaster exoskeleton team's goal is to apply our degrees to contribute back to helping others. We are committed to enhancing human mobility and strength through innovative exoskeleton systems. Join us as we begin to push the boundaries of what is possible in robotics and wearable systems!

Vision

To revolutionize human mobility and strength through advanced exoskeleton systems, empowering individuals to achieve greater independence and capabilities in their daily lives.

McMASTER
EXOSKELETON

MEET OUR TEAM

Vineet Aggrawal
Principal

Sophia Mokhtari
Safety Director

Gerald Decena
Mechanical Director

Dakota D'Souza
Electrical Director

Jessica Anziano
Electrical Director

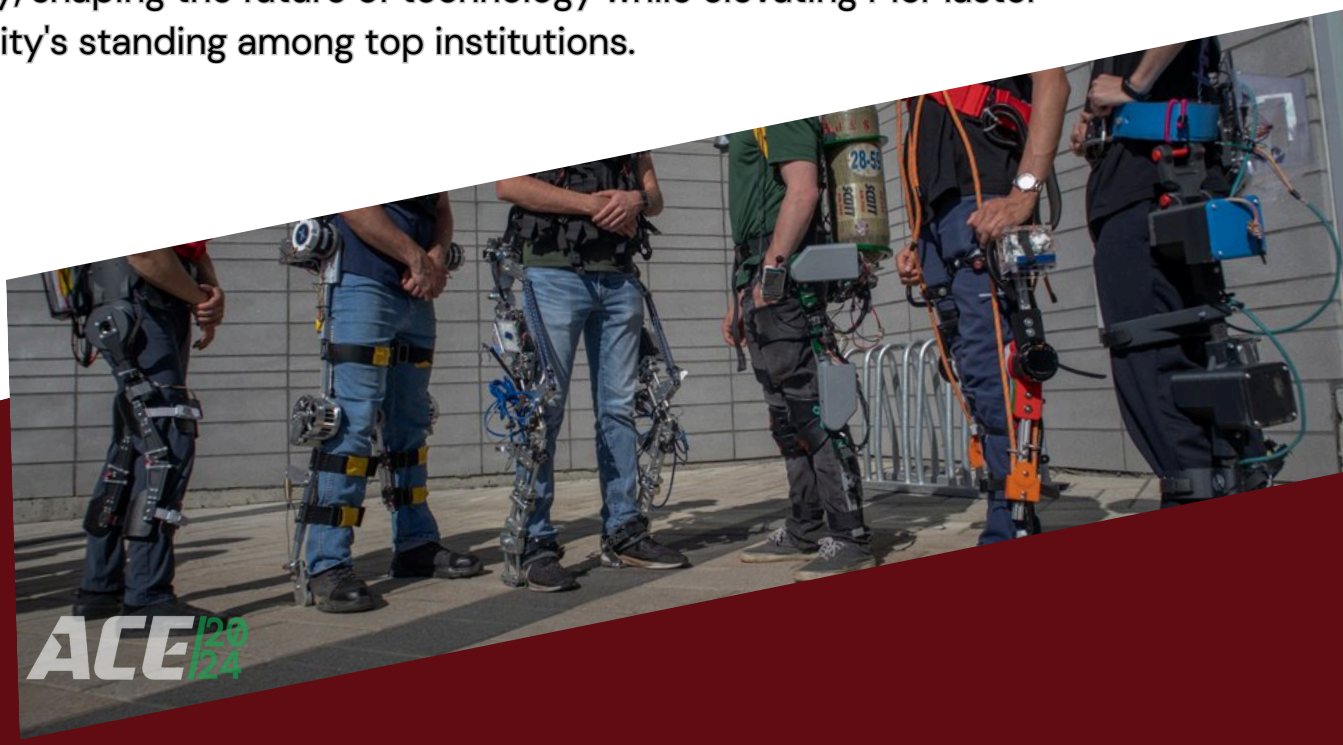
Dylan Garner
Software Director

Umar Khan
Software Director

McMASTER
EXOSKELETON

WHAT WE DO

At McMaster Exoskeleton, we are advancing human-machine interaction research to develop cutting-edge solutions with real-world biomedical applications. By leveraging mechanical, software, and electrical engineering expertise, we are designing an innovative exoskeleton that pushes the boundaries of assistive robotics. Our work taps into the growing robotics industry, shaping the future of technology while elevating McMaster University's standing among top institutions.

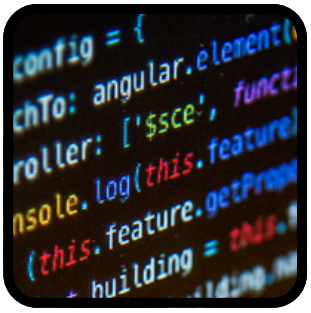


Competitions

- Test the efficiency of the suit and compete against other Universities
- Complete first responder tasks to overcome challenges

McMASTER
EXOSKELETON

SUB-TEAMS



SOFTWARE

The software team develops firmware to control the exoskeleton, processes sensor inputs for real-time motion analysis, and manages motor coordination to ensure precise and adaptive movement.

ELECTRICAL

The electrical team designs and implements the exoskeleton's core systems, including power distribution and safety features, circuit design, sensor integration, and power management.

MECHANICAL

The mechanical team designs and constructs the exoskeleton's structural components, focusing on joint mechanisms, weight distribution, and material durability to support the pilot's full range of motion below the hip while ensuring stability and comfort.

HEALTH AND SAFETY

The safety team evaluates the exoskeleton's design for potential hazards, prepares the competition safety report, and implements enhanced safety features to minimize risks during operation and testing.

McMASTER
EXOSKELETON

SPONSORSHIP TIERS

BENEFITS	BRONZE $ <1000	SILVER $1000–5000	GOLD $5000+
LOGO ON WEBSITE	STANDARD DISPLAY OF LOGO	ENHANCED DISPLAY OF LOGO	PROMINENT DISPLAY OF LOGO
SOCIAL MEDIA PROMOTION	GENERAL MENTION ON SOCIALS	DEDICATED MENTION ON SOCIALS	FEATURED POST
LOGO ON TEAM MATERIALS	WEBSITE ONLY	ON PROMOS & PRESENTATIONS	ON EXOSKELETON SUIT
ACCESS TO TEAM RESUME BOOK	-	✓	✓
MEDIA COVERAGE RECOGNITION	-	✓	✓
FEATURED ON TEAM MERCH	-	-	✓

McMaster University

ENGINEERING

Contact Us

www.macexo.com

exo@mcmaster.ca

https://www.linkedin.com/company/mcmaster-exoskeleton/