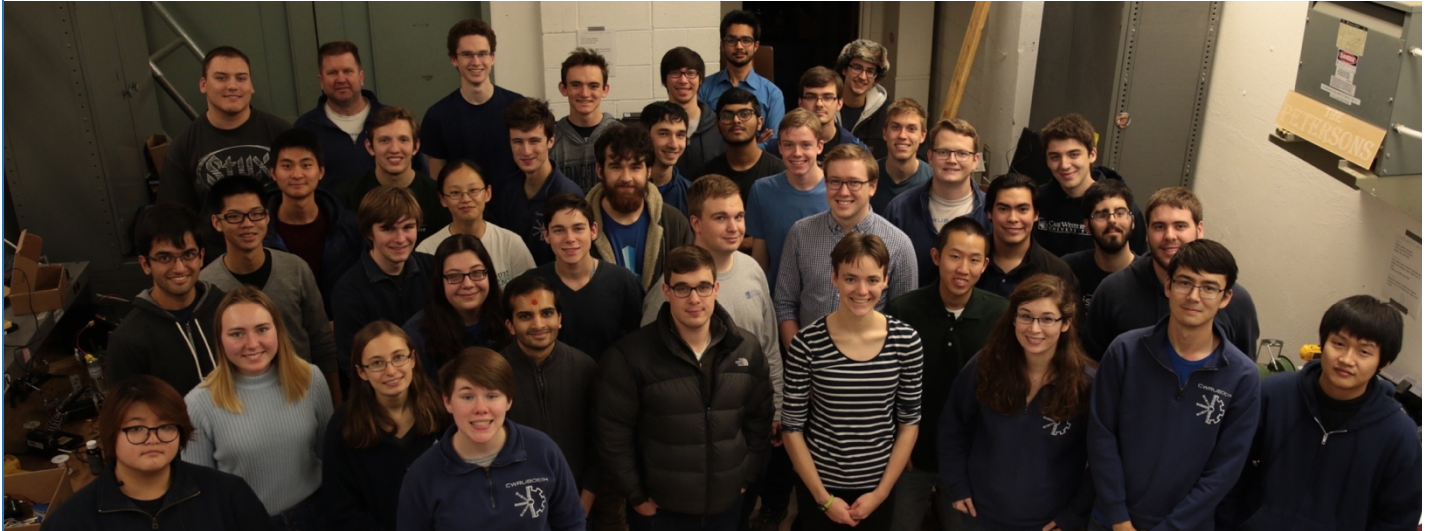


Sponsorship Packet
2017-2018

CWRUbotix

Case Western Reserve University's
Undergraduate Robotics Team

Who We Are



Mission

CWRUbotix creates robots that solve challenging and important problems. We expose students to technical concepts beyond the scope of their curricula, offer experiences in leadership and collaboration, and promote STEM through educational programs in the Cleveland community.

Projects and Education

Over the years, we have built Martian mining robots, combat robots, sumo-wrestling robots, maze-navigating robots, and much more. To ensure that all our members have the skill set to contribute to these projects, we run a practical robotics education and training program at the beginning of each school year. Students form small groups and tackle simple robotics challenges over the course of a month. We also deliver several weekly technical seminars covering topics from circuit design to 3D modeling to digital image processing that are open to all members of the Case community and local high schools.

Leadership and Collaboration

Since our projects are multidisciplinary team efforts, members learn effective collaboration techniques, practice structured and thorough design processes, and take on leadership roles within the club. From Maze Robot Mechanical Lead to club President, students can gain a wide variety of technical and leadership experiences.

Community Outreach

CWRUbotix is dedicated to positively impacting the Cleveland community. We partner with local middle and high schools to introduce students to robotics and engineering, assist the Leonard Gelfand STEM Center, and volunteer at several STEM related events for K-12 students in the area.

NASA Robotic Mining Competition



The NASA Robotic Mining Competition (RMC) is an annual robotics competition that encourages the development of innovative robotic mining solutions to support future space missions to Mars and beyond.

Each year, our team designs and fabricates a new robot from the ground up, building upon the lessons we have learned from past iterations. We take the challenge of building the best possible robot very seriously, pushing ourselves to optimize the robot's capabilities and design features.

Beyond robot performance in the mining area, the competition places a strong focus on project management. Our team utilizes systems engineering to ensure we meet important deadlines and remain on budget. This approach prepares our members for the challenges and responsibilities they will face in industry.

In-House Manufacturing Capabilities:

- CNC Milling (Haas and Hurco Vertical Machining Centers)
- CNC Turning (Haas Turning Center)
- Custom Carbon Fiber Layup
- Manual Turning, Milling, etc.

Awards:

- 5th Place Overall Ranking (2017)
- Excellence in Systems Engineering, 1st Place (2017)
- Excellence in Technical Presentation, 2nd Place (2017)
- Regolith Mechanics Award (2015)

National Robotics Challenge

The National Robotics Challenge is a robotics event which offers a range of robotics competitions covering topics from combat robots to autonomous vehicles. For the past several years, CWRUbotix has participated in many of the available competitions, the most recent of which are showcased below.

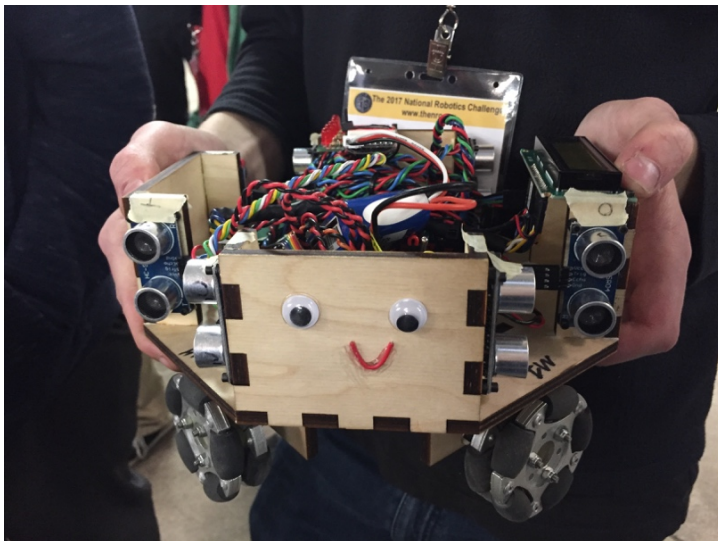


Combat Robot

Two robots enter, one robot leaves. Saws, rammers, grabbers, flippers, and weapons of all varieties are allowed. This year's 6lb, drum spinner robot improved on previous years' designs to challenge the competition and earn gold in the NRC 2017 competition.

Awards:

Gold Award (1st Place) 2017

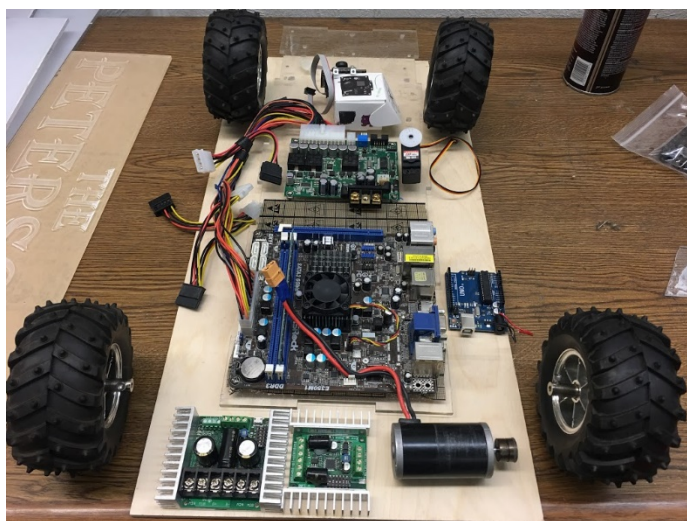


Maze Robot

A NRC Maze robot is tasked with solving a complex maze without touching the walls. This year's robot used ultrasonic sensors and an omnidirectional drive system to sense and traverse the maze. A custom circuit and localization algorithm processes the sensor data so the robot can know where to go and reach the finish line as fast as possible.

Awards:

Silver Award (2nd Place) 2016



Autonomous Vehicle Challenge

Our newest undertaking, this robot must navigate a roadway-like obstacle course marked with yellow waypoints entirely on its own. The challenge with this task is teaching the vehicle to recognize obstacles and turning points so that it can act on its own. Our team first attempted this competition in 2017 with a prototype system.

Contact Us

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Becoming a Sponsor

Why Support CWRUbotix

Industry Partnership:

CWRUbotix seeks to build a mutually beneficial relationship with industry sponsors, leveraging their invaluable support to train and widen the perspectives of the next generation of engineers and promote STEM to a wider community. Sponsorship has enabled CWRUbotix to bring hands-on experience to more students, enriching their college education and better preparing them for entering industry.

Ways to Contribute

Direct Contribution:

Direct contributions enable CWRUbotix to purchase the components, material, and resources that allow us to accomplish the core of our mission: building great robots. Direct contributions also allow the team to fund and expand its outreach efforts and bring the team to competitions that require overnight travel.

Donation:

Donations of material, software, tools, workbenches, and more have made it possible for CWRUbotix to expand the complexity and performance of its designs, better develop and understand its projects, and work more productively.

Services:

Donating services, like machine-time, welding, facility-usage, and more allow us to expand our capabilities. It also allows our members to design and create even more innovative robots.

Benefits

Exposure:

- Logos
 - Shirts
 - Bots
 - Website
- Social Media
- Blogs
- Testimonials
- Videos

Resume Book

All donations to CWRUbotix are tax-deductible as a 501(c)(3).

Sponsorship Tiers

Bronze Tier	\$250	Logo on our robots, website, and promotional materials.
Silver Tier	\$500	Logo on our T-shirts. Access to our resume book and all previous benefits.
Gold Tier	\$1000	Logo and recruitment postings in our newsletter to alumni and students, and all previous benefits.
Platinum Tier	\$2000	Opportunity to run recruitment info sessions partnered with us on Case's campus, and all previous benefits.
Adamantium Tier	\$5000	Negotiable exclusive benefits, including funding projects we did not otherwise have the resources for, and all previous benefits.

Non-monetary donations will be handled case-by-case