

UBC THUNDERBOTS

SPONSORSHIP PACKAGE 2018



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

*Thunder***Bots**



UBC THUNDERBOTS

GET TO KNOW US

Thunderbots is one of only two Canadian student design teams that creates autonomous soccer-playing robots to compete in the Small-Sized League of the annual RoboCup competition and conference. As a part of this international network of academic groups pushing state-of-the-art robotics and autonomously intelligent systems, the team has been able to pursue projects in cutting age areas: machine learning, high level and embedded software system design, navigation and route planning, power electronics, wireless communications, control theory, and electromechanical design.



By selecting top engineering and computer science students at UBC, Thunderbots has been able to standout on the international stage. The team first qualified for RoboCup in 2009, we have participated in RoboCup annually and have achieved multiple top ten placements in recent years. This year we hope to break through and win our division at RoboCup 2018 in Montréal. To achieve this, we are currently implementing improvements to our designs. Our focus is to enhance the performance of our robots, not just as individuals, but as a team working together to achieve a common goal. We believe working on these projects enhances the educational experience of UBC students by challenging members to seek out, implement, and create novel solutions to complex, multidisciplinary, engineering problems. To continue providing these opportunities to our members, we need the support of both our community and alumni. Each year, costs for materials, tools, services, and travel exceed \$25,000. Without your support and contributions, our progress and participation at RoboCup would not be possible.



FUN FACTS ABOUT OUR ROBOTS

- During games, all the robots are autonomously controlled by our high-level AI. The AI receives robot and ball positions from cameras above the field and gives individual instructions to robots via radio
- Our robots have the ability to kick, chip (shoot up and over) and dribble the ball.
- They maneuver around the field using omnidirectional wheels that were designed by a UBC student capstone project and manufactured using the faculty's waterjet cutter.
- Our kicking mechanism was modelled and 3D printed in steel.

OUR JOURNEY



THE PAST

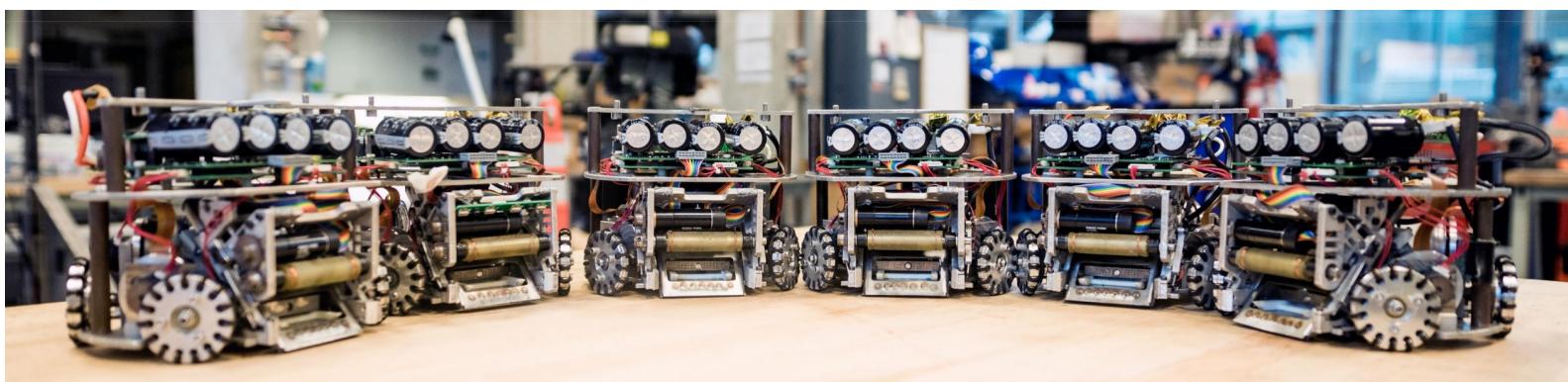
- UBC Thunderbots was founded by a group of engineering students in 2007
- In 2009, the team qualified for RoboCup for the first time with the original fleet of robots succeeding at autonomously receiving, interpreting and responding to an external vision system both individually and as a team to execute a 20-minute game of soccer against an opposing team.
- Since then, the team has grown into a multidisciplinary team to incorporate members from all over UBC.
- We have been a strong presence at RoboCup since then and were a founding member of the Canadian RoboCup National Committee.

THE PRESENT

- Currently, we are on our third generation of our robots and are prototyping the fourth.
- This past summer we competed at RoboCup 2017 in Nagoya, Japan and returned to UBC with a top- ten placement.
- This year, we hope to improve the passing capabilities of our robots.
- The team will also be working on longer-term projects to prototype the team's next generation robot.

THE FUTURE

- Our long-term goals involve the development of our next generation robot and a more sophisticated AI system.
- Areas we hope to improve in our next generation of robots are the reliability of our wireless communication, lowering the robot's centre of mass, use of higher power motors, and the development of some machine learning algorithms to improve our AI's in game decision making process.
- With these improvements being integrated with our current design, we are aiming for a top-five placement.



SPONSORSHIP BENEFITS

SPONSORSHIP LEVELS AND CONTRIBUTION AMOUNTS	PLATINUM $\geq \$7500$	GOLD $\geq \$5000$	SILVER $\geq \$2500$	BRONZE $\geq \$1000$
LOGO ON THE THUNDERBOTS JERSEY	✓ ¹	✓ ²	✓ ³	✓ ³
LOGO ON THE THUNDERBOTS WEBSITE	✓ ¹	✓ ²	✓ ³	✓ ³
LOGO ON THE THUNDERBOTS' ROBOTS	✓	✓	✓	
ACKNOWLEDGEMENT AT COMMUNITY EVENTS	✓	✓	✓	
ACKNOWLEDGEMENT ON FACEBOOK AND TWITTER	✓	✓		
FEATURED POST ABOUT COMPANY ON FACEBOOK	✓			

1- large 2- medium 3- small

Why support Thunderbots?

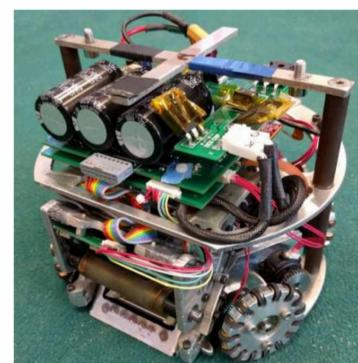
By supporting Thunderbots, you will connect your company to a capable pool of co-op and full-time candidates with experience in robotics and interdisciplinary teamwork. Sponsorship will expose your company's brand to an international audience at RoboCup and other competitions. You also will be providing support to the next generation of engineers and their contributions to new developments in robotics and automation.

Where will my money go?

Funds raised from donations and sponsorships will go directly towards the construction of new and additional robots. Not only do we build prototype robots, but also each year we build and repair our current fleet of robots in preparation for RoboCup. Additionally, as with human soccer, on-field testing and practice is vital to success at competition. Additional robots will allow us to hold full team scrimmages and perform comprehensive testing in order to move up in the RoboCup rankings.

Do you accept in-kind donations?

Absolutely! If your company would like to provide us with goods or services (e.g. discounted components, machine time, etc.), please contact us and we'll work together to reach an agreement.



Thank you very much for your consideration of support for the 2017-2018 UBC Thunderbots Team. Your support will go a long way in fuelling the future of robotics.

If you require further information regarding anything you've read, please contact us:

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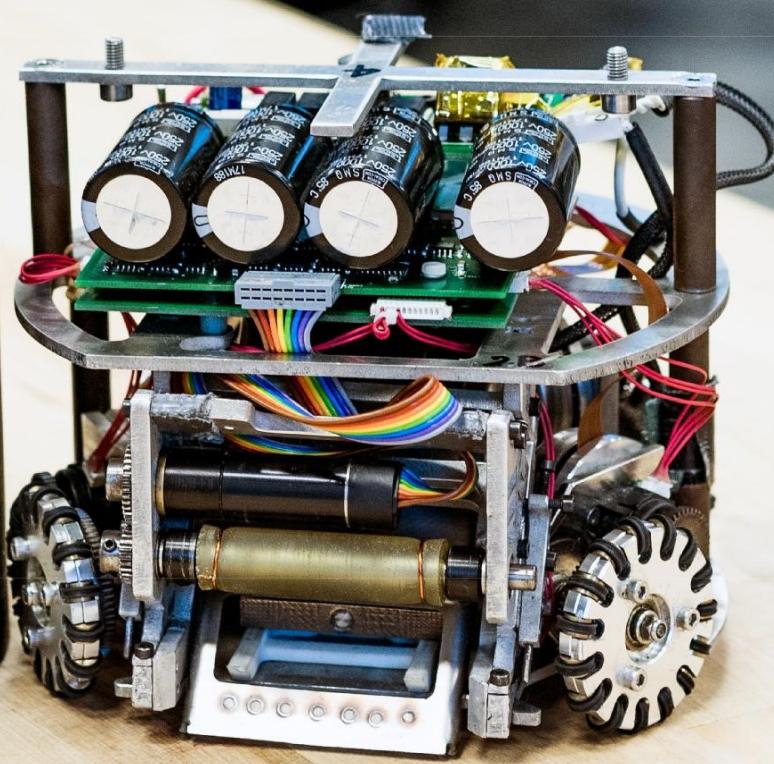
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BE OUR SPONSOR HELP US GET THERE!

You can help us make a difference. With your support, we will be able to develop improved robots and participate in RoboCup competitions.





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