Faculty of Engineering
ENGG1000 19T3
Soccer Droids
Project Summary

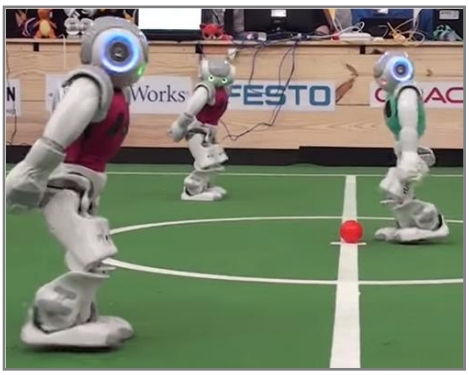
Background

Engineers are often asked to design and develop solutions for a client as part of a multi-disciplinary team. This project will give you the opportunity to contribute your expertise as an engineer in a design team made up of students from many different engineering schools, whilst achieving the learning objectives of ENGG1000.

Design Task

The client has outlined the following scenario:

> *"UNSW is currently a world leader at robot soccer. Carry on that tradition by designing and building an autonomous robot capable of playing as part of a robotic soccer team."*

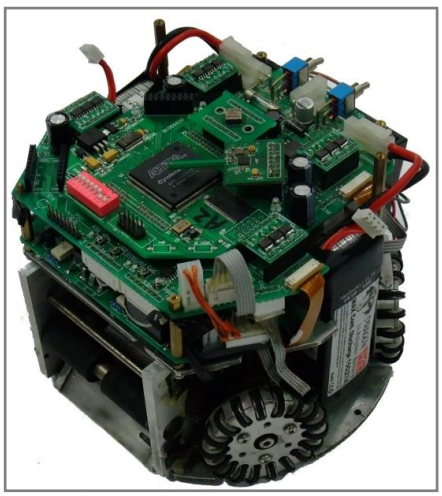


Your project team must evaluate the design challenge set out by the client and prepare a full submission for consideration. This will include a design report and a fully functional prototype.

Designs will be required to demonstrate engineering quality through their suitability to the task, their simplicity of design, their robustness of construction, and even their aesthetic appeal. The prototype will be evaluated by the client for all of these qualities as well as their soccer skills.

The Challenge

The challenge for each project team is to design and build a fully autonomous Soccer Droid. The inspiration for this challenge comes from the RoboCup competition which is held every year. The soccer equipment used in this challenge will be similar to the RoboCup Junior Soccer Challenge.



The robot will be evaluated on its capabilities. It will be awarded points for each challenge that it is able to complete:

- Find the ball
- Kick off
- Shoot for goal
- Defend the goal
- Follow a moving ball
- Play as part of a winning team

Additional points will be awarded for: Design Innovation, Robustness, Simplicity, and Aesthetic Appeal.