The Robotics Club

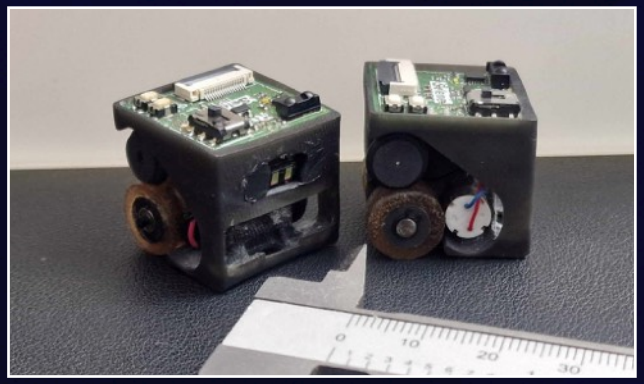
The Robotics Club is a student team at the University of Patras with the aim of **practically engaging** students with robotics. Its main activity is the **design and construction** of robotic systems. It develops original designs in every domain (Electronics, Mechanical Design, Programming).

The Club Members

The Club's members come mainly from the **Polytechnic School of the University of Patras**, primarily from the Departments of Electrical Engineering, Mechanical Engineering and Computer Engineering.

Club Goals and Motivation

The Robotics Club's primary goal is participation in **international robotics and design competitions**, while also aiming to create a fully integrated design and testing ecosystem to support its core work. An equally important motivation is the **continuous education** and familiarization of its members with **cutting-edge technologies** in the fields of robotics and design.



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Robotics Club

University of Patras

Purpose and Interests of the Robotics Club

The subjects that the Robotics Club deals with are multifaceted and holistically approach the design process of an autonomous robot or generally any electromechanical system, ranging from **mechanical design** and **PCB design** to fields of computer science such as **Motion Planning** and **Computer Vision**.

Results for Club Members

The Club's members acquire **specialized knowledge** in robotics, control and design, applying university knowledge **in practice**, thus developing a unique and **directly applicable understanding** of theory.

Students are members of a large team composed of different specializations, learning to **collaborate** in an interdisciplinary, dynamic, and demanding environment, developing **soft skills** of teamwork, communication and problem-solving that are essential in their professional careers and applicable in whatever field they pursue.

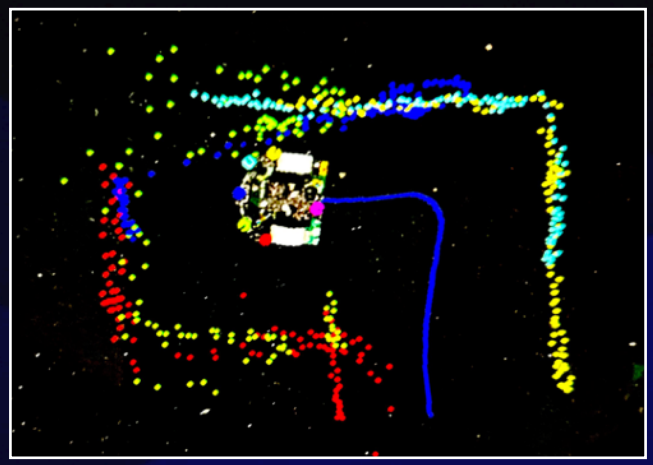
Involvement with the Club is also an excellent approximation of the working environment in the fields of **R&D** and **design**, offering students **valuable experience** that genuinely prepares them for the demands of **modern industry** and **academic research**.

Line Following Competitions

The robot's goal is to complete a course at maximum speed, using advanced **control** and **aerodynamics** technologies.

Micromouse Competitions

An autonomous robot undertakes the mapping and solving of an unknown maze, using **path finding**, **motion planning**, and **control** algorithms.



Club Achievements

The Robotics Club has been awarded in many international competitions, particularly for its line following robot series named "**Dromeas**" (**Δρομέας**).

In numbers:

8 Gold Medals

4 Silver Medals

5 Bronze Medals

15 Top 10 Finishes

Sumo Competitions

Two opposing robots battle each other with the goal of pushing the opponent out of the arena. They **develop and use algorithms** for detecting the enemy and attacking it effectively. Various sizes and weights are involved, ranging from miniature to large robots.

Design Competitions

The Robotics Club also participates in **design competitions** and **hackathons** alongside its main involvement with competitive robots, **applying the knowledge and skills** cultivated through robot design.

Community Outreach

The Robotics Club contributes to strengthening the interest of students and pupils in robotics and STEM sciences. It welcomes school students to its facilities and introduces them to the world of robotics. It also organizes **workshops** and **summer schools** for students and pupils, thereby contributing to the **promotion of knowledge**.