

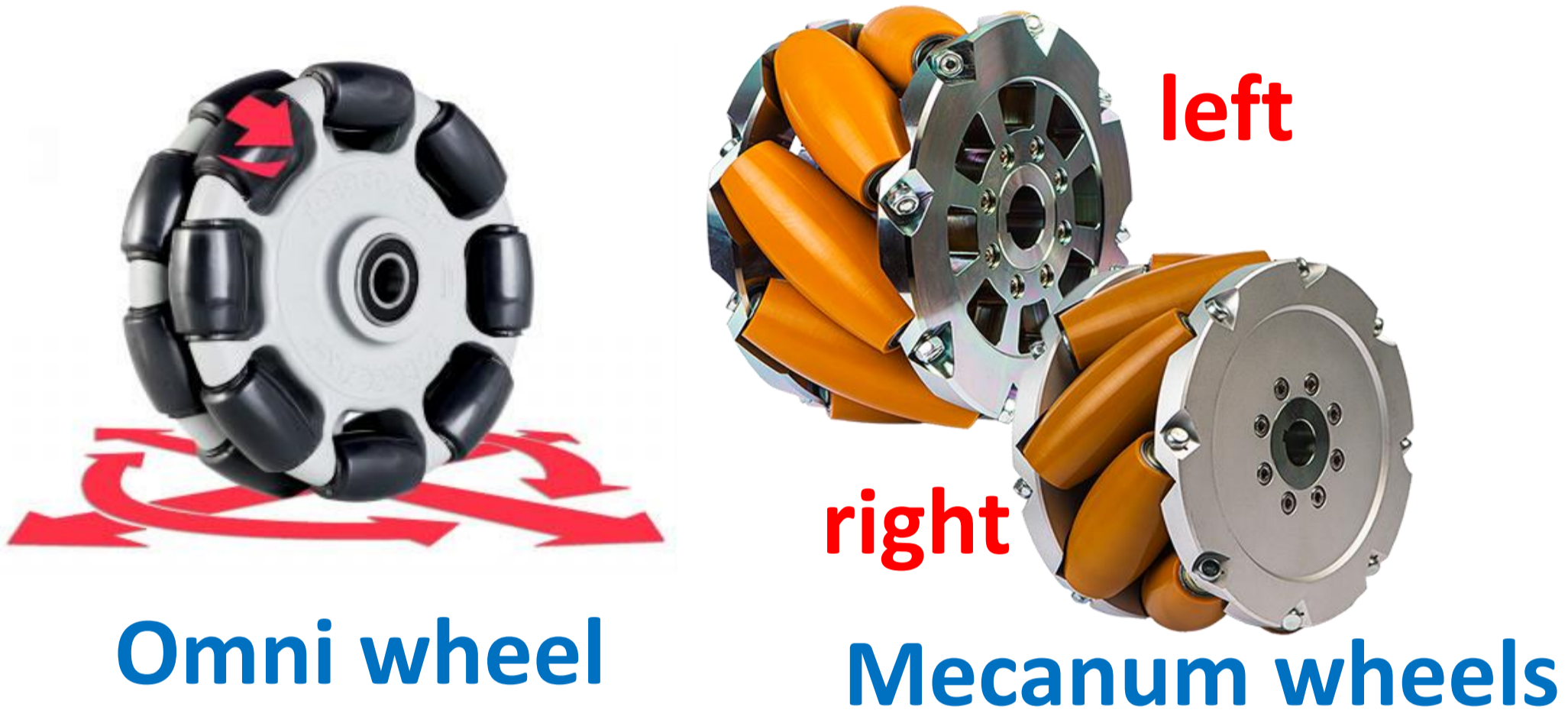
teacher: Petros Poutos

1st Vocational Technical Lyceum of Salamis Island GREECE



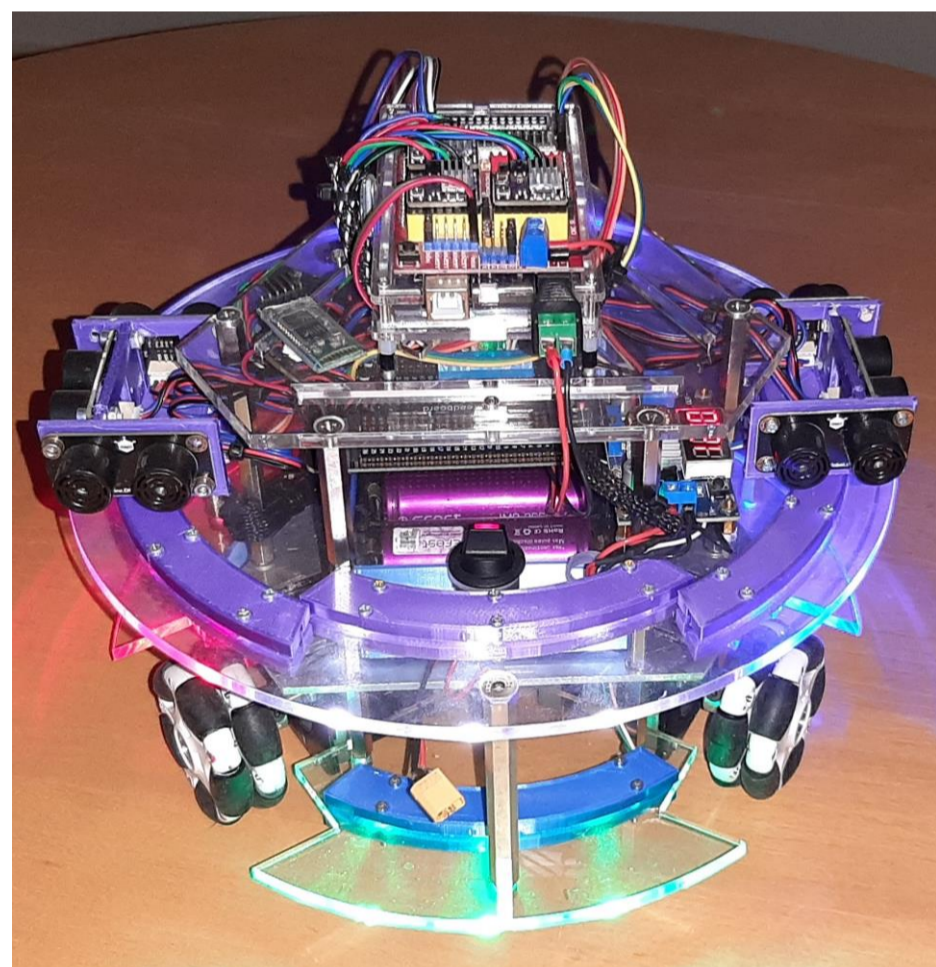
Strange wheels - Incredible movements from smart omnidirectional mobile robots

Strange wheels

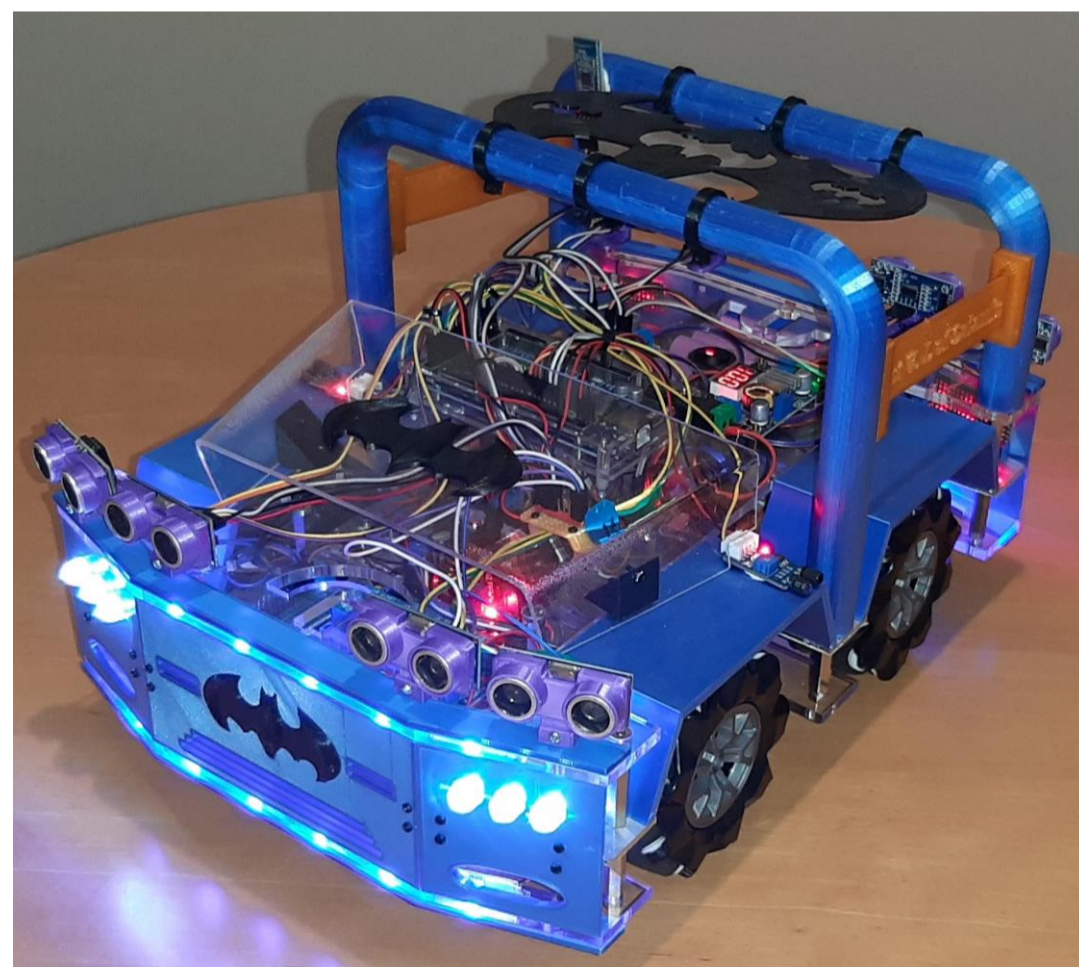


Omni wheel

Mecanum wheels



3 omni wheels robot

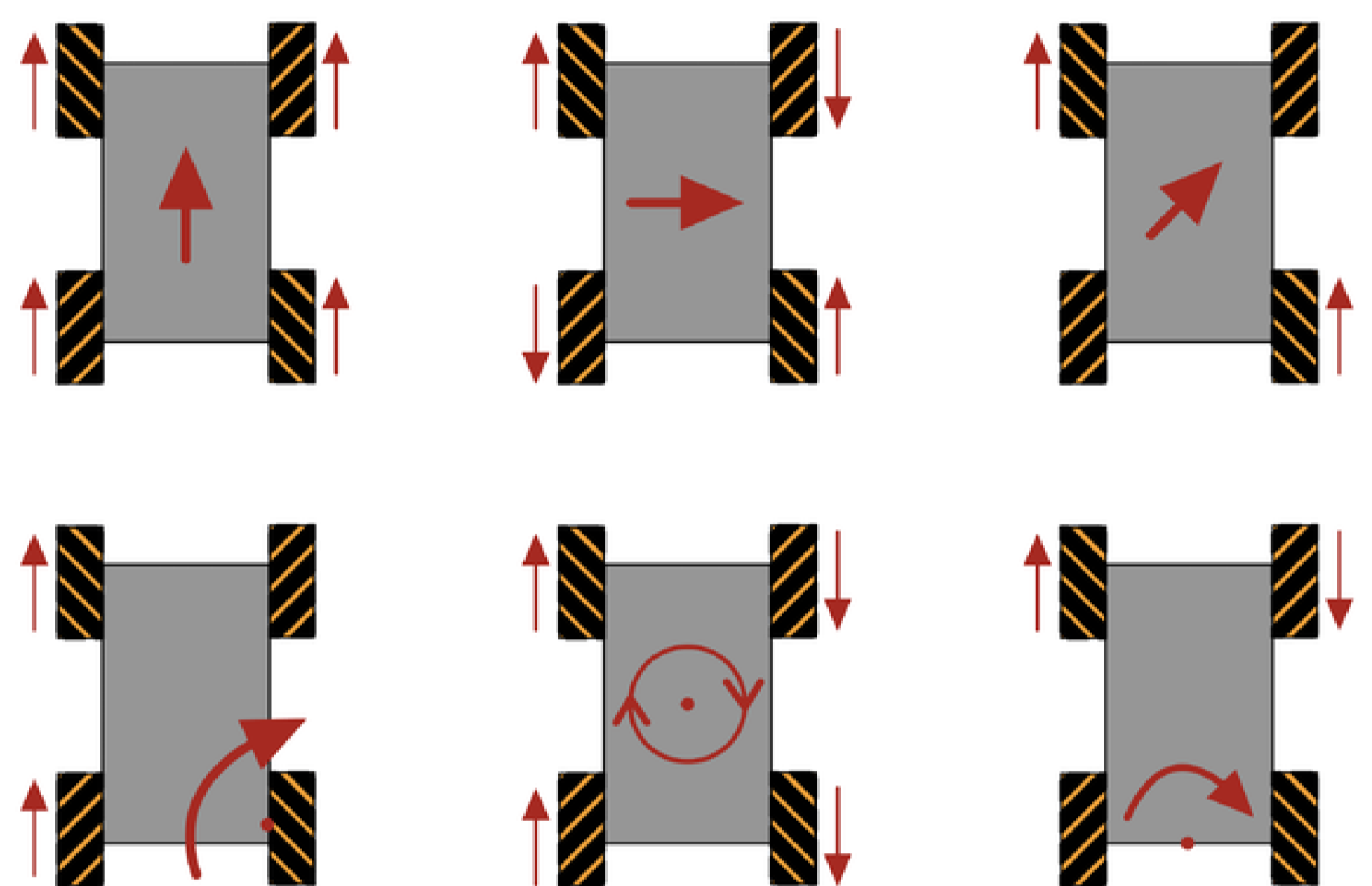


4 mecanum wheels robot

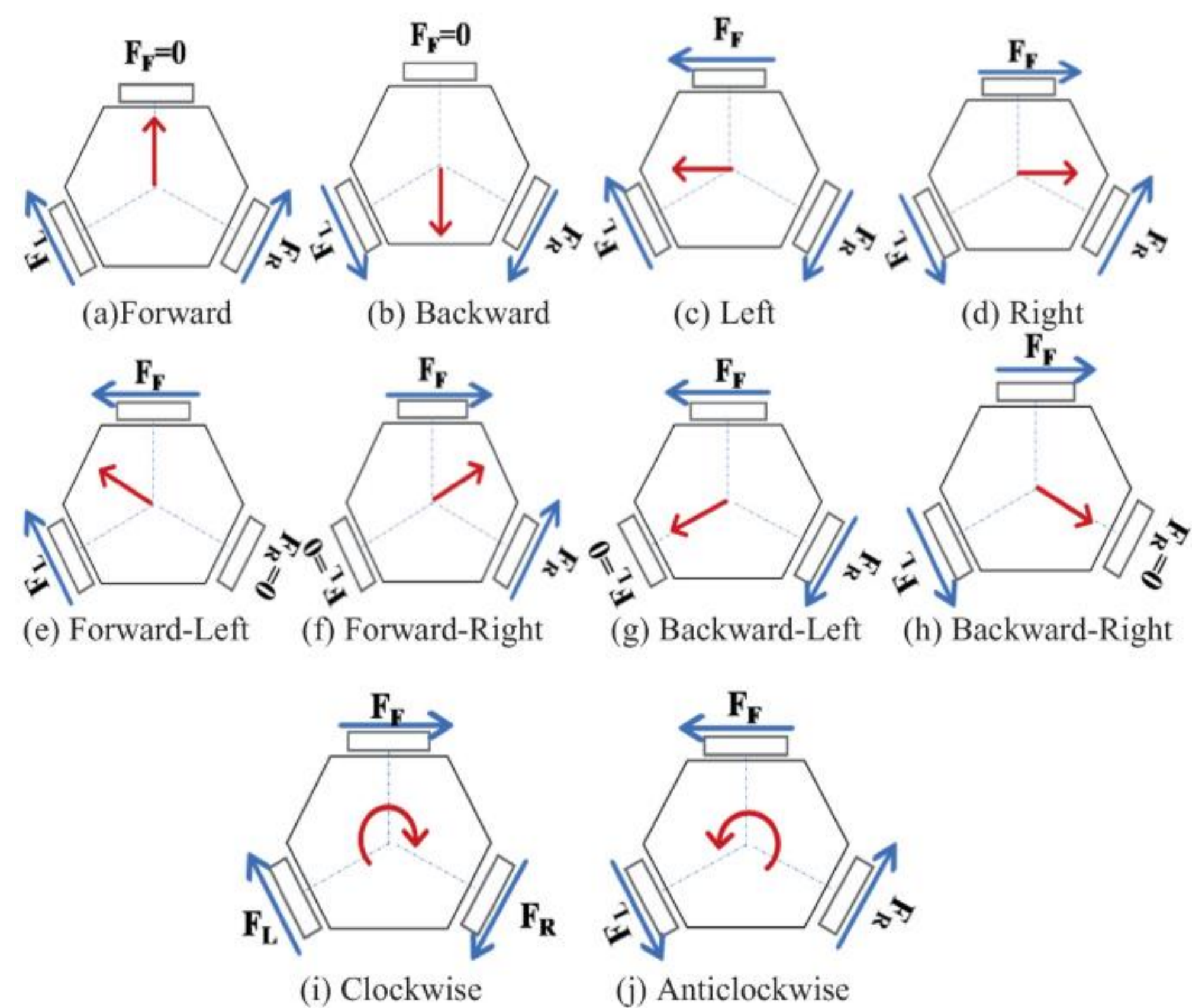
- They were designed with open source software.
- The construction materials used were: aluminum, plexiglass and many of parts was made with 3D printing (PETG filament).
- Electronic components (sensors, motors, microcontrollers, etc.) are widely used and easy to use from students.
- The programming of the microcontrollers was done in the Arduino IDE.

It is a full STEM project that includes: Physics (*kinematics*) Mathematics (*geometry and trigonometry*) new and prototype technologies and also helps students develop an engineer's mindset. It arouses the students interest and gives them the opportunity through their collaboration to inspire new technological applications.

Incredible movements



4 mecanum wheels robot movements



3 omni wheels robot movements