Autonomous Robots – Project 2016

Starting date: Monday, February 29th, 2016

Project check dates: April 4th , April 25th

Presentation: Tuesday, May 17th, 2016

Goal: to propose, implement and test a high-level controller for controlling a mobile robot in an environment with obstacles.

Platform: TurtleBot in simulation (http://wiki.ros.org/Robots/TurtleBot)

Software: ROS Indigo software **Simulation options**: Stage or Gazebo

Teams: 3 students

Examples:

- BBR
- Bug algorithms (bug1, bug2, tangent bug)
- Hybrid architecture: BBR + Path planning (Visibility graph, A*, OMPL, …)
- Pure deliberative
- Mapping approach for planning: know map, exploration, online mapping

Final deliveries: Presentation + simulation + report + code

Optional: teams having most part of the simulation ready by April 25th can test the project with a real robot if their project is easy to be tested in reality.