MADRID 2018 IROS

IEEE

MINESWEEPERS
TOWARDS A LANDMINE-FREE WORLD

7TH YEAR

October 2-5, 2018 **Madrid, Spain**

Scope

Civilian-purpose demining or humanitarian demining aims at finding and removing abandoned landmines without any hazard to the environment. While classical landmine detection and neutralizing technologies remain almost the same, the landmine technology improved dramatically. The conventional detection methods make the procedure of removing great numbers of landmines very slow, inefficient, dangerous and costly.

Robotics systems can provide efficient, reliable, adaptive and cost effective solution for the problem of landmines and the unexploded ordnances (UXOs) contamination.

Minesweepers: Towards a Landmine-free World is an outdoor robotic competition that aims at raising public awareness of the seriousness of landmines and UXOs contamination and fostering robotics research and its applications in the area of humanitarian demining in the world. In this competition, each participating team constructs a teleoperated/autonomous unmanned ground/aerial vehicle that must be able to search for buried and surface-laid anti-personnel landmines and UXOs. The position and the type of each detected object are visualized and overlaid on a minefield map. The robot must be able to navigate through rough terrain that mimics a real minefield.

The 7th edition of Minesweepers Competition will take place in conjunction with the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2018) in the beautiful city of Madrid, Spain during the period of October 2-5, 2018.

www.Landminefree.org

Competition Categories

Juniors
For elementary and high school students where only metallic objects are available in the competition arena and only landmine detection is required.

Academia
For undergraduate and postgraduate university students and researchers where only metallic objects are available in the competition arena and both landmine detection and minefield mapping are required.

Industry
For professional companies, where metallic and non metallic objects with different dimensions and profiles are available in the competition arena and landmine detection, landmine imagining and minefield mapping are required.

20% extra score is added in case of participating with fully autonomous robot, or for using **Robot Operating System (ROS)** as the main robotics middleware, or in case of using a **Multi-Robot System (MRS)** of at least one deminer and one supervisor to mimic the conventional mag-and-flag approach or standard operating procedures commonly used in humanitarian demining.

Important Dates

- **Registration Deadline:** June 1, 2018
- **Eligibility Round:** August 15, 2018
- **Classification Round:** October 2-3, 2018
- **Final Round:** October 4, 2018
- **Closing Ceremony:** October 5, 2018