TALK @ iit ISTITUTO ITALIANO DI TECNOLOGIA iCUB FACILITY

ROBOT ASSISTED DISASTER RESPONSE, COMBINING HUMAN RESCUERS, GROUND AND AERIAL ROBOTS; PERCEPTION FOR THE GROUND ROBOTS.

In the first part of the talk I will overview the TRADR project (http://www.tradr-project.eu) which has been recently deployed in Amatrice. TRADR develops novel science and technology for human-robot teams to assist in urban search and rescue efforts, which stretch over multiple missions: The novel technology makes disaster response experience persistent. Various kinds of robots collaborate with human team members to explore the environment, and gather physical samples. Throughout this collaborative effort, TRADR enables the team to gradually develop its understanding of the disaster area over, multiple possibly asynchronous missions (persistent environment models), to improve team understanding of how to work in the area (persistent multi-robot action models), and to improve team-work (persistent human-robot teaming). TRADR focuses on an industrial accident scenario, but the technology is equally applicable in other USAR scenarios, such as response to an earthquake.

In the second part I will go a bit deeper into the perception for the ground robots detailing how we control the robot morphology improving traversability, and, if time permits, how do we detect objects of interest.

Montalcini Meeting Room – Auditorium
Thursday 15th September 2016 @ 3:00 p.m.

DR. TOMAS SVOBODA

Department of Cybernetics - Engineering Faculty , Czech Technical University in Prague
(Czech Rep)

Hosted by Prof. Giorgio Metta, Dr. Matej Hoffmann

Tomas Svoboda (http://cmp.felk.cvut.cz/~svoboda/) received the Ph.D. degree in artificial intelligence and biocybernetics from the Czech Technical University in Prague, Czech republic, in 2000. He spent three post-doc years with the Computer Vision Group at the ETH Zurich. Currently, he is Associate Professor and Deputy Head of the Department of Cybernetics at the Czech Technical University in Prague, the Director of EECS study programme, and he is also on board of Open Informatics programme. He has published papers on multicamera systems, omnidirectional cameras, image based retrieval, learnable detection methods, and USAR robotics. His current research interests include multimodal perception for autonomous systems, object detection and related applications in automotive industry.