



Draft Agenda v3.0 WORKSHOP

Rethinking Robotics for the Robot Companion of the Future: the RoboCom++ Fet-Flagship-Proof-of- Concept Project

RO-MAN2017

Pestana Palace Hotel, **Lisbon**, Portugal
August 28 to September 1, 2017

26th IEEE International Symposium
on Robot and Human Interactive Communication



Date and Location

August 28 2017

Pestana Palace Hotel,

Lisbon, Portugal

Meeting Room: 7

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Objectives of the Workshop

Europe is facing major problems and a number of challenges threatening the future quality of life and prosperity of EU citizens. Robots can be a solution to some of these challenges. Robots based on the current technological and scientific paradigm, although successful, encounter serious problems to perform daily life activities and complex tasks in real-world poorly structured environments. In fact, in the mechatronic paradigm adopted in current robots system complexity increases and robustness decreases more than linearly when complexity in the desired behaviours and application environments increases. The FLAG-ERA RoboCom++ project, the main proposer of this workshop, aims at exploring new frontiers for Robot Companions and at setting the frame of a new FET-Flagship initiative on Robotics.

The main objective of this Workshop is to offer insights on the needs and features of a next generation of Robot Companions for citizens, capable of overcoming the inherent limitations of current robots. The speakers will discuss new design paradigms, grounded on Nature principles and suitable for developing future robots which will interact and co-operate with humans in disruptively new ways.

START	END	WHAT	WHO
08:00	9:00	Registration	
09:00		Start of the meeting	
09:00	09:05	Welcome and introduction	Paolo Dario (SSSA), Italy
09:05	9:30	Rethinking Robotics for the Robot Companion of the future	Paolo Dario (SSSA), Italy
9:30	15:00	Session 1: RoboCom++ presentations	
09:30	09:50	Embodied Intelligence in Natural and Artificial Physical Agents	Fabio Bonsignorio (SSSA), Italy
09:50	10:10	Soft Robotics and Bodyware	Cecilia Laschi (SSSA), Italy
10:10	10:30	Biology based Robotics	Barbara Mazzolai (IIT), Italy
10:30	11:00	Break & Informal Discussion	
11:00	11:20	Self-healing materials	Bram Vanderborght (VUB), Belgium
11:20	11:40	Energy Management in Natural and Artificial Agents	Ioannis Ieropoulos (UWE), United Kingdom
11:40	12:00	Embodied Cooperative Communication Processes	Alberto Sanfeliu (UPC-IRI), Spain
12:00	12:20	Ethical, Legal, Societal and Economic Issues	Andrea Bertolini (SSSA), Italy
12:20	14:00	Lunch break & Informal discussion	
14:00	14:20	Fundamental components of a cognitive underwater robotic companion	Dula Nad (UNIZG-FER), Croatia
14:20	14:40	Human motion estimation and intention recognition	Ivan Markovic (UNIZG-FER), Croatia
14:40	15:00	Robots and the Social Impact of Smart: Cross-cultural research on the future social benefits of AI/robots between the US and Japan	Toshie Takahashi (Waseda University), Japan
15:00	15:30	Session 2: Discussion and conclusion	
	15:30	End of the meeting	