EXCELLABUST

EXCELLING LABUST IN MARINE ROBOTICS

INVITED TALK

31st March 2017

Flying Robot Companions for Future Smart Cities

Dr Mirko Kovac
Imperial College London, UK

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EXCELLABUST

1. INVITED TALK DETAILS

Date: 31st March 2017
Time: 14:00 – 15:00
Location: Gray Hall, University of Zagreb Faculty of Electrical Engineering (UNIZG-FER)
Unska 3, Zagreb, Croatia

Title: Flying Robot Companions for Future Smart Cities
Name: Dr Mirko Kovac
Affiliation: Aerial Robotics Laboratory, Aeronautics Department, Imperial College London, UK

2. ABSTRACT

The rise of robotics offers a unique opportunity to re-imagine the design and function of urban environments. Future smart cities will behave like complex ecosystems in which humans, robots and the built-environment exist in symbiosis, performing and collaborating on various tasks that are laborious, dangerous or expensive to do by manual means. In these future cities, swarms of friendly flying robots could for example assist humans to repair and manufacture urban infrastructure, provide delivery methods for logistic systems and perform automated environmental monitoring tasks. Some of the most exciting prospects for these future robotics systems draw their inspiration from energy-efficient, adaptive strategies seen in living organisms that can thrive in complex, changing environments.
In this talk, Dr. Mirko Kovac will show the newest bio-inspired flying robots that have been developed at the Imperial College Aerial Robotics Laboratory illustrating how the study of natural systems can enable next-generation aerial robots to enhance operations and human wellbeing in future cities.

3. BIOGRAPHY OF LECTURER

Dr Mirko Kovac

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Dr. Mirko Kovac is director of the Aerial Robotics Laboratory at the Aeronautics Department at Imperial College London. His research interest is the conception and implementation of novel mobility solutions for robotics and agent based autonomous manufacturing. Before his appointment in London, he was post-doctoral researcher at at Harvard University and he obtained his PhD at the Swiss Federal Institute of Technology in Lausanne (EPFL). He received his M.S. degree in Mechanical Engineering from the Swiss Federal Institute of Technology in Zurich (ETHZ) in 2005. During his studies he was research associate with the University of California in Berkeley USA, RIETER Automotive Switzerland, the WARTSILA Diesel Technology Division in Switzerland, and CISERV in Singapore. Since 2006, he has presented his work at numerous international conferences and in journals and has won several best paper and best presentation awards. He has delivered 24 keynote lectures and 28 invited talks on bio-inspired robotics at leading research institutions and conferences world wide including the World Knowledge Dialogue Symposium 2008, the Robotics

Systems and Sciences conference as well as the London Innovation Summit 2014 and 2016. He is also advisor to the U.K. government on the topic of Aerial Robotics and is regularly consulting on technology foresight and strategy development for industry.

4. DESCRIPTION OF THE INSTITUTION:

Aerial Robotics Laboratory
Aeronautics Department
Imperial College London

Website: http://www.imperial.ac.uk/aerialrobotics
Twitter: @AerialRobotics, @MKovacRobotics