



Aerial physical interaction by means of cables and articulated arms

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About the speaker

Marco Tognon is a Post-Doc researcher at Laboratory for Analysis and Architecture of Systems (LAAS), working in the RIS team. Additionally to his main research activity, he is coordinating the LAAS team for the participation of the next robotic challenge MBZIRC-2020. He is also collaborating in the European project AEROARMS. He got the PhD at LAAS under the supervision of Dr. Antonio Franchi and Dr. Juan Cortés. During his PhD, he has been a visiting PhD student at the Robotics, Vision and Control Group in the University of Seville (Spain). He graduated in Automation Engineering at the University of Padua (Italy) under the supervision of Prof. Ruggero Carli, after an internship at the Max Planck Institute for Biological Cybernetics (Tübingen, Germany) in the Autonomous Robotics and Human-Machine Systems group. He is interested in autonomous aerial robots interacting with the environment, especially on the control and motion planning of such systems.

Abstract

Nowadays aerial vehicles are used mainly as remote sensors that perceive the environment avoiding contact because considered as potential crashes. This extremely limits the application of aerial vehicles. In fact, the recent trend is to go beyond free-flying aerial vehicle and conceive new aerial robots that can safely interact with the environment through contact and the exchange of forces. In this talk, I will present new aerial robots that by a wise concept of the aerial vehicle equipped with additional passive (like cables) or articulated links (like robotic arms) can control the force exchanged with the environment performing complex tasks.

Contact

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