

ERF 2020 Workshop

AERIAL INTELLIGENT ROBOTICS FOR INSPECTION AND MAINTENANCE

Málaga (Spain), March 3, 2020

https://www.eu-robotics.net/robotics_forum

<https://grvc.us.es/erf-aerial-robotics-workshop-2020>

ORGANIZERS

Anibal Ollero (University of Sevilla)

Mauricio Calva (Chevron)

Kris Kydd (TOTAL)

Juha Röning (University of Oulu)

Antidio Viguria (FADA-CATEC)

The Workshop is organized by the Aerial Robotics Topic Group of euRobotics with the collaboration of the IEEE Technical Committee on Aerial Robotics and Unmanned Aerial Vehicles

Co-Organized by the H2020 projects:

[HYFLIERS](#), [AERIAL-CORE](#), [PILOTING](#), [RESIST](#), [GRIFFIN](#)

MOTIVATION

The main motivation is the interest in the application of aerial robotics, combined with artificial intelligence methods, for inspection and maintenance. Methods such as learning and autonomous detection will be applied to provide intelligence to aerial robots in inspection and maintenance applications. It includes the perception and high-level control of aerial robots, as well as the exploitation of data for the inspection and maintenance application. The organizers and speakers are top level members of relevant companies, including end-users (CHEVRON, TOTAL, ENDESA-ENEL) and technology developers (Thales, Terabee, VES, NEOBOTICS), as well as research institutions (Univ. Sevilla, Univ. Oulu, Univ. Twente, Univ. Naples, FADA-CATEC).

The Workshop will continue a very successful series, which have been very well attended in all previous Workshops. These Workshops have generated new joint initiatives and successful proposals of new projects and even new products

The Workshop will present recent results and demonstrations of on-going H2020 projects related to the application of aerial robotics to inspection and maintenance, including HYFLIERS, AERIAL-CORE, PILOTING, RESIST and GRIFFIN, as well as other successful projects recently finalized such as AEROARMS.

14h: 15.30 h PART 1

[This first part includes presentations of selected end-users and technology developers followed by an interactive session with the participation of attendants](#)

AGENDA OF PART 1

014:00 h– 14:05 h [Introduction by the organizers](#)

14:05 h – 15:00 h Position statements by selected participants

The view of end-users:

- Mauricio Calva (Chevron)

The view of research and technology developers in aerial robotics:

- New Aerial Robotics Technologies for Inspection and Maintenance, Anbal Ollero (University of Seville)
- Combining aerial and ground robot to solve inspection tasks in refineries, Juha Röning (University of Oulu)
- Aerial robotic co-workers in inspection and maintenance, Antonio Franchi (University of Twente)

15:00 h– 15:30 h Interactive session with participation of speakers coming from the attendants moderated by G. Heredia (University of Seville)) and Vincenzo Lippiello (University of Naples)

15:30h – 16.15h Coffee Break and MEETING OF THE AERIAL ROBOTICS TOPIC GROUP OF EUROBOTICS

16.15h: 17.45 h PART 2

AGENDA OF PART 2

16:15h – 16:55h Position statements by selected participants:

The view of research and technology developers in aerial intelligent robotics for inspection and maintenance:

- Critical infrastructures inspection based on Artificial Intelligence, Automated drone navigation and defect analysis, Stéphane Menoret (Thales)
- Using robotics to increase infrastructure resilience, Konstantinos Bouklas (ICCS, NTUA)
- Overlapping sensors and technologies between robotics, industrial automation and IoT / smart cities, Max Ruffo (Terabee)
- Pilots for Inspection and Maintenance, Antidio Viguria (FADA-CATEC)

16:55h – 17:35h Interactive session with participation of speakers coming from the attendants in two rounds:

Round 1: Interactive session on “What AI can provide in aerial robotics?” with participation of speakers coming from the attendants, moderated by Stéphane Menoret (Thales)

Round 2: Pilots for experimentation of Aerial Robotics for Inspection and Maintenance, moderated by Antidio Viguria (FADA-CATEC) and Carlos Martinez (VES)

17.35 h – 17.45h Presentation of the Workshop outcome by organizers and Interactive Session Moderators