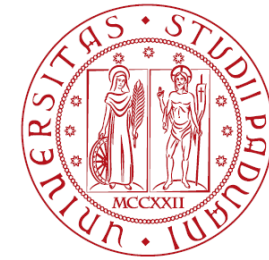




IEEE CSS Italy Chapter  
Road2CDC Workshop Series



**2020 Prin Project Workshop:**

**Design Of Cooperative Energy-aware Aerial platforms for  
Remote and Contact-aware Operations (DOCEAT)**

**Speakers:** Sergio Galeani, Luca Zaccarian, Nicola Mimmo, Giulia Michieletto, Davide Invernizzi  
*Local Arrangement and Organization Chair: Davide Invernizzi and Giulia Michieletto*

October 30<sup>th</sup>, 2024

Politecnico di Milano, Department of Aerospace Science and Technology,  
Building B12, 2<sup>nd</sup> floor, Sala Consiglio, Via La Masa, 34 – 20156 Milano (Italy)

Starting time 09:00 AM (Oct. 30<sup>th</sup>, 2024)

Ending time 12:45 PM (Oct. 30<sup>th</sup>, 2024)

**Workshop Abstract:** The DOCEAT project, funded by the Italian MUR in the framework of the 2020 Program for Research Projects of National Interest (PRIN), focuses on the development of cooperative, energy-efficient aerial platforms for complex operational environments. The DOCEAT team is composed of five research units with complementary expertise: University of Rome "Tor Vergata", University of Padova, Politecnico di Milano, University of Bologna and University of Trento. This workshop will present the latest advancements and methodologies developed within the project through five talks, highlighting innovative approaches to UAV control, localization, and platform design:

1. **“Control and observer design tools for UAV fleet”**, *Sergio Galeani, University of Roma Tor Vergata*
2. **“Orchestrating Front and Rear Sensors for Hybrid Robust Stabilization of Unicycles”**, *Luca Zaccarian, University of Trento and LAAS-CNRS, France*
3. **“Bearing-based Target Localisation in Search and Rescue Scenarios”**, *Nicola Mimmo, University of Bologna.*
4. **“Star-shaped Tilted Hexarotor Maneuverability: The Role of Tilt Angles”**, *Giulia Michieletto, University of Padova.*
5. **“Adaptive Plant Augmentation Design with Application to Multicopter UAVs with Tilttable Propellers”**, *Davide Invernizzi, Politecnico di Milano.*



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**Agenda Workshop DOCEAT, October 30th, 2024, 9.00 – 12.45 AM**

Location: Politecnico di Milano, Building B12, Department of Aerospace Science and Technology, 2<sup>nd</sup> floor, Sala Consiglio, Via La Masa, 34 – 20156 Milano (Italy)

Event registration link (max 40 attendees in presence)

<https://forms.gle/fuPhgSpbpzHuqFxeA>

Youtube streaming channel <https://www.youtube.com/live/e3pzNmryP8o>

**Schedule:**

09:00 – Welcome Coffee

09:30 – Welcome remarks (*M. Lovera, Politecnico di Milano*) and introduction to the DOCEAT project (*A. Astolfi, University of Rome Tor Vergata and Imperial College London*)

09:45 – First part of presentations:

1. “Control and observer design tools for UAV fleet”, *Sergio Galeani (University of Roma Tor Vergata)*
2. “Orchestrating Front and Rear Sensors for Hybrid Robust Stabilization of Unicycles”, *Luca Zaccarian (University of Trento and LAAS-CNRS (France))*
3. “Bearing-based Target Localisation in Search and Rescue Scenarios”, *Nicola Mimmo (University of Bologna)*

11:15 – Coffee break

11:30 – Second part of presentations:

1. “Star-shaped Tilted Hexarotor Maneuverability: The Role of Tilt Angles”, *Giulia Michieletto (University of Padova)*.
2. “Adaptive Plant Augmentation Design with Application to Multicopter UAVs with Tilttable Propellers”, *Davide Invernizzi (Politecnico di Milano)*

12:30 – 12:45 Closing remarks (*A. Astolfi, University of Rome Tor Vergata and Imperial College London*)