

When Robotics Meet Wireless Communications:

A Tale of Two Interconnected Worlds

Half-Day Tutorial Session · Room Calypso A · Divani Corfu Palace (09:00 – 13:00), 15th June 2026

Note: Questions will be addressed at the end of each part and in the final discussion.

Program

From	To	Description	
Part 1: Welcome and Overview (10 min)			
09:00	09:05	5'	Motivation, tutorial scope, structure, and speakers
Part 2: MRV-Enabled Wireless Systems and Channel Effects (50 min)			
09:05	09:25	20'	Overview of MRV-enabled wireless communication scenarios
09:25	09:55	30'	Mobility-, orientation-, and airframe-aware channel modeling + Q&A
Part 3: Communications-Aware Control with Underactuated MRVs (95 min)			
09:55	10:10	15'	Dynamic modeling and control properties of underactuated MRV
10:10	10:30	20'	Communications-aware trajectory planning formulations
10:30	10:45	15'	Representative use cases and performance trade-offs
10:45	11:00	15'	Discussion: limitations due to actuation and pose coupling + Q&A
11:00	11:30	30'	Coffee Break
Part 4: Communications-Aware Control with Omnidirectional MRVs (90 min)			
11:30	11:45	15'	Modeling and control of omnidirectional (fully-actuated) MRVs
11:45	12:05	20'	Pose optimization versus position-only planning
12:05	12:30	25'	Communications-aware control enabled by full pose regulation
12:30	13:00	30'	Open challenges, future directions, and extended discussion + Q&A
End of Tutorial Session			

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Paper · supplementary material · video



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