

# Mechanics & Control of Orbital Robotic Systems from Simulations, to Lab & Flight Experimentation

**Dr. Marcello Romano**



**Professor, Mech./Aerospace Engineering Department,  
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**Professor, Mech./Aerospace Engineering Department / Space Systems Ac. Group  
Director, Spacecraft Robotics Lab  
Naval Postgraduate School, Monterey, California (2004-present)**

## **Brief Abstract**

The talk will give an overview of selected research activities and achievements by Dr. Romano and his research team, in the following areas: autonomous guidance & control of spacecraft proximity maneuvers, design, development and utilization of spacecraft kino-dynamic lab testbed.

## **Short Bio**

Dr. Marcello Romano is a Professor of Space Systems Engineering at Politecnico di Torino, Italy, and at the Naval Postgraduate School, USA, and is the Director of the NPS Spacecraft Robotics Laboratory, which he founded in 2004. Furthermore, he is a NASA visiting researcher. Marcello holds a Ph.D. (2000) and an Engineering Degree (1997) in Aerospace Engineering from Politecnico di Milano, Italy. His main research interests are in Astrodynamics, Spaceflight Guidance & Control, Orbital Space Robotics, and Space Systems Engineering. Before joining the Naval Postgraduate School in 2004, he has been research fellow of the US National Research Council. In 2018, Marcello spent a one-year sabbatical as a Visiting Professor at Stanford University and NASA Ames, and in 2011 he spent a one-year sabbatical as Visiting Associate Professor at the Technical University of Munich, Germany. Marcello authored/co-authored 57 journal publications and 8 awarded US patents. He is an Academician in the International Academy of Astronautics, an Associate Fellow in the American Institute of Aeronautics and Astronautics, and a Senior Member in the IEEE. He is a member of the board of directors of the Italian Scientists & Scholars in North America Foundation (ISSNAF), of the AAS Space Flight Mechanics TC, the AIAA Space Automation and Robotics TC, the IEEE Space Robotics TC, and the CEAS-GNC TC. He is the recipient of the 2020 AAS Patty Grace Smith award, and of two Menneken Research Excellence Awards (2021, for sustained research contributions; and 2006, for young-investigator research achievement). He is an associate editor with IEEE Transactions in Aerospace and Electronic Systems, and Frontiers in Robotics and AI / Space Robotics.