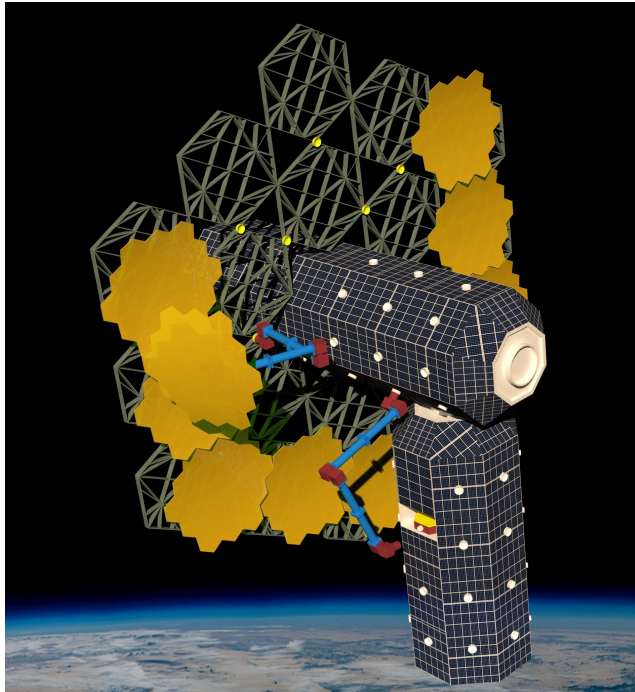


# ASSEMBLING LARGE INFRASTRUCTURES IN SPACE USING INTELLIGENT ROBOTS



October 1-5, 2023  
DETROIT USA

Full-day Workshop at the IEEE/RSJ International Conference  
on Intelligent Robots and Systems (IROS), October 1, 2023



<https://wvrtc.com/iros2023>

TOPIC AREAS INCLUDE:

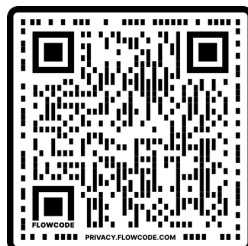
- Robotic in-space manufacturing and material manipulation
- Intelligent task planning and coordinated control
- Robotic locomotion including walking and sleds
- Modular mechanical power and data interfaces
- In-situ sensing and relative navigation
- Dexterous robot manipulators, robotic tools, and mating mechanisms
- Modular/cooperative servicing interfaces and systems
- Multi-robot/multi-agent cooperative systems or operations
- Deployable booms and flexible sheet materials

PRESENTERS:

- Maximo Roa (German Aerospace Ctr) – Robotic manipulation, assembly and servicing in space
- Kate McBryan (U.S. Naval Research Lab) – Multi-Arm Robot for In-Space Assembly of Truss Units
- Mini C. Rai (Univ of Lincoln, U.K.) – End-over-end walking manipulators for a space telescope
- John R. Cooper (NASA/Langley) – Autonomous Robotic Assembly of Modular Space Structures
- Amira Abdel-Rahman (Massachusetts Institute of Technology) – Self-reconfigurable robotic swarms
- Alycia Gailey (W Virginia Robotic Tech Ctr) – HIL simulation of modular antenna assembly
- Glory Sikka (Maxar Technologies) – SPIDER: Commercialized robotics enabling evolvable assets
- Rudra Mukherjee (NASA JPL) – Telescopes & Persistent Platforms & Radars
- Carol Martinez (Univ of Luxembourg) – Robotics Technology for Intelligent In-Space Assembly
- Keisuke Watanabe (JAXA) – Deployable lightweight planar antenna technology mission
- Greenfield Trinh (NASA/Ames) – ARMADAS: Autonomous Multi-Agent Robotic Construction System
- Brian Roberts (NASA/GSFC) – Enabling Next Generation Space Science Missions with ISAM Technologies

Organizers:

Craig Carignan (Univ. MD)  
Mini Rai (Univ. Lincoln, UK)  
Giacomo Marani (WVRTC)  
Carol Martinez (Univ. Lux.)



Submit a Poster/Video

IMPORTANT DATES

Abstract submission deadline: **September 1, 2023**

Notification of acceptance: **September 5, 2023**

Workshop date: **October 1, 2023**