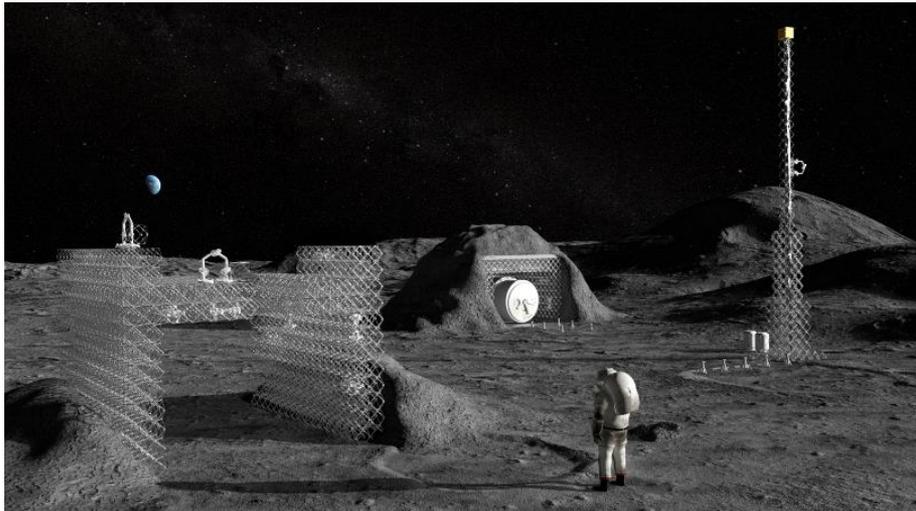


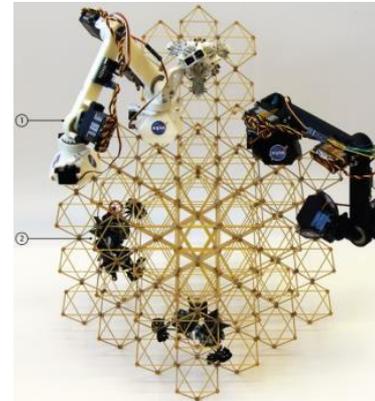
Automated Reconfigurable Mission Adaptive Digital Assembly Systems (ARMADAS)

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KEY ATTRIBUTES / COMPETENCY

Develop robots and structure for ground demonstration of autonomous assembly, leveraging relative robotics and discrete lattice material technologies.



TECHNICAL / SCIENTIFIC CHALLENGE ADDRESSED

The Automated Reconfigurable Mission Adaptive Digital Assembly Systems (ARMADAS) project will provide infrastructure that will autonomously assemble itself from a set of packed parts using simple robots.

SUMMARY

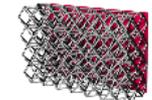
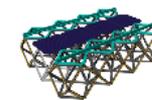
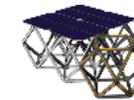
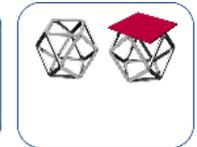
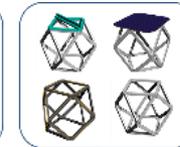
Develop robots and structure for ground demonstration of autonomous assembly, leveraging relative robotics and discrete lattice material technologies.

Lattices can become rebar-equivalent in planetary composite construction.

Local regolith components – used for bulk “lunarcrete” or “marscrete”.

HERITAGE

Voxels --
Ultralight
Aircraft
structures



Robot Charging Station

Self-powering Rail System

Wall (shelterblast/berm)

APPLICATIONS BEYOND

Significant reduction in launch mass for long-duration missions, autonomous assembly of on-orbit space port structures, increased capability / system robustness / cost reduction for lunar surface habitat structures, large aperture instrumentation...