

## Research Objectives

- Automation of routine robot tasks in human-robot deployments
- Research questions:
  1. How can the robot determine who to contact for help?

2. How does the robot engage in fluid and transparent interaction with a local crew and ground control operators?
3. How does the robot use operator input to refine its task model to enable improved autonomy in the future?

## Potential Impact

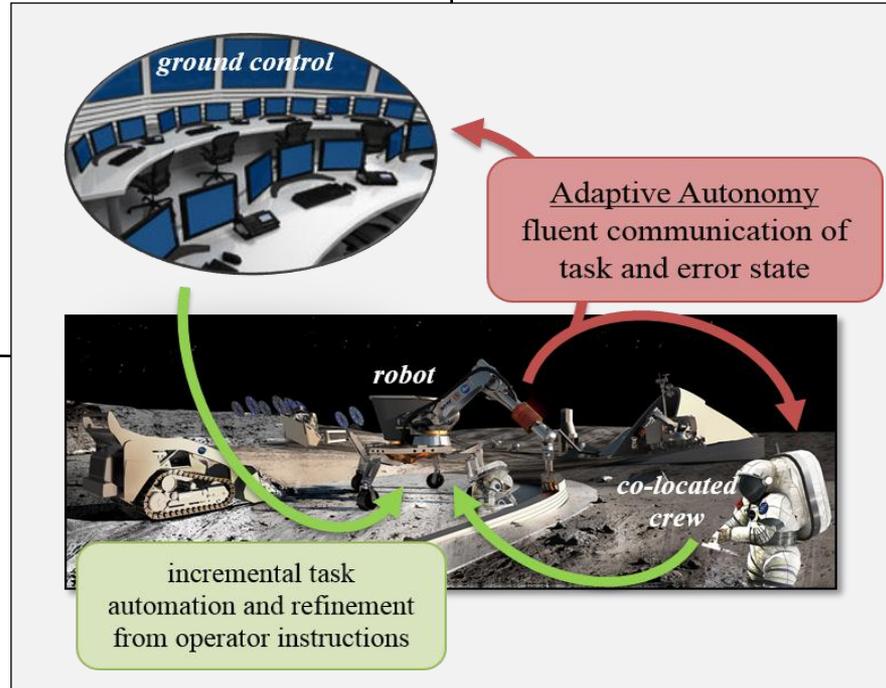
- Robust automation of routine robot tasks in human-robot deployments

- Improved effectiveness and sustainability of human-robot operations across low Earth orbit and deep space missions
- Improve scalability of human-robot team missions through greater operational efficiency and reduced human crew and operator workload

# Increasing Efficiency of Routine Robot Space Operations through Adjustable Autonomy and Learning from Human Input

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## Approach

- Development of new theoretical models, techniques and open source implementations that enable the robot to:
  - detect when unexpected operating conditions are encountered
  - request help from co-located crew members or remote ground-control operators, as appropriate, and
  - refine its operating procedures to improve future task execution and the long-term autonomy of the system.