



Consulate General of Italy
Houston



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Rice Space Institute



The focus will extend beyond the immediate horizon of near-Earth space and the essential development of space infrastructure. While these topics are at the heart of our mission, we also cast our gaze towards Mars and the farthest reaches of our cosmos, where the Moon beckons us with the promise of scientific discovery and even the prospect of sustained habitation.

We explore space because:

- we are drawn to the Universe by an insatiable curiosity;
- space exploration offers us an opportunity to uncover the enigmas that lie beyond our home planet;
- the technological marvels born from space exploration have far-reaching consequences for life on our planet, improving our lives in numerous ways, from healthcare to communication, Earth observations, and the development of groundbreaking materials and medicines;
- space has become a new frontier for business, attracting visionary entrepreneurs who see commercial opportunities that were once the stuff of science fiction.

Beyond the scientific and technological advances, space exploration is a mirror reflecting our culture and society. It changes our perspective, urging us to see our world differently, to reevaluate what we often take for granted.

In the spirit of exploration, let us ponder the age-old question: "Quo vadimus?" Where are we heading? It is a quest that has guided humanity through the eons, and it is a question that will continue to drive us towards a future where our understanding of space is limitless, and our exploration, boundless.

QUO VADIMUS?

SPACE EXPLORATION

December 15th, 2023

Venue: 101 Brockman Hall for Physics, Rice University, Houston, TX

Agenda

8:15 am – 8:40 am

Check-in & refreshments

8:40 – 9:05 am

Opening Remarks

- *Prof. David Alexander, Director Rice Space Institute, Rice University, Houston*
- *The Consul General of Italy in Houston Mauro Lorenzini*

9:05 – 12:00 am

Morning session

Session Chair: Prof. David Alexander, *Director Rice Space Institute, Rice University, Houston*

- Dr. Francesco Fusco, Propulsion Engineer, Boeing, Houston, *“Space Launch System (SLS) Core Stage and Exploration Upper Stage”*.
- Dr. Vittorio Netti, Researcher at Sasakawa International Center for Space Architecture, University of Houston, *“Architecture beyond Earth: A Technological Roadmap to build on the lunar and martian surface”*.
- Dr. Nadia Agha, Depart. of Kinesiology, Rice University, Houston, *“Exercise as a countermeasure for latent viral reactivation during long-duration space flight”*.
- Prof. Gianni Royer-Carfagni – University of Parma, CEO of Spaceglass SRL, Italy, *“High performance transparent-composite windows for space applications”*.
- Prof. Andrea Isella, Depart. of Physics and Astronomy, Rice University, Houston, *“The origin of habitable planets”*.

12:00 pm – 1:00 pm

Lunch refreshment

1:00 pm – 2:00 pm

Panel “How are we getting there?: The Tech taking us from Earth, to the Moon, Mars, and Beyond” moderated by

Dr. Christine Galib - Senior Director, Entrepreneurship and Innovation, ION, Houston

- Prof. Marcie O’Malley, Chair, Depart. of Mechanical Engineering, Rice University, Houston.
- Dr. Michelle Rucker, Mars Architecture Team Lead for the Exploration Systems Development, Mission Directorate, NASA Johnson Space Center, Houston.
- Dr. Marcello Azzoni, Chief Research and Development Spacewear, Fano, Italy.
- Col. Luca Parmitano, Italian astronaut, ESA.

2:00 pm – 2:35

Final talk

- Dr. Roberto Provera, Director New Initiatives, Partnerships and Innovation, Exploration and Science, Thales Alenia Space, Torino, Italy, *“From Earth to Moon: the new horizon for institutional and commercial challenges in the exploration journey”*.

2:35 pm – 2:40 pm

Final Remarks

The Scientific attaché Antonella Incicchitti