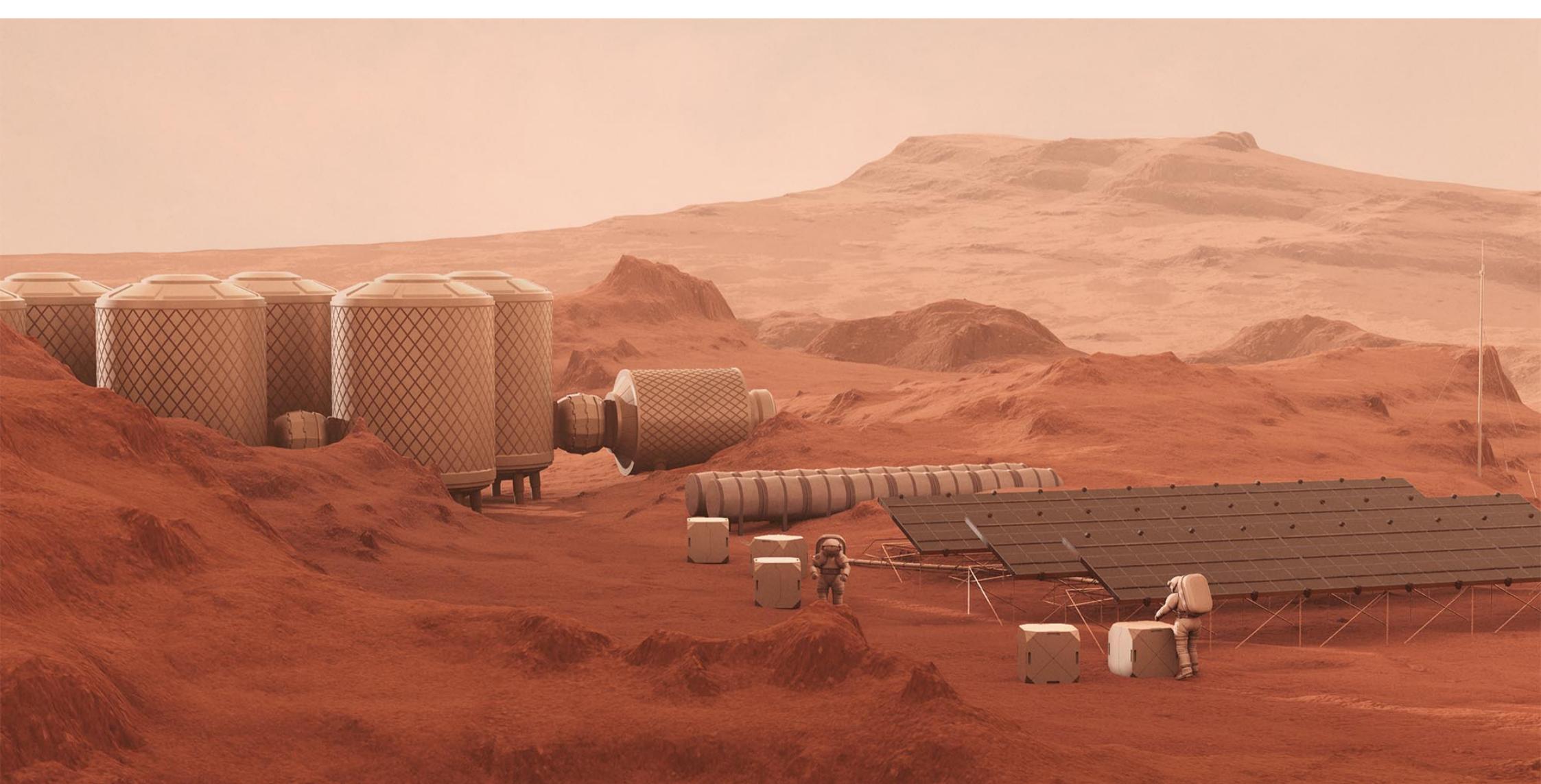




Mars present environment and future exploration

Dr. Maria-Paz Zorzano
Centro de Astrobiología (CSIC-INTA)
National Institute of Aerospace Technology, Spain

**16 Feb 2022, 13:30 ECT
online via zoom**



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In this talk we will revise the current knowledge about the environment on Mars, the cycle of water and dust and the availability of critical products for in-situ-resource-utilization and for life, as we know it. We will review observations from orbiter and landed spacecrafts and understand what are the main challenges of exploring Mars. We will also review what are the planetary protection concerns when we explore Mars, and how has the Mars Sample Return program started its way. We will finally discuss the implications of these missions on the future sustainable exploration of Mars.

protection concerns when we explore Mars, and how has the Mars Sample Return program started its way. We will finally discuss the implications of these missions on the future sustainable exploration of Mars.

Maria-Paz Zorzano is a planetary physicist. Her research focuses on astrobiology and planetary exploration and on the interaction of the atmosphere, the hydrosphere and radiation with the surface of planetary environments. She is co-Principal Investigator of the HABIT instrument, of the ExoMars Surface Platform and co-I of ISEM of the ExoMars rover (ESA/IKI), co-I of REMS onboard the Curiosity rover (NASA) and one of the Returned Sample Scientists of Perseverance rover (NASA). She is a researcher at the Astrobiology Center, of the National Institute of Aerospace Technology (INTA), Spain. She is a member of the COSPAR (Committee On SPace Research) Planetary Protection Panel and of the Mars sample return Science Planning Group-2 (MSPG-2).



[Bremen Human Space Exploration Seminar](#)

The seminar takes place every third Wednesday of the month at 13:30 ECT online via zoom and consists of a 40-minute talk followed by a 40-minute discussion.

Bremen Human Space Exploration Seminar

Humans living on Mars has been a long-time dream which may now appear within reach. The technological, ethical and environmental challenges are however enormous and require transdisciplinary, ground-breaking science. The Bremen Human Space Exploration Seminar is an exchange platform for scientists committed to envisage and shape a sustainable Mars Exploration program for the benefit of humankind and Earth.

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13:30 ECT online

