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Living Among the Stars: ISRU for a Sustainable Future in Space

In-Situ Resource Utilization (ISRU) focuses on harvesting local resources to minimize reliance on Earth. Abiotic methods, including regolith-based water and oxygen extraction, help reduce the need for resupply. Meanwhile, biotic approaches, such as microbial metal mining, harness microorganisms to extract metals directly on planetary surfaces. Integrating these strategies enhances sustainable exploration, enabling closed-loop systems for human settlements on other moons and planets. By studying extreme environments on Earth, we can lower costs for future space missions and support long-term human presence in space, paving the way for humanity to become an interplanetary species.



**Thursday
8 May, 2025**



**4.30 pm
to 5.30 pm**

**U3-BIOS building
room U3-04**



**Host:
BtBs-UNIMIB**

