

2021 Mars Society Convention Schedule

| Thursday October 14th | | | | |
|--------------------------|---|--|---|--|
| All Times PDT | | | | |
| Morning Plenaries | | | | |
| 9:00 AM | Dr. Robert Zubrin, President, The Mars Society - Reaching Mars this Decade | | | |
| 9:30 AM | Bruce Banerdt, NASA JPL - Mars InSight Mission Update | | | |
| 10:00 AM | Omran Sharaf, Project Manager - UAE Mars Hope Mission Update | | | |
| 10:30 AM | Vera Mulyani, CEO & Founder, Mars City Design - The Future Alchemists | | | |
| 11:00 AM | Dr. Nathaniel Putzig, Planetary Science Institute - Exploring for Underground Ice on Mars | | | |
| 11:30 AM | Dr. David Poston, SpaceNukes - Space Nuclear Power | | | |
| 12:00 PM | Dr. Karl Stapelfeldt, NASA Scientist - Search for Exoplanets with Telescopes | | | |
| 12:30 PM | Alfredo Munoz - Digital twins of Martian Cities as a new frontier for Space Analogs | | | |
| Afternoon Sessions | | | | |
| | Tech A | Tech B | Medical | Outreach |
| 2:00 PM | TA-1 Raymer: The Raymer Manned Mars Airplane | | MD-1 Squire et al: Induced Torpor and Advanced Propulsion Systems | O-1 Gathu: Space Boot Camp (A Novelty Space Project) |
| 2:30 PM | TA-2 Ng et al: Martian Biolith: composite for closed-loop manufacturing | TB-2 Hussain: Investigating possible water activity on Mars using Earth volcanos | MD-2 Plata: Providing for the Medical Needs of a Growing Base | O-2 Friedman: The Science Fiction connection to Mars |
| 3:00 PM | TA-3 Phillips: Mars Transit Direct | | MD-3 Marggraff: Countermeasure to Reduce Isolation during Long-Duration Missions | O-3 Calanchi: A Martian Literary Project: Mission 1/2021, Unveiling a Parallel |
| 3:30 PM | TA-4 Peláez-Fernández: The role of AI in the space industry and Mars | | | |
| 4:00 PM | TA-5 Parks: Five Ecological Principles for In Situ Resource Utilization | TB-5 Gurrea: Update on Mars Direct 3.0 | MD-5 Sridharan et al: Mars and COVID-19: The psychological effects | O-5 Ebenbach: The Role of Science-Fiction in Reaching Mars Successfully |
| 4:30 PM | TA-6 Behrens: The Critical Mission Sequence for Mars | TB-6 Bai: Mars Global Power Grid - Offering Sufficient Energy | MD-6 Gilkar: Kymira: Astronaut Physiological Health Monitoring Using Smart Underlayer Garment | O-6 Melton: Why Become a Mars Society Ambassador? |
| 5:00 PM | | TB-7 Morley/Bowen: Borebots: Unlocking Subglacial Lake Access in Mars South Pole | MD-7 Avinav: Neurosurgical procedures possible to carry out in space | O-7 Barboza: Training High School Tiger Teams for Simulated Mars Missions. |
| 5:30 PM | TA-8 Plata: The InstaBase Concept | TB-8 Sridharan: Technology-enabled Robotic Exploration (Trex) | MD-8 Sarmiento et al: Microalgae: protein and antioxidants for food and oxygen | O-8 Letherwood: The Mars Leap- An immersive Mars museum |
| 6:00 PM | TA-9 Plata: Design Choices for the GreenHab | TB-9 Gaviraghi: The martian global city as the first ecumenopolis | MD-9 Dubé: The case for Space Sexology | O-9 Pass: Expanding the Scope of Astrosociology in Order to Settle Mars |
| 6:30 PM | TA-10 Ford: Silkworms as an Industrial Organism for Martian Biosystems | | MD-10 Elavarasan: Synthetic Biology for Gene editing of edible plants | O-10 Barboza: Can we grow food using Martian soil? |
| Break (7pm - 7:30pm) | | | | |
| Thursday Evening Program | | | | |
| 7:30 PM | Panel - China's Space Program: The View from China (Moderated by Angela Cui - Director, Mars Society China) | | | |
| 8:30 PM | How China's exploration ambitions are helping to shape the future of future of Mars exploration Dr. Joseph Michalski, Laboratory for Space Research, The University of Hong Kong | | | |

2021 Mars Society Convention Schedule

| Friday October 15th | | | | |
|------------------------|--|--|--|---|
| All Times PDT | | | | |
| Morning Plenaries | | | | |
| 9:00 AM | Maria Antonietta Perino, Thales Alenia Space - ExoMars Mission Update | | | |
| 9:30 AM | Jim Green, NASA Chief Scientist - Ingenuity and the future of Flying on the Red Planet | | | |
| 10:00 AM | Teddy Tzanetos - NASA-JPL Ingenuity Mars Helicopter Operations Lead - Mission Update | | | |
| 10:30 AM | Dr. Katie Stack Morgan, NASA-JPL Perseverance Deputy Project Scientist - Mission Update | | | |
| 11:00 AM | Dr. Michael Hecht, NASA-JPL, Principal Investigator - MOXIE Project Update | | | |
| 11:30 AM | Penelope Boston, NASA Ames Research Center - Astrobiology by any other Name | | | |
| 12:00 PM | Dr. Greg Autry, Arizona State University - COMSTAC duties; commercial spaceflight | | | |
| 12:30 PM | Patrick Rennie & Fabrizio Bernardini, British Interplanetary Society - Engineering for Mars | | | |
| 1:00 PM | Anastasiya Stepanova, IBMP Moscow, Researcher - Preparation of humans for deep space flights | | | |
| Afternoon Sessions | | | | |
| | Tech C | Tech D | Analog Missions | Political/Philosophical A |
| 2:00 PM | TC-1 Greenbaum: Mars Aquaponics System | TD-1 Chaturvedi et al: In-Situ Resource Utilization technology for sustainable development | AM-1 Marques-Quinteiro: How Antarctica teams deal with unexpected events | |
| 2:30 PM | | TD-2 Nebergall: Insight – From First Landing to Cities | AM-2 Burk: MDRS Crew 261's Innovative Mars Analog Experiments | PA-2 Ravibhanu : Space Archaeology: Humans as a Multiplanetary Species in 2050 |
| 3:00 PM | TC-3 Mezilis: A Brief History of Sound on Mars | TD-3 Nebergall: FlexSail – Solar Sails and Tech Revolutions | AM-3 Popovaito: Machine Learning to Study Behavior in Space Analogs | PA-3 Lixiong: Seek Democracy on Mars |
| 3:30 PM | TC-4 Clarke et al: The Challenge of Mars EVA suits | TD-4 Mor: Communication Technologies in Mars Missions | AM-4 Stowe: Mars Ocean Analogs: Voyages at Sea to Provide Human Factors Data | PA-4 Plata: Martian Countries: Why They are Inevitable |
| 4:00 PM | TC-5 Rodriguez et al: Restoration of Essential Atmosphere Exploits Megastructure | | AM-5 Souza: Endurability to Habitability: BRIDGES for human spaceflight | |
| 4:30 PM | TC-6 Greenbaum: Mars Research Operations Habitat | | AM-6 Kędzierski: Improved cycloidal gear design in Mars rover analogue | |
| 5:00 PM | TC-7 Bonime: The Initiative for Martian Hemp Industrialization (I. M.H.I.) | | AM-7 Trolese: A Low-Cost & Off-the-Shelf Analogue Research Hab in Extreme Environments | |
| 5:30 PM | TC-8 Secosky: Water, water, water on Mars | TD-8 Aggarwal: Satellite Communication Channels for Mars Missions | AM-8 Staats: Data analysis of the first hermetic seal of SAM habitat at Biosphere 2 | PA-8 Gilley: The Martian Papers: A framework for thinking and discourse on Martian Governance |
| 6:00 PM | TC-9 Hago/Hatfield: A thermochemical approach to convert CO2 and water to sugars | | AM-9 Rezende: Physical preparation of analog astronauts in Habitat Marte | PA-9 Bhuiyan: Mars City State Design for 1,000,000 Population |
| 6:30 PM | | | AM-10 Rezende: Mining in space analog habitats | PA-10 Rathod: Habitat on Mars - Architectural Design for Future Settlements |
| Break (7pm - 7:30pm) | | | | |
| Friday Evening Program | | | | |
| 7:30 PM | IS THERE LIFE OUT THERE? Current Biological Research at the Mars Desert Research Station (MDRS) Shannon Rupert, Director, Mars Desert Research Station | | | |
| 8:30 PM | MDRS Crew 245 - Mars Analog Experience at MDRS (Moderated by Ron Craig - Host, Red Planet Live podcast) | | | |

2021 Mars Society Convention Schedule

| Saturday October 16th | | | | |
|--------------------------|---|---|--|--|
| All Times PDT | | | | |
| Morning Plenaries | | | | |
| 9:00 AM | Pam Melroy, Deputy Administrator, NASA - NASA's Path to Mars | | | |
| 9:30 AM | Dr. Charles Cockell, University of Edinborough - Engineering a Free Mars | | | |
| 10:00 AM | Dr. Carol Stoker, NASA-Ames - Finding Life on Mars | | | |
| 10:30 AM | Dr. Paul Davies, Arizona State University - What is Life? | | | |
| 11:00 AM | Dr. Chris McKay, NASA-Ames - Terraforming Mars | | | |
| 11:30 AM | Dr. Steven Benner & Jan Spacek, Astrobiology Group - How SpaceX Could Find Life on Mars | | | |
| 12:00 PM | Dylan Taylor, Founder, Space for Humanity & CEO, Voyager - Opening Space for Humanity | | | |
| 12:30 PM | Dr. Bernard Foing - EuroMoonMars highlights, instruments, field campaigns | | | |
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| Afternoon Sessions | | | | |
| | Tech E | Tech F | Political/Philosophical B | Mixed A |
| 2:00 PM | | | PB-1 Kenyon: The Two Plots Problem: Dealing with Death and Crime in a Martian Colony | XA-1 Gerard: 20 years of European Mars Conference (EMC) |
| 2:30 PM | TE-2 Marefat: The need for speed in Space Power Electronics | TF-2 Arora: Astronomy On Mars | PB-2 Zara: Mars, Terra nullius | XA-2 Canada: Raise your Voice - Comms, Before, During and After Mars |
| 3:00 PM | TE-3 Baldock: Semi-Cycling and the Martian Export Market | TF-3 Collier-Wright: Overview of NEP for Human Space Exploration Missions | PB-3 Bhatt: Legal perspectives on the political economy of a Martian settlement | XA-3 Rezende: Building experiences in the Lava Cave Habitat space analog |
| 3:30 PM | TE-4 Trevino et al: Micro Algae for Life Support | TF-4 Collier-Wright: Superconductor Magneto-hydrodynamic Shielding System | PB-4 Young: Sicut in Caelo et in Marte: Implementing a Catholic Diocese of Mars | XA-4 Shull: Modify MDRS Layout to Resemble Lunar Lava Tubes |
| 4:00 PM | | TF-5 Humble: A spinning toroidal gravity facility for mars. | PB-5 Dyck: Saint John's Newfoundland – historical example of settlement | XA-5 Wise/Burk/Lopin: Land Rights and a Centralized Mars Database |
| 4:30 PM | TE-6 Shah: Martian Paraterraforming | TF-6 Collier-Wright: Superconductors as Enabling Technology for High Power Space Missions | | XA-6 Kapoor: Leveraging Mars to solve immediate problems on Earth |
| 5:00 PM | TE-7 Dyck: Large Scale Colonization Ship | TF-7 Green: Walking on Mars: A Pathway to a Martian Space Suit | PB-7 Earnshaw/Gilley: Defining Mars for the purposes of a Martian constitution | XA-7 Muscatello/Blair: The Institute for Terraforming Earth and Mars (ITEM) |
| 5:30 PM | TE-8 Mondal: Understanding the Surface Modifications at Mars Landing Site | TF-8 August/Borri: Improved Rocker-Bogie Suspension Block | PB-8 Wood/Gilbert: Toward a Martian Trade Economy | XA-8 Harman: Who's Winning the Moon Race—and Why it Matters for Mars |
| 6:00 PM | | TF-9 Sharp: Xenotrophic gastronomy: fine dining on Mars | PB-9 Jewell: Moon/Mars Academy | XA-9 Khalid: Evaporite Minerals at Ritchey Crater using CRISM Hyperspectral Data |
| 6:30 PM | TE-10 Łabowska/Suścicka: Design of Xors Moon Base | | PB-10 Chairetis: Proposal for Interhuman Space Immigration Corporation ISIC | XA-10 Mackenzie: Open Discussion on New Visionary Mars Projects |
| Break (7pm - 7:30pm) | | | | |
| Saturday Evening Program | | | | |
| 7:30 PM | Digital Simulations & Entertainment Panel: MarsVR & Occupy Mars game (Moderated by James Burk - Mars Society Director of IT & MarsVR) | | | |
| 8:30 PM | Erik Bethke, CTO: Million on Mars game | | | |

2021 Mars Society Convention Schedule

| Sunday October 17th | | |
|------------------------|---|---|
| <i>All Times PDT</i> | Morning Plenaries | |
| 9:00 AM | Live broadcast with AMADEE-20 Mars Sim Staff (Austria & Israel) | |
| 9:30 AM | Dr. Sara Seager - MIT - Biosignatures in Venusian Atmosphere | |
| 10:00 AM | Barbara Belvisi, CEO, Interstellar Lab - Sustainable Space Settlement | |
| 10:30 AM | Jim Cantrell, Phantom Space - Achieving Economic Space Launch | |
| 11:00 AM | Dr. Setthivoine You, Co-Founder & Chief Scientist, Helicity Space - Fusion Powered Helicity Drive | |
| 11:30 AM | Evan Plant-Weir, Co-Founder, Mars Society Canada, & Senior Blog Writer, The Mars Society | |
| 12:00 PM | Vandi Verma, Chief Engineer, NASA-JPL Rover Robotics Operations - Driving Curiosity & Perseverance | |
| 12:30 PM | Dr. Henrik Hargitai, NASA Ames Researcher - Mapping the Planet Mars | |
| 1:00 PM | José M. Hernández, Former NASA Astronaut & CEO, Tierra Luna Engineering | |
| 1:30 PM | Dr. Elizabeth Turtle, NASA-JPL, Principal Investigator - Titan Dragonfly Mission | |
| Afternoon Sessions | | |
| | Tech G | Mixed B |
| 2:00 PM | TG-1 Tompkins: Challenges and opportunities for passive, practical agriculture on Mars. | XB-1 Lynov: Self Heating Living Bio Shelter Organism for Mars |
| 2:30 PM | | XB-2 Trevino et al: Algae on Martian Regolith Simulant as Fertilizer for Life Support |
| 3:00 PM | TG-3 Mathur: Mechanical Energy Storage System - An alternative of batteries on Mars | XB-3 Heinz: Why Art in Space? |
| 3:30 PM | TG-4 Kumar: Autonomous And Sentient Droid (Paldroid) to Assist Space Crews during Long Haul Journey to Mars | XB-4 Reznikov: Smart Impact-Assisted Rapid Construction for Space Colonization |
| 4:00 PM | TG-5 Rajalingam et al: Bio-Inspired Soft Robot for Mars Exploration | XB-5 Holden: Mars Colonist Candidate Selection & Training |
| 4:30 PM | TG-6 Mackenzie/Lutz: Mars Settlement with SpaceX Starships | |
| 5:00 PM | TG-7 Mateus/Esmeral: Modeling of a positioning system for astronauts on Mars | XB-7 Valenzuela et al: Appendicitis Considerations in Long-Term Space Travel |
| 5:30 PM | TG-8 Abhang et al: Autonomous Geomatics for Mars Exploration and Settlement | XB-8 Sobocinski: Terraforming Mars? Games & Their Positive Impact on the Perception of Space Exploration |
| 6:00 PM | TG-9 Prabakar et al: Astronaut Assisted Mobility Surface Explorer (AAMSE) for Mars | Mars Society Chapters Council All representatives from new/prospective and existing chapters are welcome |
| 6:30 PM | TG-10 Rezende: Mars Farming Viability | |
| | Break (7pm - 7:30pm) | |
| Sunday Evening Program | | |
| 7:30 PM | Kolemann Lutz, Bruce MacKenzie, Jekan Thanga - Mars University | |
| 8:30 PM | Dr. Robert Zubrin, Founder & President, The Mars Society - Closing Remarks | |