# Monday, July 8

| Start Time | Title | Name | Affiliation | |
|---|---|---|---|---|
| **Opening Session - Conveners: Ethiraj Venkatapathy, Miguel Perez Ayucar, and Bernie Bienstock** | | | | |
| 9:00 AM | LOC Welcome | Colin Wilson; Steve Lingard | University of Oxford; Vorticity | |
| 9:15 AM | IOC Welcome | Bernie Bienstock | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:30 AM | Al Seiff Award - 2018 and 2019 | Miguel Perez Ayucar | Aurora Technology B.V. for ESA | |
| 9:40 AM | 2018 Al Seiff Award Winner Lecture - *in situ* , forever | Sushil Atreya | University of Michigan | Keynote |
| 10:10 AM | Coffee Break | | | |
| 10:35 AM | Introduction to the Keynote Address and Panel Discussion | Ethiraj Venkatapathy | NASA Ames Research Center | |
| 10:38 AM | European Space Agency Program Discussion | Luigi Colangeli | ESA | Keynote |
| 11:12 AM | China's Deep-Space Exploration and Planetary Research in the Past, Current and in the Near Future | Chi Wang | National Space Science Center, Chinese Academy of Sciences | Keynote |
| 11:46 AM | Updates on NASA's Planetary Science Programs | Carolyn Mercer | NASA Headquarters | Keynote |
| 12:20 PM | Moderated Panel | Ethiraj Venkatapathy; Robert Buchwald | NASA Ames Research Center; Airbus Defence and Space | Invited |
| 1:05 PM | Lunch | | | |
| 2:30 PM | IPPW-2019 Pictures | | Meet in front of the lecture hall | |
| **Science Instrumentation, Experiments, and In-Situ Measurements - Conveners: Manuel Dominguez, Rafael Lugo, Ryan Timoney, and Gregory Villar** | | | | |
| 2:45 PM | Poster Introductions | | | |
| 2:57 PM | The PanCam instrument for the Rosalind Franklin (ExoMars 2020) rover | Andrew Coates | UCL Mullard Space Science Laboratory | |
| 3:09 PM | TheJet Propulsion Laboratory, California Institute of Technology Venus Aerosol Mass Spectrometer Concept | Kevin Baines | Jet Propulsion Laboratory, California Institute of Technology | |
| 3:21 PM | Dragonfly: In Situ Exploration of Titan's Organic Chemistry and Habitability | Elizabeth Turtle | Johns Hopkins Applied Physics Laboratory | |
| 3:33 PM | Coffee Break | | | |
| 3:58 PM | The Entry Descent and Landing Instrumentation Suite for the Mars 2020 Mission | Todd White | NASA Ames Research Center | |
| 4:10 PM | Piezo-Electric Inlet System For Atmospheric Descent Probe | Jurij Simcic | Jet Propulsion Laboratory, California Institute of Technology | |
| 4:22 PM | Exploring The Performance Of A Miniature 3D Wind Sensor Under Extreme Martian Winds Up To The Dust Devil Scale | Manuel Dominguez-Pumar | Technical University of Catalonia | |
| 4:34 PM | Assessing The Habitability Of Icy Ocean Worlds | Samuel Kounaves | Tufts University | |
| 4:46 PM | i-Drill: An Instrumented Drill for Lunar Polar Volatiles | Ryan Timoney | University of Glasgow | Student |
| 4:58 PM | Laser Nephelometer For In-Situ Particle Detection In Planetary Atmospheres | Vandana Jha | NASA Ames Research Center | |
| 5:10 PM | ESA plans for Planetary Defense and Small Satellites | Frederic Teston | Head of Systems Department, D/TEC | Keynote |
| 5:40 PM | Break | | | |
| 6:30 PM | Industry Reception at University of Oxford Natural History Museum | Sponsored by Analytical Mechanics Associates | | |
| 9:30 PM | | | | |

# Tuesday, July 9

| Start Time | Title | Name | Affiliation | |
|---|---|---|---|---|
| **Mars Exploration - Conveners: Ashley Korzun, David Mimoun, Michelle Munk, and Brooke Harper** | | | | |
| 8:30 AM | Poster Introductions | | | |
| 8:45 AM | InSight EDL Overview and As-Flown Performance | Rob Grover | Jet Propulsion Laboratory, California Institute of Technology | Invited |
| 8:57 AM | Mars InSight Trajectory and Atmosphere Reconstruction | Chris Karlgaard | AMA, Inc. at NASA Langley Research Center | Invited |
| 9:09 AM | Insight Approach Operations During Dust-Storm Season | Eugene Bonfiglio | Jet Propulsion Laboratory, California Institute of Technology | Invited |
| 9:21 AM | Performance of the InSight Spacecraft During Entry, Descent, and Landing at Mars | Mark Johnson | Lockheed Martin Space | Invited |
| 9:33 AM | EDL Comm featuring MarCO CubeSat Performance | Sanford Krasner | Jet Propulsion Laboratory, California Institute of Technology | Invited |
| 9:45 AM | Simulation of InSight Plume Induced Surface Cratering and Validation Through Imagery Based 3D Topology Reconstruction | Peter Liever | CFD Research Corp. | Invited |
| 9:57 AM | Comparison of the Reconstructed Entry, Descent, and Landing Phase of the InSight and Phoenix Mars Landers | Aline Zimmer | Jet Propulsion Laboratory, California Institute of Technology | Invited |
| 10:09 AM | Coffee Break | | | |
| 10:30 AM | Reconstruction Of Schiaparelli And Comars Flight Data | Aaron Brandis | AMA Inc at NASA Ames Research Center | |
| 10:42 AM | Mars 2020 Entry, Descent, and Landing Update | Allen Chen | Jet Propulsion Laboratory, California Institute of Technology | |
| 10:54 AM | Mars 2020 EDL System Performance at Jezero Crater | David Way | NASA Langley Research Center | |
| 11:06 AM | The Mars 2020 Lander Vision System: Architecture And V&V Results | James Montgomery | Jet Propulsion Laboratory, California Institute of Technology/Caltech | |
| 11:18 AM | Exomars 2020 Entry, Descent And Landing System | Steve Lingard | Vorticity Ltd | |
| 11:30 AM | Systems Analysis Of An Inflatable Entry Concept For Human Mars Mission | Jamshid Samareh | NASA Langley Research Center | |
| 11:42 AM | Application of Direct Force Control to Human-Scale Mars Entry, Descent, and Landing. | Rafael Lugo | NASA Langley Research Center | |
| 11:54 AM | Lunch and Student Profession Lunch Event | | | |
| 1:30 PM | ESA Talk including discussion on ESA's contribution to Mars Sample Return | David Parker | European Space Agency | Keynote |
| 2:00 PM | Mars Sample Return - A reference campaign architecture for joint ESA-NASA studies and early mission concepts | Sanjay Vijendran | European Space Agency | |
| 2:12 PM | Overview And Status Of The Mars Sample Return Study 2026 Opportunity | Martin Greco | Jet Propulsion Laboratory, California Institute of Technology | |
| 2:24 PM | Mars Sample Return Edl Flight Performance Challenges And Mitigation Strategies | Mark Ivanov | Jet Propulsion Laboratory, California Institute of Technology | |
| **Sample Return to Earth - Conveners: Scott Perino, Matthias Grott, Marcus Lobbia, Joern Helbert, and Sahadeo Ramjatan** | | | | |
| 2:36 PM | Poster Introductions | | | |
| 2:48 PM | Robotic Mars Sample Return Earth Entry Vehicle Concept Development | Marcus Lobbia | Jet Propulsion Laboratory, California Institute of Technology | |
| 3:00 PM | HEEET Material Modeling and Earth Entry Vehicle Landing Analyses for Potential Mars Sample Return | Aaron Siddens | Jet Propulsion Laboratory, California Institute of Technology | |
| 3:12 PM | Break the Chain and Containment Assurance Concepts for Mars Sample Return and Beyond | Morgan Hendry | Jet Propulsion Laboratory, California Institute of Technology | |
| 3:24 PM | Conceptual Design Of Sample Return Capsule For CAESAR Mission | Kazuhiko Yamada | JAXA | Invited |
| 3:36 PM | The DLR Sample Analysis Laboratory | Joern Helbert | DLR | |
| 3:48 PM | Successes With Exo-Brake Development and Targeting for Future Sample Return Capability: TES-6,7,8 Flight Ex-eriments | Marcus Murbach | NASA Ames Research Center | |
| 4:00 PM | Coffee Break | | | |
| **Innovative Concepts for Exploration - Conveners: Robert Dillman, Dmitriy Shutin, Gilles Bailet, and Siddharth Krishnamoorthy** | | | | |
| 4:24 PM | Poster Introductions | | | |
| 4:36 PM | Deployable Aeroshell Technology For Small-Class Planetary Exploration Mission | Kazuhiko Yamada | JAXA | Invited |
| 4:48 PM | Dragonfly: In situ Terrain Relative Navigation for Titan Surface Exploration | Kenneth Hibbard | Johns Hopkins Applied Physics Laboratory | |
| 5:00 PM | BioSats: Distributed Sensing of Venus' Atmosphere through Microprobes | Katharina Hildebrandt | European Space Agency | |
| 5:12 PM | Swarm Navigation and Exploration for Planetary Surface Missions: Experimental Results | Emanuel Staudinger | German Aerospace Center (DLR) | |
| 5:24 PM | Triple: Autonomous Subglacial Lake Exploration As A Stepping Stone Towards Icy Worlds Ocean Exploration | Christoph Waldmann | University of Bremen/MARUM | |
| 5:40 PM | Poster Session | | | |
| 7:10 PM | | | | |

# Wednesday, July 10

| Start Time | Title | Name | Affiliation | Status |
|---|---|---|---|---|
| **Solar System Exploration I – Mercury, Venus, Giant Planets, and Titan - Conveners: Thibault Cavalie, Jacob Izraelevitz, Olivier Mousis, and David Atkinson** | | | | |
| 8:30 AM | Poster Introductions | | | |
| 8:42 AM | The Decade of Venus: Revitalizing Exploration of our Sister Planet | James Cutts | Jet Propulsion Laboratory, California Institute of Technology | |
| 8:54 AM | Mercury Vapor Rankine Power Cycle For A Venus Surface Lander | Christopher Greer | The Pennsylvania State University | Student |
| 9:06 AM | Long-Duration Venus Probes and Landers | Tibor Kremic | NASA Glenn Research Center | |
| 9:18 AM | The Cupid's Arrow Mission Concept: Hypervelocity Sampling In The Upper Atmosphere Of Venus | Jason Rabinovitch | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:30 AM | Balloon-Borne Infrasound As A Remote Sensing Tool For Venus - Progress In 2018 | James Cutts | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:42 AM | Altitude-Controlled Balloon Concepts for Venus and Titan: Energy, Mass, and Stability Tradeoffs | Jacob Izraelevitz | NASAJet Propulsion Laboratory, California Institute of Technology | |
| 9:54 AM | Coffee Break | | | |
| 10:18 AM | Advances In Mechanical Compression Altitude Control Balloon Technology For Venus And Titan | Maxim de Jong | Thin Red Line Aerospace | |
| 10:30 AM | Sampling Titan'S Surface With Dragonfly | Ralph Lorenz | Johns Hopkins Applied Physics Laboratory | |
| 10:42 AM | Study On ESA Contribution To NASA-Led Ice Giants Mission | Gonzalo Saavedra Criado | European Space Agency | |
| 10:54 AM | The deep composition of Uranus and Neptune from mass spectrometry and thermochemical modeling | Thibault Cavalié | Laboratoire d'Astrophysique de Bordeaux | |
| 11:06 AM | Key Atmospheric Signatures For Deciphering The Formation Conditions Of Uranus And Neptune In The Protosolar Nebula | Olivier Mousis | Laboratoire d'Astrophysique de Marseille | |
| 11:18 AM | Ice Giant Aerocapture Using Low-L/D Aeroshells: Uncertainty Quantification and Risk Assessment | Athul Pradeepkumar Girija | Purdue University | Student |
| 11:30 AM | Atmospheric Link Science And Communications With Planetary Entry Probes Via Direct-To-Earth And Relay Radio Link Methods. | Sami Asmar | Jet Propulsion Laboratory, California Institute of Technology | |
| 11:42 AM | The Challenges of Landing on Uncertain Terrain | Alejandro San Martin | Jet Propulsion Laboratory, California Institute of Technology | Invited |
| 12:12 PM | Lunch | | | |
| 1:30 PM | Tour | | | |
| 5:00 PM | Break | | | |
| 6:00 PM | IPPW Banquet – Keble College | | | |
| 9:00 PM | | | | |

# Thursday, July 11

| Start Time | Title | Name | Affiliation | Status |
|---|---|---|---|---|
| **Entry, Descent, and Landing Technologies - Conveners: Tom West, Rodrigo Haya Ramos, Milad Mahzari, Karl Edquist, and Eric Stern** | | | | |
| 8:30 AM | Poster Introductions | | | |
| 8:45 AM | Study Of Neuromorphic Application Using Spiking Neural Network For Terrain Relative Navigation | Kazuki Kariya | The Graduate University for Advanced Studies | Student |
| 8:57 AM | Crater-based Optical Navigation Technologies for Lunar Precision Landing in SLIM Project. | Takayuki Ishida | JAXA | |
| 9:09 AM | Map matching during descent for terrain relative navigation on Titan | Larry Matthies | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:21 AM | Mars 2020 Hazard Map for Terrain Relative Navigation | Richard Otero | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:33 AM | Onboard Autonomous Trajectory Planner: A guidance routine to assist in enabling pinpoint landing and in-flight trajectory analysis | Justin Green | NASA Langley Research Center | |
| 9:45 AM | Design Of The Pinpoint Landing GNC Of Space Rider. | Rodrigo Haya Ramos | SENER Aerospace | |
| 9:57 AM | Coffee Break | | | |
| 10:18 PM | An Uncoupled Range Control Approach to Fully Numerical Predictor-Corrector Entry Guidance | Breanna Johnson | NASA Johnson Space Center | |
| 10:30 PM | The SPLICE Project: Safe and Precise Landing Technology Development and Testing | Jay Estes | NASA Johnson Space Center | |
| 10:42 PM | Stability Analysis and Control Design for a Deployable Entry Vehicle with Aerodynamic Control Surfaces | Wendy Okolo | NASA Ames Research Center | |
| 10:54 PM | The Dragonfly Entry And Descent System | Michael Wright | NASA Ames Research Center | |
| 11:06 PM | European Solutions for Heatshields of High Energy Entry Probes | Jean-Marc Bouilly | ArianeGroup SAS | |
| 11:18 PM | Sustaining Phenolic Impregnated Carbon Ablator (PICA) For Future Nasa Missions Including Discovery And New Frontiers | Donald Ellerby | NASA Ames Research Center | |
| 11:30 PM | ADEPT Sounding Rocket One Flight Test Overview | Alan Cassell | NASA Ames Research Center | |
| 11:42 PM | Technology Readiness Assessment For HEEET TPS | Peter Gage | Neerim Corp at NASA Ames Research Center | |
| 11:54 PM | The Challenges of Seam Design in Tiled Thermal Protection Systems | Cole Kazemba | NASA Ames Research Center | |
| 12:06 AM | Lunch and Women Networking Lunch | | | |
| 1:34 PM | Damage Assessment During a Structural and Thermal Test Campaign of a 1-meter Diameter Heatshield with a 3-D Woven Thermal Protection System for Extreme Environments | Sarah Langston | NASA Langley Research Center | |
| 1:46 PM | LOFTID Aeroshell System Overview | Stephen Hughes | NASA Langley Research Center | |
| 1:58 PM | LOFTID Aeroshell Engineering Development Unit Structural Testing | Greg Swanson | NASA Ames Research Center | |
| 2:10 PM | Retro Propulsion Assisted Landing Technologies (RETALT) | Ali Guelhan | DLR e.V. | |
| 2:22 PM | Designing A Supersonic Retropropulsion Test For The NASA Langley Unitary Plan Wind Tunnel | Karl Edquist | NASA Langley Research Center | |
| 2:34 PM | Experimental Investigation of Magnetohydrodynamic Energy Generation in Conditions and Configurations Relevant to Planetary Entry | Hisham Ali | Georgia Institute of Technology | Student |
| 2:46 PM | Design And Qualification Testing Of Two European Parachute Mortars For The ESA Exomars 2020 Mission | Rudi Matthijssen | APP-ArianeGroup | |
| 2:58 PM | Coffee Break | | | |
| **Solar System Exploration II – Airless Planetary Satellites, Asteroids, and Comets - Conveners: Aline Zimmer, Christian Grimm, Michelle Rodio, and Benoit Pigneur** | | | | |
| 3:22 PM | Poster Introductions | | | |
| 3:34 PM | Europa Lander Mission Concept Overview and Update | Steve Sell | Jet Propulsion Laboratory, California Institute of Technology | |
| 3:46 PM | A New Mission Concept for Further Exploration of Enceladus | Stephanie Mottershead | University College London | Student |
| 3:58 PM | Surface Accessibility with Vertical Controlled Landing on 67P / Churyumov-Gerasimenko | Alena Probst | Bundeswehr University Munich | Student |
| 4:10 PM | Juventas - Attempting to Land a CubeSat on Didymoon for the Hera Mission | Hannah Goldberg | GomSpace | |
| 4:22 PM | Moon Diver: A Discovery Mission Concept For The Exploration Of A Lunar Pit In Mare Tranquillitatis | Richard Kornfeld | Jet Propulsion Laboratory, California Institute of Technology | |
| 4:34 PM | HERACLES - Human-Enhanced Robotic Architecture and Capability for Lunar Exploration and Science | Robert Buchwald | Airbus | |
| 4:46 PM | Overview of NASA's Human Landing System for Lunar Exploration | Tara Polsgrove | NASA Marshall Space Flight Center | |
| 4:58 PM | Technology Investments At The Moon To Enable Entry, Descent, And Landing For Humans At Mars | Alicia Dwyer Cianciolo | NASA Langley Research Center | |
| 5:10 PM | ExoMars 2020 - Rosalind Franklin Rover Integration and Test Status | Dave Pecover | Airbus UK | Keynote |
| 5:40 PM | Poster Session | | | |
| 7:10 PM | IOC Dinner - Invite only | | | |

# Friday, July 12

| Start Time | Title | Name | Affiliation | Status |
|---|---|---|---|---|
| **Modeling, Simulation, Testing, and Validation - Conveners: Clara O'Farrell, Michael Wright, Julia Kowalski, Al Witkowski, and Aaron Stehura** | | | | |
| 8:30 AM | Further Aerodynamic Characterization Of The Esa Huygens Probe And Its Appendages : A Combined Testing And Modeling Approach | Simon Couche | Polytech Orleans - University of Orleans | Student |
| 8:42 AM | Dragonfly: Modeling, Testing, and Validation for Atmospheric Flight on Titan | Douglas Adams | Johns Hopkins Applied Physics Laboratory | |
| 8:54 AM | Integrated Modeling And Simulation Of Autonomous Parafoil Descent On Titan | Larry Matthies | Jet Propulsion Laboratory, California Institute of Technology | |
| 9:06 AM | Static And Dynamic Testing Of Blunt Bodies In A Subsonic Magnetic Suspension Wind Tunnel | Mark Schoenenberger | NASA Langley Research Center | |
| 9:18 AM | Recent Developments in Free-Flight CFD | Joseph Brock | AMA Inc. at NASA Ames Research Center | |
| 9:30 AM | Plume-Surface Interaction (PSI): A New (Old) Challenge for Descent and Landing | Michelle Munk | NASA STMD | |
| 9:42 AM | Application of Petascale Computing to Simulation of Powered Descent in Atmospheric Environments | Ashley Korzun | NASA Langley Research Center | |
| 9:54 AM | Coffee Break | | | |
| 10:18 AM | Reconstructed Disk-Gap-Band Parachute Performance During the Third ASPIRE Supersonic Flight Test | Christopher Tanner | Jet Propulsion Laboratory, California Institute of Technology | |
| 10:30 AM | ADEPT SR-1 Flight Test Performance Summary | Soumyo Dutta | NASA Langley Research Center | |
| 10:42 AM | Aeroheating Tests Of Hayabusa Sample Return Capsule In Shock Tunnel And Expasion Tube | Hide Tanno | JAXA Kakuda | |
| 10:54 AM | Challenges In Qualification Of Thermal Protection Systems In Extreme Entry Environments | Milad Mahzari | NASA Ames Research Center | |
| 11:06 AM | Progress Towards Modeling The Mars Science Laboratory Pica-Nusil Heatshield | Brody Bessire | NASA Ames Research Center | |
| 11:18 AM | Preliminary Results from Shock-layer Radiation Experiments in the T6 Aluminium Shock Tube | Peter Collen | University of Oxford | Student |
| 11:30 AM | Current Status of Shock Layer Radiation Studies for Planetary Probes | Brett Cruden | AMA Inc. at NASA Ames Research Center | |
| 11:42 AM | Mars 2020 EDL System Test Design and Progress | Mallory Lefland | Jet Propulsion Laboratory, California Institute of Technology | |
| 11:54 AM | Validation Of The Mars 2020 Dsends Simulation Of Entry, Descent, And Landing Using Msl Reconstruction Data | Clara O'Farrell | Jet Propulsion Laboratory, California Institute of Technology | |
| 12:06 PM | Lunch | | | |
| **Closing Session - Conveners: Pat Beauchamp and Jean-Pierre Lebraton** | | | | |
| 1:30 PM | SOC Awards Ceremony | | | |
| 1:42 PM | Decadal Survey | Bernie Bienstock, Jim Cutts, Pat Beauchamp | Jet Propulsion Laboratory, California Institute of Technology | |
| 1:57 PM | White Papers For The Next Decadal Survey: Thermal Protection Systems And Instrumentation | Helen Hwang | NASA Ames Research Center | |
| 2:07 PM | Insight Overview | Tom Hoffman | Jet Propulsion Laboratory, California Institute of Technology | Keynote |
| 2:37 PM | Silicon Seismometers, from Mars to Europa and Beyond | Tom Pike | Imperial College London | Keynote |
| 3:10 PM | IPPW-2020 | | | |
| 3:25 AM | IOC Closing Remarks | Bernie Bienstock | Jet Propulsion Laboratory, California Institute of Technology | |