

As of 5-13-18

**Registration**

8:00 am - 7:00 pm

**Student Registration**

9:00 am - 6:00 pm

**Exhibit Hall**

10:00 am - 7:00 pm

**Space Art Exhibition**

10:00 am - 6:00 pm

**Morning Plenary**

8:30 am - 9:45 am

**Student Plenary**

10:00 am - 10:45 am

**Saturday, May 26**

**Century Prefunction**

**Grand ABC**

**Gateway & Century Prefunction**

**California Prefunction**

**The Art of Space** - International Association of Astronomical Artists (IAAA)

**Grand Ballroom**

"From Legislation to Reality: Space Tourism 2004-2018" (panel)

Panelists: Rep. Dana Rohrabacher, Dr. George C. Nield and Loretta Whitesides

Moderator: Dr. Greg Autry, Assistant Professor, Lloyd Greif Center for Entrepreneurial Studies, University of Southern California Marshall School of Business

**Grand Ballroom**

"Designing Tomorrow's Missions Today – The Future of Deep Space Robotic Exploration"

Keynote Speaker: Dr. Randii Wessen, Lead Study Architect, NASA Jet Propulsion Laboratory Innovation Foundry A-Team

**10:00 am - 12:00 noon**

**Aerospace Legacy**

10:00 am

11:00 am

**METI International**

10:00 am

10:25 am

10:50 am

11:10 am

11:35 am

**Moon Development**

10:00 am

10:15 am

10:30 am

10:45 am

11:00 am

11:15 am

11:30 am

11:45 am

**Morning Sessions & Symposia**

**Salon 210 (2nd floor)**

The ALF Story - This tells the story of the Aerospace Legacy Foundation and describes the founding and first 10 years of the organizations history including how the Columbia Memorial Space Center came to be. Gerald Blackburn and Stan Barauskas (Aerospace Legacy Foundaton)

China Space Program - Traces the history of the China Space Program from the introduction of rockets in medieval times in warfare through modern times. Stan Barauskas (Aerospace Legacy Foundaton)

**Redondo Room**

Mars Needs Linguists. Dr. Laura Welcher (Long Now Foundation and METI International)

A Linguistic Perspective on the Drake Equation: Knowns and Unknowns for Human Languages and Extraterrestrial Communication. Daniel Ross (University of Illinois at Urbana-Champaign)

NSS/NASA Ames Student Space Settlement Contest Presentation

Spinning the Golden Record: Interstellar Misunderstandings at 16 $\frac{2}{3}$  RPM Rebecca Orchard and Dr. Sheri Wells-Jensen (Bowling Green State University)

Genome Information as an Extraterrestrial Trade Good: Messages, Marketing and Ethics of Selling Ourselves and Terra. Dr. Daniel S. Helman (Ton Duc Thang University)

**Hermosa Room**

**Enabling Capabilities for Lunar Development & Settlement**

NASA's Plans for Returning to the Moon. Dr. Christopher Moore (Advanced Exploration Systems Division, Human Exploration and Operations Mission Directorate, NASA Headquarters)

Review of Lunar Reconnaissance Orbiter Results. Dr. Mark Robinson (Arizona State University)

Lunar Cargo Lander. Reginald Alexander (NASA Marshall Space Flight Center)

Modeling Lunar Partnerships for the NASA Emerging Space Office. Brad Blair (NewSpace Analytics)

**Lunar Economics, Missions & Markets**

Sustainability of a Cislunar Economy. Jim Plaxo (Chicago Society for Space Studies)

International Lunar Observatory & Galaxy Forum: 10 Years On. Steve Durst (International Lunar Observatory Association)

Overview of Project Moon Hut. David Goldsmith (Project Moon Hut)

Post Mortem for the Google Lunar X Prize. Dr. John M. Wilkes (Worcester Polytechnic Institute)

As of 5-13-18

**Saturday, May 26**

**Space Business**

10:00 am  
10:15 am  
10:30 am  
10:45 am  
11:00 am  
11:15 am  
11:30 am  
11:45 am

**Laguna Room**

Introduction. Meagan Crawford (The Center for Space Commerce & Finance)  
Joe Latrell (Beyond-Earth Enterprises)  
Karan Talati (First Resonance)  
Garritt Chrzanowski (Space Map)  
Alex Smith (Stofiel Aerospace)  
Darren Charrier (Voyager Space Technologies)  
Kevin Heath (Waypoint 2 Space)  
Thomas Andrew Olson (The Center for Space Commerce & Finance)

**Space Transportation**

10:00 am  
  
10:30 am  
10:45 am  
  
11:00 am  
  
11:15 am  
  
11:30 am  
11:45 pm

**Malibu Room**

NASA Marshall Space Flight Center Nuclear Propulsion Program. Dr. Michael Houts (NASA Marshall Space Flight Center)  
Air Force Propulsion Needs. Lt. Col. Peter Garretson (Air University, USAF)  
System Design of Advanced Nuclear Thermal Propulsion (NTP). Carly Romnesa (University of New Mexico) and Roger Lenard (Zodiac Planetary Services)  
System Design of In-Space and Surface Power System. Kyle Beling (University of New Mexico) and Rodger Lenard (Zodiac Planetary Services)  
Advanced Technologies and Future Space Systems. Les Johnson (NASA Marshall Space Flight Center)  
Thor Launch System. Cam Hosie (8 Rivers)  
Robotic Vehicle Development for Planetary Exploration. Brian Wilcox (NASA Jet Propulsion Laboratory)

**Student Program**

11:00 am - 12:00 noon

**Gateway Ballroom**

Workshop: Planetary Defense from Asteroids and Comets  
Dr. Nahum Melamed, Project Leader, The Aerospace Corporation

**Student Program**

11:00 am - 12:00 noon

**Salons 212, 215, 217 (2nd floor)**

Universalization Debates

**Lunch**

12:00 noon - 1:50 pm

**Grand Ballroom**

"SETI - Where Do We Go From Here?"  
Keynote Speaker: Dr. Frank Drake, Professor Emeritus of Astronomy and Astrophysics at University of California, Santa Cruz and Former President of the SETI Institute  
Presenting of NSS Space Pioneer Award to Dr. Frank Drake  
Presenting of Jim Baen Memorial Short Story Award  
MC: David Brin, Author/Astrophysicist

**Student Poster Session**

1:30 pm - 3:30 pm

**Grand ABC**

NSS/NASA Ames Space Settlement Contest posters on display with the student presenters.

**Student Event**

2:00 pm - 3:30 pm

**Grand ABC**

Students Meet & Greet with Freeman Dyson  
Meet famed physicist Freeman Dyson, one of the great champions of space exploration and settlement.

As of 5-13-18

**Saturday, May 26**

**2:00 pm - 5:00 pm**

**Aerospace Legacy**

2:00 pm

**Afternoon Sessions & Symposia**

**Salon 210 (2nd floor)**

On Wings from the West - A short history of early California aviation pioneers and the development of the aerospace industry in California from 1886 to 2015. Gerald Blackburn (Aerospace Legacy) Foundaton) and Dr. Seth D. Potter (SDP Space Systems)

3:00 pm

U.S. Manned Spacecraft Program - U.S. manned space flights beginning with Project Mercury through Space Shuttle Orbiter flights and briefly covers future programs. Stan Barauskas (Aerospace Legacy Foundaton)

4:00 pm

The Lynx, The Distributed Black Box and Data Flows: Spacecraft Data Systems in the 21st Century. Dale Amon (National Space Society Board of Directors)

4:30 pm

The New NSS Space Ambassador Program (Phase 2). Stevan Akerley (National Space Society Ambassador #1129)

**METI International**

2:00 pm

**Redondo Room**

Where Does Universal Grammar Fit in the Universe? Human Cognition and the Strong Minimalist Thesis. Dr. Jeffrey Punske (Southern Illinois University) and Dr. Bridget Samuels (University of Southern California)

2:35 pm

Universal Grammar. Dr. Ian G. Roberts (University of Cambridge), Dr. Jeffrey Watumull (Oceanit) and Dr. Noam Chomsky (MIT and University of Arizona)

3:00 pm

Evolutionary Biology and Pessimism About Communication with Extraterrestrial Species. Dr. Gonzalo Munevar (Lawrence Technological University)

3:15 pm

Communal Morality and Spirituality for Nonhuman Intelligences. Dr. Mark Graves (University of Notre Dame)

3:40 pm

Toward a Universal Language Based on Physics: An Iconic Approach to Communicating Basic Features of Radio Waves. Dr. Douglas Vakoch (METI International)

4:00 pm

NSS/NASA Ames Student Space Settlement Contest Presentation

4:10 pm

Created Languages, Braille, Lincos and Message Construction: What Kind of Puzzle is a Good Puzzle? Dr. Sheri Wells-Jensen (Bowling Green State University & METI International)

4:30 pm

Dothraki, Language Creation and Other Fascinations. David J. Peterson

**Moon Development**

2:00 pm

**Hermosa Room**

**Innovative Lunar Architectures & Concepts**

NSS/NASA Ames Student Space Settlement Contest Presentation

2:10 pm

A Sustainable Settlement on Earth's Moon. John C. Mankins (Moon Village Association)

2:25 pm

Space Architecture Strategy for Lunar Habitats and Bases. Dr. Marc Cohen (Space Cooperative Inc.)

2:40 pm

NSS/NASA Ames Student Space Settlement Contest Presentation

**Near-Term Steps**

2:50 pm

Progress toward the Concept of a Moon Village. John C. Mankins (Moon Village Association)

3:05 pm

ESA Studies: Moon Village Concept & Future Directions for the Moon. Dr. Bernard Foing (European Space Agency)

3:20 pm

Moon Base Alliance Concept to Realize Lunar Analogues. Henk Rogers (Moon Base Alliance)

3:35 pm

PTScientists: Putting Europe on the Moon. Kate Arkless Gray (PTScientists)

3:50 pm

Lunar COTS Concept: Building an Economical and Sustainable Lunar Infrastructure to Enable Future Human Settlements. Dr. Allison Zuniga and Dan Rasky (NASA Ames Space Portal Office)

4:05 pm

Panel: Future Directions for the Moon. Dr. Bernard Foing (European Space Agency), Mark Hopkins (National Space Society), John C. Mankins (Moon Village Association), Henk Rogers (Moon Base Alliance) and Dr. Allison Zuniga (NASA Ames Space Portal Office). Moderator: Madhu Thangavelu (University of Southern California)

4:45 pm

Future Moon. Stan Rosen (National Space Society)

4:55 pm

Summary Remarks. Madhu Thangavelu (University of Southern California)

As of 5-13-18

**Saturday, May 26**

<p><b>Space Business</b></p> <p>2:00 pm</p> <p>2:10 pm</p> <p>2:45 pm</p> <p>3:45 pm</p> <p>4:45 pm</p> <p><b>Space Elevators</b></p> <p>2:00 pm</p> <p>2:25 pm</p> <p>3:00 pm</p> <p>3:20 pm</p> <p>3:35 pm</p> <p>4:00 pm</p> <p>4:10 pm</p> <p>4:35 pm</p> <p><b>Space Security</b></p> <p>2:00 pm</p> <p>3:30 pm</p>	<p><b>Laguna Room</b></p> <p><b>Space Investment Summit 2.0</b></p> <p>Introduction. Thomas Andrew Olson (The Center for Space Commerce &amp; Finance)</p> <p>Welcome to the New Space Investment Summit. Eva-Jane Lark (BMO Nesbitt Burns)</p> <p>Panel: The Current Space Investment Ecosystem. Hoyt Davidson (Near Earth LLC), Dr. Armin Ellis (Exploration Institute), Thomas Andrew Olson (The Center for Space Commerce &amp; Finance) and Taichi Yamazaki (ASTRAX). Moderator: Eva-Jane Lark (BMO Nesbitt Burns)</p> <p>Panel: New Space Funds Coming Online – How Will They Impact the Ecosystem? Michael Mealling (Starbridge Capital), Michael Laine (LiftPort Group) and Rick Tumlinson (Star Century Partners). Moderator: Dennis Stone (NASA Johnson Space Center)</p> <p>Wrap Up. Meagan Crawford (The Center for Space Commerce &amp; Finance)</p> <p><b>Malibu Room</b></p> <p>Space Elevator 101, Status &amp; Architectures. Dr. Peter A. Swan (International Space Elevator Consortium)</p> <p>Lunar Space Elevators. Michael Laine (LiftPort Group)</p> <p>Space Elevator Earth Port. Vern Hall (International Space Elevator Consortium)</p> <p>Space Elevator Research and Studies. Dennis Wright (International Space Elevator Consortium)</p> <p>ISEC History Committee Activities. Matthew Farrell (International Space Elevator Consortium)</p> <p>NSS/NASA Ames Student Space Settlement Contest Presentation</p> <p>Galactic Harbour, A Strategic Vision Emerges. Michael Fitzgerald (International Space Elevator Consortium)</p> <p>Question and Answers. Michael Fitzgerald and Dr. Peter A. Swan (International Space Elevator Consortium)</p> <p><b>Malibu Room</b></p> <p><b>Space Security &amp; Policy</b></p> <p>Panel: Security (U.S.) – Space Corps, Force or Guard – Roles and Missions for a Uniformed Space Service. Dr. George Nield (Federal Aviation Administration and Aerospace Safety Advisory Panel), Michael Laine (LiftPort Group) and Roger Lenard (Zodiac Planetary Services). Moderator: Dr. Greg Autry (University of Southern California Marshall School of Business)</p> <p>Panel: Geopolitical &amp; Economics (International) – Toward the Creation of an International Liberal Order and the Associated Governing Organizations in Space. Ken Davidian (Federal Aviation Administration Office of Commercial Space Transportation), Dr. Ming Zhang (Florida Institute of Technology), Dr. Thomas L. Matula (Sul Ross State University, Texas) and Dr. Nikola Schmidt (Charles University Prague). Moderator: Peter Garretson (Air University, U.S. Air Force)</p>
<p><b>Student Program</b></p> <p>3:30 pm - 5:00 pm</p> <p><b>Silent Auction</b></p> <p>4:00 pm - 7:00 pm</p> <p><b>Tau Zero Foundation</b></p> <p>4:30 pm - 6:00 pm</p> <p><b>ASTRAX Showcase Event</b></p> <p>5:00 pm - 6:00 pm</p>	<p><b>Grand Ballroom</b></p> <p>Explore the exciting realm of university rocket teams. This session will feature three teams from the University of Southern California and the University of California, San Diego who have been building, and in some cases test firing, their own rockets.</p> <p>Moderator: Dr. Andy Aldrin, Chief Strategist, Tau Zero Foundation. Director, Buzz Aldrin Space Institute (BASI), and Associate Professor, Florida Institute of Technology.</p> <p><b>Century Prefunction</b></p> <p>Space memorabilia and collectables can be yours for the highest bid.</p> <p><b>Seminar Room (2nd floor)</b></p> <p>Space Faring Beyond Rockets. Jeff Greason, Chairman of the Board of the Tau Zero Foundation, CEO and Co-Founder of Agile Aero, Inc., CTO of Electric Sky and National Space Society Board of Governors</p> <p><b>Gateway Ballroom</b></p> <p>Come to the fabulous “Japanese Space Showcase” and experience Japanese-themed art, costumes, live music and topped off with a manga art show!</p> <p>Sponsored by ASTRAX (International Space Services).</p>

As of 5-13-18

**Saturday, May 26**

**Cocktail Reception**

6:00 pm - 7:00 pm

**Dinner**

7:00 pm - 9:30 pm

**Party**

9:30 pm - Till

**Century Prefunction**

**Grand Ballroom**

"Noah's Ark Eggs"

Keynote Speaker: Freeman J. Dyson, Professor Emeritus, Mathematical Physics and Astrophysics, Institute for Advanced Study

Presenting of NSS Space Pioneer Award to Sean Hargreaves, Visual Effects Art Director, Senior Concept Designer: "Imaginary Worlds"

Presenting of Student Space Settlement Contest Grand Prize Award

MC: Geoff Notkin, Aerolite Meteorites, Inc. and National Space Society Board of Governors

**California Ballroom**

L.A. ROCKS ISDC - Come dance to the sounds of *The Zippers*