

SSP 2015 Workshop Technical Program: Dec. 14,15, Orlando, FL

Chairs: Seyed (Reza) Zekavat, Michigan Tech, Darel Preble, Space Solar Power Institute

Monday Dec. 14 2015

Plenary Talks 8:30-10am

1. **Ali Hajimiri** (*Caltech*) Space Based Solar Power: Is there a path from science fiction to reality?
2. **Chris Valenta** (*Georgia Tech Research Institute*) Harvesting Wireless Power: Current Capabilities and Future Directions

SSP-S1 Technology Panel 10:30am -12:00pm (A. Hajimiri, C. Valenta, J. Mankins, B. Wie, N. Kaya)

1. **John Mankins** (*President, Artemis Innovation Management Solutions LLC*) SPS-ALPHA: A Hyper-modular Approach to the Technology of Space Solar Power
2. **Bong Wie** (*Iowa State University*) Orbit and Attitude Control Issues for Very Large Space Solar Power Satellites (SSPS)
3. **Nobuyuki Kaya** (*Kobe University, Japan*) Recent Advances in Retro-directive Antenna for the Microwave Power Transmission for SSP

SSP – S2 Paper and Abstract 1:30 -3:00pm

1. **Erinn van Wynsberghe, Paul Jaffe** (*McMaster University and Naval Research Lab*) High-Altitude Balloon for Wireless Power Transmission;
2. **Mingyu Lu** (*Western Virginia University*) Employing Phase-Conjugation Antenna Array to Beam Microwave Power from Satellite to Earth
3. **Mohsen Jamalabdollahi, Reza Zekavat** (*Michigan Tech*) Time and Frequency Synchronization for Space-based Solar Power Satellites Network via weighted OFDMA
4. **Paul Jaffe** (*Naval Research Lab*) Modular Space Solar Power Pathfinder Mission in Low Earth Orbit

SSP-S3 Paper and Abstract 3:30 - 5:30pm

1. **Gary Barnhard** (*Xtraordinary Innovative Space Partnerships, Inc. - XISP-Inc.*) Unbundling Space Power Systems to foster Space-to-Space Power Beaming Applications
2. **Trevor Brown** (*Auburn University*) An Industry-Government Partnership for Space Solar Power
3. **Joshua Gigantino** (*Arizona State University*) Single Number Life Cycle Assessment of Space Solar Power
4. **Paul Jaffe** (*Naval Research Lab*) Review of Sandwich Conversion Modules for Space Solar Power
5. **Lewis Fraas** (*President JX Crystals Inc.*) Self Pointing Mirrors for Solar Power from Space

Tuesday Dec. 15 2015

IEEE WiSEE Plenary Talks: 8:30 – 10am

SSP-S4 Vehicle Launch Panel: 10:30am-12:30pm (J. Olds, K. Hensen, E. Zapata, D. Bienhoff, G. Sowers)

1. **Dallas Bienhoff** (*Boeing*) An Overview on RLV Development Programs
2. **John Olds** (*CEO, Space Works Enterprises Inc.*) A Review of Current and Future Launch Options for SSP
3. **Edgar Zapata** (*Kennedy Space Center*) Emerging US Space Launch – Trends and SSP
4. **Keith Hensen** (*L5 Society*) Solar Power Satellite Transportation Economics
5. **George Sowers** (*Vice President, Advanced Programs, United Launch Alliance*) Transportation Architecture for Cislunar space

SSP-S5 Economy Panel: 1:30 -3:00pm (D. Preble, G. Tverberg, J. Mankins, K. Hensen)

1. **Darel Preble** (*Space Solar Power Institute*) Overview of Space Solar Power's antecedent Technical, Environmental, Economic and Energy Crunch
2. **John Mankins** (*Artemis Innovation Management Solutions LLC*) Realizing Economically and Programmatically Viable Space Solar Power
3. **Gail Tverberg** (*Space Solar Power Institute*) Energy Economics Outlook for Space Solar

IEEE WiSEE/SSP Funding Opportunity Panel: 3:30 – 5pm