



Glen A. Robertson
 Technical & Organizing Chair
 256-694-7941
gar@ias-spes.org

IASSPES is seeking to hold other conferences, symposia and workshops, specifically those that could provide underlying basic research, technology developments and educational support toward the use and exploration of space. Subject areas do not necessarily need to be solely space related, but should contain some applications toward future in-space utilization or the educational support thereof. Contact IASSPES for more information at

iasspes@ias-spes.org



In Co-Operation with



Space, Propulsion & Energy Sciences International Forum

Von Braun Center - February 24-27, 2009

is an international technical forum organized by the Institute for Advanced Studies in the Space, Propulsion & Energy Sciences as part of their mission to:

Integrate the sciences toward rapid advancements in basic research that will lead to new developments in the **SPACE**, **PROPULSION**, and **ENERGY** sciences toward new earth and space uses with a eye on their applications for the exploration of space beyond present day visions,

Educate the public on the scientific and technical reasons why basic research in certain space, propulsion and energy related areas should be funded, and

Support the STEM program toward educating teachers and students toward this understanding.

The SPESIF - 2009 platform is a bit broader than IASSPES's mission as it seeks to promote the exchange of information among technologists, academicians, industrialists, and program managers on technical and programmatic issues related to the Space, Propulsion and Energy Sciences -- as well as -- to infuse commercialization by promoting visions of future financing in all areas of space science and technology research.

Papers and presentations are welcomed. Papers approved for SPESIF-2009 are reviewed by the technical staff, Chairs and Co-Chairs and other Committee Members as needed for a proper peer review and will be published in a our Proceedings by the American Institute of Physics (AIP).

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6th Symposium on New Frontiers in the Space Propulsion Sciences (SPS) pertains to the advancement of the SPS from current technologies to emerging concepts and theories. The symposium is broken into five topic areas covering: 1) Advances in contemporary propulsion sciences, technologies and techniques for short-term objectives supporting near-term space initiatives for Earth, in-orbit, Moon and Mars-based propulsion and power systems over the next 30 years; 2) The advancement of technologies, concepts, and techniques for space applications, in general; 3) New frontiers in SPS comprising ideas, concepts, experiments, theories and models; 4) Approaches that could lead to new directions in space travel, exploration, astrophysics and particle physics with applications to propulsion, power or communication leading to the combination of these areas of science with the SPS toward new frontiers in science, and; Far term space transport and environmental models and theories leading to new understandings in the SPS.

Chair - Glen A. Robertson, President, Institute for the Advanced Studies in Space, Propulsion & Energy Sciences, gar@ias-spes.org; **Co-Chair** - Dr. Clive Woods, Louisiana State University, cwoods@lsu.edu

1st Symposium on Astrosociology focuses on topics common to the space community, though from a social-scientific perspective. That is, a strong consideration of how each topic relates to society, culture, and the individual – the traditional purview of the social and behavioral sciences, humanities, and the arts (hereafter referred to as the “social sciences” for brevity) -- defines astrosociology. A major theme of the symposium focuses on how traditional knowledge and findings of the social sciences, which normally focus on terrestrial matters, actually possess important applications for space exploration and related issues. Moreover, the direct application of social science research and theory-building in contemporary and future timeframes receive attention as vital components in the understanding of humanity’s efforts in space environments in terms of exploration, settlement, work, and recreation. Examination of the impact of space exploration on terrestrial societies and cultures receives attention in addition to that of humans in space.

Chair: Dr. Jim Pass, Astrosociology Research Institute, jpass@astrosociology.org; **Co-Chair:** Dr. Albert A. Harrison, University of California - Davis, Department of Psychology, aaharrison@ucdavis.edu

Register before 15 December and Save

13th Conference on Thermophysics Applications in Microgravity pertains to thermophysical research and technology considered to be important for emerging aerospace applications. Sessions focus on scientific and technology research efforts originating from government, university and commercial research programs. The Conference starts with a session on emerging, and perhaps controversial, thermal control issues, which is followed by discussions on recent progress in fundamental research topics, and then the discussions move on to specific new technologies and applications. Technology discussions focus on; single and two-phase flow technologies, advanced thermal control coatings, convection interfacial mass transfer, and innovative thermal control devices for spacecraft applications.

Chair: Ted Swanson, NASA Goddard Space Flight Center, Ted.Swanson@nasa.gov; **Co-Chair:** Tung T. Lam, The Aerospace Corporation, tung.t.lam@aero.org

Workshop on Future Directions in Space Science & Technology seeks to promote the dream of space exploration by providing a venue for basic research currently underway in various areas of space science and technology that could prove beneficial in the near future. In any integrated space vehicle, there are a large number of independent and interdependent systems that are needed to accomplish mission success. In some cases, there are engineers and scientists that work with fine focus to produce prototypes of high fidelity subsystems (such as navigation or propulsion) that are relevant for next generation spacecraft; while in other cases, teams of engineers and scientists work diligently and carefully to incorporate the latest cutting-edge subsystems into an integrated spacecraft tailor built to accomplish a specific other-worldly task. In all cases, it is critical that engineers and scientists alike be keenly aware of the trade space of available hardware and technology at their disposal so as to allow them to focus their efforts on the real technical innovation challenges.

Chair: Prof. Ir. A. A. M. Delil, AATCS consultant, adelil@xs4all.nl; **Co-Chair:** Michael T Pauken, Jet Propulsion Laboratory, michael.t.pauken@jpl.nasa.gov

Workshop on Future Energy Sources seeks to integrate current, emerging and future energy sources for space exploration with Earth applications, including their issues of public interest. Consideration is given to 1) the examination basic research and theories for conventional (e.g., fusion), non-conventional (e.g., bio-fuels) and more speculative future energy sources (e.g., quantum fluctuations, dark energy, gravity, wide frequency EM, etc.) and 2) the fundamental high-impact issues of future energy sources, such as their economics versus alternatives, breakthroughs in energy source or conversion efficiency and sustainability.

Chair: Dave Goodwin, Department of Energy, Dave.Goodwin@science.doe.gov; **Co-Chair:** Len Danczyk, Energetics Technology, Len@energetics.tech.com

Workshop on High Frequency Gravitational Waves seeks discussions pertaining to the means of detecting, exploiting and generating high-frequency gravitational waves (HFGWs). Papers on HFGWs may encompass the high-frequency (100 kHz to 100 MHz), very high frequency (100 MHz to 100 GHz), and ultra high frequency (greater than 100 GHz) bands and should concentrate on the means for evolving this technology with a focus upon gravitational-wave generation in the laboratory, detection, or applications. Specific interests include (but are not limited to) the description of HFGWs in conventional space-time with possible extension to higher dimensional Hyperspaces, which may be possible with a Euclidean Relativity approach. Concepts may be either mathematical or speculative and should include rigorous, logical, scientific support and plausible assumptions to validate the fundamental aspects.

Chair: Dr. Bob Baker, Gravwave, drrobertbaker@gravwave.com; **Co-Chair:** Gary Stephenson, Seculine Consulting, seculine@gmail.com

**SPESIF-2009
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