

NETS-2017 CALL FOR PAPERS

<http://anstd.ans.org/nets-2017>

Important Dates

Conference Dates: **Feb. 27 – Mar. 2, 2017**
Abstract Submissions and Full Paper Intents Due: **Oct. 21, 2016**
Abstract Reviewer Response to Submitters: **Nov. 21, 2016**
Corrected Abstracts Due: **Dec. 9, 2016**
Full Papers Due: **Dec. 9, 2016**
Full Paper Reviewer Response to Submitters: **Jan. 20, 2017**
Corrected Full Papers Due: **Feb. 3, 2017**



About the Meeting:

On February 27th – March 2nd, 2017 the Aerospace Nuclear Science and Technology Division (ANSTD) of the American Nuclear Society (ANS) will hold the 8th Nuclear and Emerging Technologies for Space (NETS-2017) topical meeting. The meeting will be held at the Orlando Airport Marriott Lakeside in Orlando, Florida near Kennedy Space Center. NETS serves to communicate progress, research, and ideas across government, academia, industry, and national laboratories related to space nuclear activities. The first NETS meeting was held in 2005 and emerged from past symposia on Space Nuclear Power and Propulsion and the Space Technologies and Applications International Forum (STAIF).

Topic Areas:

NASA is currently developing capabilities for robotic and crewed missions to the Moon, Mars, and beyond. Strategies that implement advanced power and propulsion technologies, as well as radiation protection, will be important in accomplishing these future missions. NETS serves as a major communications network and forum for professionals and students working in the area of space nuclear technology. Every year, it facilitates the exchange of information among research and management personnel from international governments, industry, academia, and the national laboratory systems. To this end, the NETS-2017 meeting will address topics ranging from overviews of current programs to methods of meeting the challenges of future space endeavors.

Submission Requests:

The requested submission for NETS-2017 is a 1-page abstract. Optional full papers (8-10 pages in length) may also be submitted. They will be published in formal conference proceedings following NETS-2017. Please see the online templates for format and layout guidelines. Abstracts and papers that do not hold to these guidelines will be returned to the author for reformatting. Abstracts and papers should be submitted online to the desired track for initial review; specific session assignments will be identified following the abstract review.

Note: Please ensure submitted abstracts, full papers, and associated presentations are approved for public release.

Track 1: Energy Conversion and Space Power Systems

- Stirling development and testing
- Thermoelectric development and testing
- Next-generation energy conversion in space (including Brayton, Rankine, thermionic, etc.)
- Thermal management
- Component development and testing
- Space reactor design and simulation for nuclear electric and thermal propulsion systems
- Radiation shielding
- Power management and distribution
- System integration

Track 2: Fuels and Materials

- Radioisotope production, processing, and testing
- Uranium fuels fabrication, testing, and modeling
- Fuel development using non-radioactive surrogates
- Materials modeling and testing
- Thermoelectric materials development and testing
- Radiation testing and material compatibility

Track 3: Missions and Infrastructure

- Infrastructure and capabilities
- Project and mission architectures
- Nuclear-enabled space science and mission concepts
- Space power programs
- Spacecraft design concepts
- Nanosatellite and CubeSat missions and power sources
- Space nuclear policy and regulation
- Lessons learned from previous space nuclear programs
- Flight systems mission performance

Note: The above list of subcategories is not exhaustive. Papers are welcome for all relevant topics.