

ANNOUNCEMENT and FINAL CALL FOR PAPERS



NSREC



2010 IEEE NUCLEAR AND SPACE RADIATION EFFECTS CONFERENCE Short Course and Radiation Effects Data Workshop

July 19 - 23, 2010

Sheraton Denver Downtown Hotel
Denver, Colorado

www.nsrec.com

Sponsored By

IEEE/NPSS Radiation Effects Committee

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The 2010 IEEE Nuclear and Space Radiation Effects Conference will be held July 19 - 23 in Denver, Colorado at the Sheraton Denver Downtown Hotel. The Conference features a technical program consisting of eight to ten technical sessions of contributed papers describing the latest observations in radiation effects, a Short Course on radiation effects offered on July 19, a Radiation Effects Data Workshop, and an Industrial Exhibit. The Technical program includes oral and poster sessions.

At this meeting of engineers, scientists, and managers, papers will describe nuclear, space, atmospheric, and terrestrial radiation effects on electronic and photonic materials, devices, circuits, sensors, and systems. Papers will also describe semiconductor processing technology and design techniques for producing radiation-tolerant (hardened) devices and integrated circuits. International participation is strongly encouraged.

We are soliciting papers describing significant new findings in the following or related areas:

Basic Mechanisms of Radiation Effects in Electronic Materials and Devices

- Ionizing Radiation Effects
- Materials and Device Effects
- Displacement Damage
- Single-Event Charge Collection Phenomena and Mechanisms
- Radiation Transport, Energy Deposition and Dosimetry
- Processing-Induced Radiation Effects

Radiation Effects on Electronic and Photonic Devices and Circuits

- MOS, Bipolar and Advanced Technologies
- Isolation Technologies, such as SOI and SOS
- Optoelectronic and Optical Devices and Systems
- Methods for Hardened Design and Manufacturing
- Modeling of Devices, Circuits and Systems
- Particle Detectors and Associated Electronics for High-Energy Accelerators
- Cryogenic or High Temperature Effects
- Single-Event Effects
- Novel Device Structures, such as MEMS and Nanotechnologies

Space, Atmospheric, and Terrestrial Radiation Effects

- Characterization and Modeling of Radiation Environments
- Space Weather Events and Effects
- Spacecraft Charging
- Predicting and Verifying Soft Error Rates (SER)

Hardness Assurance Technology and Testing

- Testing Techniques, Guidelines and Hardness Assurance Methodology
- Unique Radiation Exposure Facilities or Novel Instrumentation Methods
- Dosimetry

New Developments of Interest to the Radiation Effects Community

PAPER SUMMARY DEADLINE: FEBRUARY 5, 2010

PROCEDURE FOR SUBMITTING SUMMARIES

Authors must conform to the following requirements:

1. Prepare a single Adobe Acrobat file consisting of an informative two to four page summary describing results appropriate for 12-minute oral or a poster presentation. The summary must include sufficient detail about the work to permit a meaningful technical review. In the summary, clearly indicate (a) the purpose of your work, (b) significant new results with supporting technical material, and (c) how your work advances the state of the art. Show key references to other related work. The summary must be no less than two and no more than four pages in length, including figures and tables. All figures and tables must be large enough to be clearly read. Note that this is more than an abstract, but do not exceed four pages.
2. Prepare your summary in single-column format, using 11 point or greater font size, formatted for either U.S. Standard (8.5 x 11 inch) or A4 (21 x 29.7 cm) page layout, with 1 inch (2.5 cm) margins on all four sides.
3. Obtain all corporate, sponsor, and government approvals and releases necessary for presenting your paper at an open attendance international meeting.
4. Summary submission is electronic only, through www.nsrec.com. The submission process consists of entering the paper title, author(s) and affiliation(s), and an abstract no longer than 35 words. Authors are prompted to state their preference for presentation (oral, poster, or data workshop poster) and for session. Details of the submission process may be found at www.nsrec.com. The final category of all papers will be determined by the Technical Program Committee, which is responsible for selecting final papers from initial submissions..

Summaries must be received by
February 5, 2010

Detailed submission and
formatting instructions
will be available after
January 4, 2010
at www.nsrec.com

Papers accepted for oral or poster presentation at the technical program will be eligible for publication in a special issue of the *IEEE Transactions on Nuclear Science* (December 2010) based upon papers from the Conference. Selection for this issue will be based on a separate submission of a complete paper. These papers will be subject to the standard full peer review given all papers submitted to the *IEEE Transactions on Nuclear Science*. Further information will be sent to prospective authors upon acceptance of their NSREC summary. It is not necessary to be an IEEE member to present a paper or attend the NSREC. However, we encourage IEEE and NPSS membership of all NSREC participants.

RADIATION EFFECTS DATA WORKSHOP

The Radiation Effects Data Workshop is a forum for papers on radiation effects data on electronic devices and systems. Workshop papers are intended to provide radiation response data to scientists and engineers who use electronic devices in a radiation environment, and for designers of radiation-hardened systems. Papers describing new simulation or radiation facilities are also welcomed. **The procedure for submitting a summary to the Workshop is identical to the procedure for submitting NSREC summaries.** Radiation Effects Data Workshop papers will be published in a Workshop Record and are not candidates for publication in the Conference issue of the *IEEE Transactions on Nuclear Science*.

DENVER, COLORADO

NSREC 2010 will be held in Denver, Colorado, July 19-23 at the Sheraton Denver Downtown Hotel (www.sheratondenverdowntown.com). The hotel offers rooms with beautiful mountain and downtown views and is conveniently located on the 16th Street Pedestrian Mall in the heart of downtown Denver. The 16th Street Mall is Denver's hub of shopping, dining and entertainment that stretches for 16 blocks in the heart of downtown. An environmentally friendly free shuttle service stops at every intersection to transport shoppers to more than a mile of Denver's best restaurants and shops. The hotel is within walking distance of the Denver Art Museum, the United States Mint, and just minutes from Coors Field and historic LoDo (Lower Downtown Denver). The Sheraton Denver's \$70 million renovation will be completed for NSREC! Denver, established in 1858 when gold was discovered, is the perfect blend of outdoor adventure and urban sophistication.

With snow capped peaks providing a spectacular backdrop, Denver is as refined as it is laid-back and with 300 days of sunshine per year, bring your sunscreen! Known as the Mile High City (5,280 feet), a round brass cap embedded in the western entrance stairs of the State Capitol marks the spot (www.denver.org).



Photo: Steve Crecelius for the Denver Metro Convention & Visitors Bureau