

## — Call for Papers —



COLORADO SCHOOL OF MINES  
EARTH • ENERGY • ENVIRONMENT



## 2014 IEEE Conference on Reliability Science — for Advanced Materials and Devices (RSAMD) —

Colorado School of Mines Campus, Golden, Colorado - September 7- 9, 2014

[www.csmspace.com/events/rsamd](http://www.csmspace.com/events/rsamd)

The IEEE Reliability Society and the Colorado School of Mines are jointly seeking original papers and posters for presentation at the 2<sup>nd</sup> Annual Conference on Reliability Science for Advanced Materials and Devices (RSAMD) to be held in Golden, CO on September 7 through 9, 2014.

This forum aims to stimulate a cross-technology discussion of ideas, expertise, and knowledge for improving the reliability of advanced materials and devices in energy technologies (photovoltaics, batteries, LED lighting, etc.); micro, wide-bandgap and power electronics; and Pb-free solders. Reliability in **harsh** environments is a topic of particular interest. The driving philosophy is that reliability science shares attributes common to all technologies, and that solutions and understanding developed in one technology may indeed be applicable to others. As such, the conference will provide dedicated time for educational lectures, peer-to-peer interactions through dynamic workshops, and contributed paper and poster presentations in the following sessions:

**Degradation Mechanisms in Use Environments:** This session seeks contributions discussing empirical observations or physics-based modeling of degradation mechanisms observed in advanced materials and devices in the environments in which they are used. Degradation mechanisms involving electrical, chemical, electro-chemical and mechanical processes observed or predicted as a function of the operating environment are appropriate topics for this session.

**Photovoltaics and Renewables:** This session seeks contributions discussing current research into the reliability of photovoltaic and other renewable energy sources (wind power, bio-fuels, geothermal, etc.) and related systems (energy storage and batteries, power electronics, sensors, mechatronics, etc.). Topics such as failure mechanisms, environmental stressors, aging and asset health monitoring are of great interest.

**Pb-Free Electronics Reliability:** This session seeks contributions discussing ongoing developments in the development of reliable Pb-free electronics. Pb-free electronics reliability topics regarding solders, circuit board finishes, underbump metallurgy, device packaging, assembly, aging, failure mechanisms, and operation in harsh environments are of great interest in this session.

**Wide-Bandgap (WBG) Semiconductors:** This section seeks contributions regarding cutting edge research in the reliability of WBG devices and systems. Examples include SiC, GaN and AlN devices, WBG power electronics, WBG RF devices and systems, and semiconductor lasers and other WBG photonic devices.

**Emerging Microelectronics:** This section seeks contributions discussing fundamental new understandings of degradation and failure modes acquired through research for cutting-edge devices. Fields of interest are broad, including LEDs, mobile and bio-implantable electronics, TSVs for 3D, MEMS and nanotechnology.

For more session topic and workshop details, please visit

[www.csmspace.com/events/rsamd/topics.html](http://www.csmspace.com/events/rsamd/topics.html)

Abstracts and full papers will be peer reviewed and selected based on originality, significance, quality, and clarity. Accepted and presented papers will be published in the **Conference Proceedings** and the **IEEE Xplore®** digital library.

### Key Author Information

Submissions accepted:	now until 7/27, 2014
Notification of acceptance:	3-4 weeks from receipt
Final Manuscripts due:	At conference
Submit abstract & full paper at:	<a href="http://www.csmspace.com/events/rsamd">www.csmspace.com/events/rsamd</a>
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