



international

reliability physics symposium

NEWS RELEASE

**2005 IEEE INTERNATIONAL RELIABILITY PHYSICS
SYMPOSIUM OPENS TO RECORD ATTENDANCE
IN SILICON VALLEY**

SAN JOSE, CALIF. – April 21, 2005 – Microelectronics industry professionals gathered in record setting numbers in Silicon Valley for the 2005 IEEE International Reliability Physics Symposium (IRPS) as it opened its 43rd annual conference Sunday, April 17 at the San Jose Marriott in San Jose, Calif. The event runs through April 21, 2005.

“Approximately 700 people from around the world registered for the 2005 IRPS,” said Tim Rost, the IRPS general chair. “We've also experienced the greatest-ever submissions of abstracts, resulting in the highest number of accepted platform presentations, totaling 101 papers, comprising 22 technical sessions. The Poster Session will review an additional 69 presentations.”

2005 IEEE Fellow Award Announced

Robert Baumann of Texas Instruments received an IEEE Fellow Award at this year's Symposium. A Distinguished Member of Technical Staff, he joined TI in 1989. Baumann was one of the primary authors of the International JEDEC JESD-89 specification that has become the de-facto industry standard for radiation effects testing of commercial electronics. Baumann has been elected fellow for contributions to the understanding of the reliability impact of terrestrial radiation mechanisms in commercial electronics. He received a B.A. (1984) with honors in physics from Bowdoin College and

a Ph.D. (1990) in electrical engineering from Rice University, researching ferroelectric process development and integration for opto-electronic applications.

Technical Paper Awards

Awards for the Best Papers from last year's IRPS were announced at this year's conference. The IRPS 2004 Best Paper entitled, "Negative Bias Temperature Instability in Triple Gate Transistors," was authored by S. Maeda, J. Choi, J-H Yang, Y-S Jin, S-K Bae Y-W Kim and K-P Suh from Samsung Electronics. The 2004 IRPS Outstanding Paper, "A Comprehensive Framework for Predictive Modeling of Negative Bias Temperature Instability," was authored by: S. Chakravarthi, A.T. Krishnan, V. Reddy, C.F. Machala and S. Krishnan from Texas Instruments.

Keynote Address

This year's keynote speaker David W. Yen, executive vice president of Sun Microsystems' Scalable Systems Group, discussed how "Chip Multithreading Processors Enable Reliable High Throughput Computing" to the IRPS on Tuesday, April 19. Yen presented exciting developments in microprocessor design with a focus on the incorporation of multiple cores; addressing the issue of high power is a reliability improvement that also results in increased performance. The introduction of redundancy and reparability in concert with reduced drift results in wear out reduction and lower operating temperatures, which are the highlights of improved reliability of microprocessors with multiple cores.

Memorial to James R. Black

Following Yen's address IRPS presented a retrospective memorial of the late microelectronics engineer James R. Black's contributions to the IRPS, reliability physics and the semiconductor industry. Black, who died in 2004, is noted for the equation he introduced and attached to his name ("Black's Equation") that relates the mean time to failure for electromigration to the mechanism drivers of current density and metallization temperature; or in general layman's terms when an electronic component design will likely fail due to electromigration concerns. Black was a regular contributor and presenter

at IRPS for many years until his passing in 2004. Dr. Jim Lloyd, of IBM's Research Division specializing in reliability science, hosted the memorial.

About IRPS

For more than 40 years, IRPS has been one of the leading meetings for engineers in the area of electronic component reliability. IRPS promotes the comprehension of reliability and performance of integrated circuits and microelectronic assemblies through an improved understanding of failure mechanisms in the user's environment. Originally started in the early 1960s by the military and aerospace community, IRPS now is sponsored by IEEE Reliability Society and IEEE Electron Devices Society. All accepted IRPS papers will appear in the symposium proceedings publication, as well as on the virtual IRPS DVD-ROM, which is available now for the previous 2004 IRPS.

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For further information, please visit the IRPS Web site at www.irps.org or contact:

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