

Scope of the Workshop

The workshop will provide a forum for presenting current research and for discussions on issues related to stress-induced phenomena in microelectronics. The continued interconnect scaling and the development of 3D structures have brought new and significant challenges in process integration, design optimization and reliability. Stresses arising in interconnects and multi-chip stack structures due to thermal mismatch, microstructure changes and processing integration can lead to damage and failure of devices. Understanding stress-related phenomena in new materials and structures is critical for development of future metallization and 3D integration.

Stress-related phenomena generated by 3D integration and packaging extending beyond metal interconnects are of interest, focusing on device nanostructures and advanced 3D devices and memories. Multi-scale modeling and characterization developed for probing 3D structures are also of interest, as well as for 1D and 2D device structures, such as nanowires and flexible microelectronics. Topics of interest include:

- Scaling effects of metal/low k structures, microstructure and reliability
- Ultra low k materials, electrical and mechanical properties of small dimensions
- Chip-package interaction and reliability impact in 3D integration
- Processing and reliability of TSV in 3D and die-stack structures
- Impact of interface and microstructure on reliability
- Synchrotron micro-diffraction on Cu stress and plasticity
- Solder joints and effect of intermetallics on reliability
- Multi-scale simulation and characterization
- Carbon-based materials and nanostructures: CNT and graphene structures
- 1D nanowires and 2D flexible structures for microelectronics

Following the spirit of previous workshops, new research results and advances in basic understanding are emphasized.

1st Announcement

13th International Workshop on Stress- Induced Phenomena in Microelectronics



October 15-17, 2014

The University of Texas

Austin, TX

• <http://www.mrc.utexas.edu/events/international-stress-workshop>

Co-Chairs

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C. K. Hu, IBM, Yorktown Heights, NY, US
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Valeriy Sukharev, Mentor Graphics, Fremont, US
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- Larry Smith, SEMATECH, Albany, NY, US
- Ralph Spolenak, ETH Zuerich, Switzerland
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- Kazuyoshi Ueno, Shibaura Institute of Tech., Tokyo, Japan
- Chihiro Uchibori, Fujitsu Laboratories, Japan
- Xiaopeng Xu, Synopsys, Mountain View/CA, US

Call for Contributions

The workshop comprises invited and contributed papers. In addition, there will be posters which will be briefly introduced in a dedicated oral session.

Abstracts should be 300 words or less. Submission may be made by mail or email to Workshop Contact as listed. Please indicate the author to whom correspondence should be addressed and include mailing address, email address, phone and fax numbers.

Deadline for submission of abstracts:

April 30, 2014

Notification of Authors:

May 15, 2014

Late abstract submission:

August 31, 2014

Full length papers will be published in the series of the American Institute of Physics Conference Proceedings. Papers will be due at the beginning of the workshop.

Registration

The registration fee is \$500 (\$550 after August 31, 2014) which includes technical sessions, lunch, conference dinner and proceedings. Prior to the conference, payment can be made by check or credit card (Visa, Mastercard, Discover only). Please see the workshop web site for further registration and payment information. Participants are encouraged to register as soon as possible using the registration form on the workshop website or writing to the address below.

Location

The workshop will be held at The University of Texas, J.J. Pickle Research Campus, the Commons Learning Center in Austin, TX, USA.

www.utexas.edu/commons/maps

Austin is located in the beautiful Hill Country in Central Texas, within an hour of San Antonio, and approximately three hour drive from Dallas and Houston.

Workshop Contact

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