

## Conference News....

### 61st 2011 Electronic Components and Technology Conference (ECTC): had an outstanding conference

The 61st ECTC in Lake Buena Vista, FL, USA, was a spectacular year with more than 621 abstracts received matching the abstract submission record of 2008. Of the abstracts submitted 51% were from educational institutions, 38% from corporations, and 11% from research institutes. With 342 technical papers presented in 36 oral and 5 poster sessions including student posters, ECTC continues to be the prime technical conference in the electronic packaging industry. This year, the Executive Committee formed a 3D/TSV Work Group led by John Knickerbocker of IBM and comprised of members from all subcommittees to create 8 TSV-related sessions that would be co-sponsored by various subcommittees. This decision helped to consolidate all the TSV abstracts into topical sessions like 3D Interconnections, Integration, Applications, Materials, and Manufacturing. The 3D sessions were the highest attended with over 200 attendees per session.

With over 1000 attendees (compared to 844 in 2010), the semiconductor industry proved to be in a strong year. The 386 (compared to 345 in 2010) Professional Development Course (PDC) attendees, 61 exhibitors, and 26 sponsors were further proof of the strength of ECTC as a premier technical packaging conference. The conference also included luncheons, raffle drawings, evening receptions, and best paper awards.

In addition to technical sessions, there were invited speakers at four additional sessions:

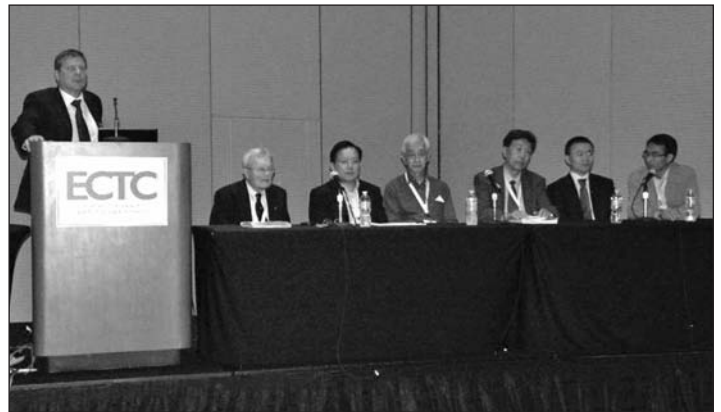
- ECTC Panel Discussion chaired by Rolf Aschenbrenner of Fraunhofer IZM and co-chaired by Keyun Bi of the Electronic Manufacturing and Packaging Technology Society of China,
- Plenary Session chaired by Henning Braunisch of Intel,
- CPMT Seminar chaired by Kishio Yokouchi of Fujitsu Interconnect Technologies
- Special session on “Impact of manufacturing limitations on electronic package performance and reliability” on Tuesday morning chaired by Lei Shan of IBM.

On Tuesday, 386 attendees attended 16 professional development courses (PDCs). The courses were organized by the PDC Committee chaired by Kitty Pearsall of IBM. The ITRS Assemblies and Packaging Technology Committee meeting took place in parallel to PDCs.

In the evening, students attended the ECTC Student reception hosted by Eric Perfecto of IBM, where they had an opportunity to learn about how the technical subcommittees work to select the abstracts.

Session chairs and speakers, on the other hand, got together at the General Chair’s Speakers Reception.

At night, ECTC Panel Discussion on “ECTC Spotlight on China” chaired by Rolf Aschenbrenner of Fraunhofer IZM attracted a lot of attention. As Chinese industry has been growing very fast in electronic products manufacturing and has become the major consumer of integrated circuits products, the panel session of the ECTC 2011 focused upon the development of the packaging industry in China. Ed Pausa presented the latest economic data from PricewaterhouseCoopers while Ricky Lee’s presentation was concentrated on the R&D development in China and Bill Chen documented the point of view of a US based industry enterprise with strong business relations in China. The two Chinese panelists,



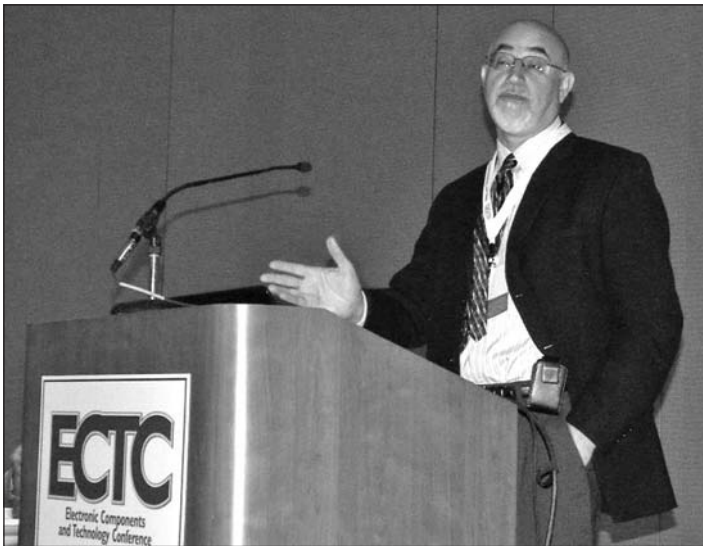
ECTC Spotlight on China Panel.



Eric Perfecto IBM, instructing on Flip Chip Fabrication and Interconnection.



ECTC Program Chair Wolfgang Sauter, IBM at Speakers Breakfast.



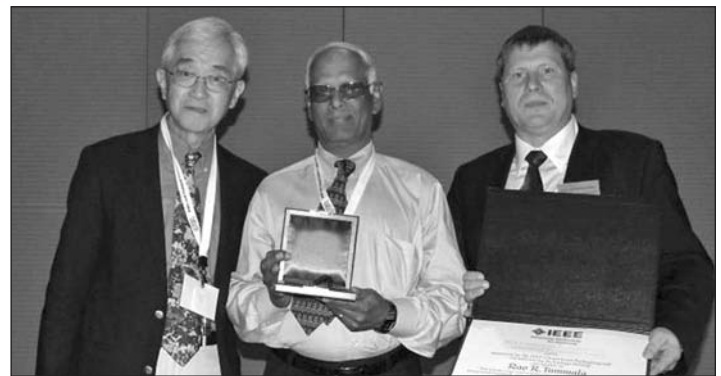
Nasser Grayeli, Intel – Speaking at luncheon.



Inside the Technology Corner.



Plenary Session: Power Efficiency Challenges and Solutions.



Rao Tummala (center) receiving award from CPMT President Rolf Aschenbrenner (right) and Past CPMT President William Chen (left).

Bill Li and Wenhui Zhu, described the state-of-the-art of the Chinese electronic manufacturing industry.

Technical sessions started on Wednesday, and ran through Friday, 8:00 AM to 5:00 PM every day. Speakers and session chairs met at breakfast to prepare for the sessions.

Dr. Nasser Grayeli, Intel Vice President of the Technology and Manufacturing Group and Director of Intel’s Corporate Quality Network spoke on the challenges and opportunities ahead at the ECTC Luncheon. His presentation is posted at the ECTC web site ([www.ectc.net](http://www.ectc.net)).

In the evening, the exhibitor reception provided another opportunity for networking and exchanging information among the conference attendees.

ECTC General Chair Rajen Dias of Intel, hosted the program subcommittee chairs and assistant chairs in his suite and thanked them for their leadership in selecting the 342 technical papers out of 621 abstracts which matched the abstract submission record from 3 years ago.

In the evening, a Plenary Session “Power Efficiency Challenges and Solutions: From Outer Space to Inside the Human Body” was held, chaired by Henning Braunsch of Intel. The power efficiency theme was highlighted in the areas of space exploration (Greg Cardell, JPL), supercomputing (Hans Jacobson, IBM), data

centers (Randy Mooney, Intel), consumer electronics (Raj Master, Microsoft), and medical implants (Sayfe Kiaei, Arizona State).

The CPMT Society presented its 2011 awards at the Thursday luncheon. Rao Tummala of Georgia Institute of Technology, a leader in packaging research worldwide, was among the ones that were honored for their contributions to the industry. He received 2011 IEEE CPMT Award. Also, CPMT ECTC Sustained Contribution awards were presented to ECTC volunteers such as Joe Soucy and Harry K. Charles who have served 25 years and Steve Bezuk, Sharad Bhatt, Swapan Bhattacharya, Steve Dvorak, Mahadevan Iyer, Quinn Tong, Dongji Xie, and Charles Zhang who have served 10 years.

Sixty-one exhibitors took part in the Technology Corner Exhibit which continued through Thursday. Ten exhibitors were new for this year.

In addition to technical sessions that ran throughout the day, the 62nd ECTC Program Committee chaired by the 62nd ECTC Program Chair Senol Pekin met to prepare for 2012, where CPMT Representative C. P. Wong announced that Dr. Beth Keser of Qualcomm will serve as the Assistant Program Chair in 2012.

Thursday evening’s Gala Reception was held outside at the Lake Terrace at the Swan. The weather was beautiful and the presenters, attendees, and conference volunteers had a wonderful time



ECTC General Chair Rajen Das (standing, center).

discussing the success of the conference while eating good food (and desserts).

On Friday, Technical sessions continued till 5 PM. At the luncheon, General Chair Rajen Dias of Intel received the ECTC General Chair award from CPMT Representative C. P. Wong.

Conference attendees never feel sad at the last day of the conference thanks to the raffle drawings announced by ECTC Treasurer Tom Reynolds at the luncheon.

The First Call for Papers for 62nd ECTC is already out and can be found at [www.ectc.net](http://www.ectc.net). You are invited to submit an abstract



Chris Bower, Semprius - winner of "Introduction to System-on-Package," written and donated by R.Tummala.

by October 10, 2011. In addition to abstracts for papers, proposals are solicited from individuals interested in teaching educational professional development courses.

See you at the 62nd ECTC in San Diego, CA next year!

## 2011 IEEE Semiconductor Wafer Test Workshop

*Submitted by Jerry Broz, Ph.D., General Chair of IEEE SW Test and IEEE Senior Member*

San Diego, CA: Wafer level test and probe technologists from around the world met in San Diego, CA, from June 12 to 15, 2011 for 21th Annual IEEE Semiconductor Wafer Test Workshop (SW Test) at the Rancho Bernardo Inn in San Diego, CA. This annual IEEE / CPMT sponsored workshop brings together technologists, engineers, and managers as well as sales and marketing professionals involved with all aspects of probe technology and wafer level testing. SW Test 2011 began with a Sunday tutorial from Intel Corporation on the basics of statistical analysis with applicability to wafer level sort and data analysis. Starting Monday morning, the next three days were filled with a broad technical program; 5-hours of supplier exhibits (which did not compete with the technical sessions), and a San Diego Safari Park Social Networking Event.

SW Test 2011 had a total of 305 attendees from 15 countries with 30% of the attendees from outside the US to make the 2011 Workshop a truly global gathering of leading probe technologists. As always, there was a great mix of end-users (~31%) and suppliers / vendors (~69%) that were in attendance during the three day event. This unique workshop provides for plenty of time for informal interaction to discuss problems and promotes a friendly networking environment between colleagues as well as new attendees.

On Sunday night, Dr. William Chen, Sr. Advisor at ASE Group and former President of CPMT, made a thought provoking Key-note Presentation entitled, "From Backend to Front End".

Dr. William Chen began with a perspective into device packaging / assembly development that will likely affect wafer level test technologies. He reminded the attendees that Moore's Law is NOT a Law of Nature; it is however, an "expectation of continuity for innovation and invention" and a "promise of innovation and creativity for the semiconductor industry".

Dr. Chen discussed that overall society life experience improvements have been achieved through key product cycles within computing (personal computing), communication (wireless and wired), information (virtual sociality), and life sciences (medical and biotechnologies).

The changing landscape for packaging technologies to support future product life cycles will be driven by the critical integration of an increasing number of semiconductor device types within various electronics. According to Dr. Chen, the concepts of "More Moore" and "More than Moore" are the major trends that are currently driving semiconductor devices and packaging developments and architecture innovation.

"More Moore" can be described by continued shrinking of physical feature sizes of the digital functionalities in order to improve density and performance. It is, however, necessary to move past "More Moore", which works well for the digital world, but not for interfacing with the actual physical world. The "More-than-Moore" approach allows for the non-digital functionalities to