Appointment of Two Strategic Directors to CPMT Board of Governors

Marsha S. Tickman
Executive Director, IEEE CPMT Society

The following message is sent on behalf of CPMT President Bill Chen:

I'm pleased to announce two appointments to Strategic Director positions on the CPMT Board of Governors.

Kitty Pearsall (CPMT Member-at-Large 2005-2007) has accepted appointment as Strategic Program Director, Awards. She is taking over this position from Rao Bonda, who was elected Vice President, Technical for 2006-2007. Kitty has an outstanding professional career in IBM. Her great knowledge of the industry and the people make her particularly well-suited to this important responsibility.

Charles Lee (CPMT Member-at-Large 2004-2006) has accepted appointment as Strategic Program Director, Region 10. Charles is succeeding me in this position. In his professional capacity, Charles has developed an extensive global network, particularly in Asia Pacific Region. He has demonstrated great leadership and strong commitment to the CPMT Society in his many contributions in the Singapore CPMT Chapter, as well as in his work as Technical Chair and General Chair at EPTC Conferences.

Please join me in congratulating Kitty and Charles and in supporting their efforts on the Board of Governors.

Regards,

Bill Chen, President, IEEE CPMT Society

Welcome Aboard Kitty Pearsall and Charles Lee!

Kitty Pearsall kittyp@us.ibm.com

Kitty Pearsall received the BS degree in Metallurgical Engineering in May 1971 from the University of Texas at El Paso. She continued at the University in the graduate program until 1972 at which time she joined IBM as a Materials Engineer. In 1976 she left IBM on an educational leave of absence. She received the MS and PhD degree in Mechanical Engineering, Materials Option from the University of Texas at Austin in May 1979 and May 1983 respectively.

Since returning to IBM in 1983, Kitty has served as a technical resource in materials/package engineering in manufacturing, procurement and development environments. Twelve of these years were spent in technical management focusing on the qualification of various commodities.

In April 2005 Kitty was promoted to a Distinguished Engineer. As a DE in the Integrated Supply Chain, her responsibilities include strategic process consultancy to cover definition, introduction and deployment of key supplier quality initiatives for Procurement Engineering in all geographies, with particular emphasis on qualification, assurance and supplier quality management for procured commodities. She is a champion for cross-brand, cross-commodity processes across procurement ensuring robust linkage into development, manufacturing engineering and services. Kitty was recognized for her contribution to the IBM technical community by being elected a member of the IBM Academy of Technology in 2005. She has been a licensed Professional Engineer in the State of Texas since 1993; holds 3 US patents and several disclosures that have contributed to the IBM patent portfolio. She has numerous internal publications as well as 17 external publications in IEEE conferences and journals.

Kitty has been a member of IEEE since 1993 and was appointed a Senior IEEE member in 2002. Today, Kitty serves as a Member at Large for IEEE's Component, Packaging and Manufacturing Technology society, a member of the Manufacturing Technology Committee and the Professional Development Community for the ECTC.

(Next issue we will profile Charles Lee)

Meet IEEE CPMT Society Transactions Editors

Avram Bar-Cohen is Distinguished University Professor and Chair of Mechanical Engineering at the University of Maryland. He joined Maryland in 2001 after 15 years in academic and administrative positions at the University of Minnesota. He had earlier held academic positions at the Ben Gurion University (in Israel), the Naval Postgraduate School, and the Massachusetts Institute of Technology. He's also held technical leadership positions at Control Data Corporation (1984-1989) and Raytheon (1968-1972). He holds an SB, SM and the PhD degree in Mechanical Engineering from the Massachusetts Institute of Technology. Bar-Cohen currently serves on the Steering Committee of ASME's Nanotechnology Institute, is the ASME representative for the US on the Assembly for International Heat Transfer Conferences (2002-2006), and is the Editor of the IEEE Transactions on Components and Packaging Technologies. . He is the co-author of two books and has co-edited nine books in this field. He has authored and co-authored some 250 Journal papers, Refereed Proceedings papers, and Chapters in books, and has delivered more than 50 Keynote, Plenary, and Invited Lectures at major technical Conferences and Institutions. Nearly all of these have been co-authored with the 49 MS and PhD students that have completed their studies under his direction. Bar-Cohen is a Fellow of ASME and IEEE and has received several national awards from each society.

Dr. Koneru Ramakrishna is the current Editor-in-Chief for Trans. CPT along with Dr. Ricky Lee. Dr. Koneru Ramakrishna [BE (1976), Andhra University, Waltair, India, M. Tech (1978), IIT, Madras, India, MSME (1980), Kansas State University, and Ph. D (1989), University of Pennsylvania] was with IBM Corporation, Endicott, NY from 1988-'94 following the completion of his doctoral degree in heat

transfer and fluid mechanics. His Ph. D thesis dealt with electrical breakdown between a pointed electrode and a plane and the melting of the electrode. At IBM, he worked on assessment of the mechanical reliability of electronic packages and advanced printed wiring boards (PWBs) using simulation and modeling. He conducted an extensive study of the stresses induced in plated through holes in a variety of PWBa during their manufacturing steps. This effort included participation in the development of the first PWB with PTFE as the dielectric and the development of kapton-based TAB packages. Rama is with Freescale Semiconductor, Inc. (formerly Semiconductor Products Sector, Motorola, Inc.) since March 1994. He is currently a Distinguished Member of Technical Staff. Early on at Motorola, Rama conducted experimental and modeling studies to evaluate various thermal enhancements to portable electronic equipment. His work on simulation of thermal performance of an advanced wafer level burn-in system early in its development cycle were instrumental in narrowing down the design options for the system. He contributed thermal solutions in the development of the very first wire-bond PBBA (ball grid array) package used in automotive underhood application for Chrysler. During this project, he developed experimentally verified mechanistic methods linked to package physical design to predict thermal performance of BGA packages. He applied them to ceramic and plastic – flip-chip and wire-bond - for consumer, automotive and wireless applications. Using these methods, he generated an extensive database of the thermal characteristics of these families of packages cover a wide range of parameters of practical interest. He shifted his focus to the development of the state of the art models to predict the effects of Joule heating and limitation they impose on current carrying capability of the copper/low-k interconnects for 130-65 nm nodes in a design environment. These models were later extended to poly resistors. Following this, he worked on the evaluation of intrinsic reliability of copper interconnects with low-k dielectrics for electromigration and stress migration effects in 130 and 90 nm technology nodes. For the past three years, he is working on evaluating the TDDB (time dependent dielectric break down) performance of the on-chip dielectrics for 130 and 90 nm technology nodes using traditional and new methods. He is dividing hid time to evaluate the intrinsic reliability of large area MIM decoupling capacitors. At Freescale and Motorola, Rama was actively engaged with mentoring SRC projects in electronic packaging and devices at various universities. He continues to be active in this area.

Prior to the completion of his Ph. D degree, Rama was a Consulting Engineer at the United Engineers and Constructors, a subsidiary of Raytheon Corporation, from 1983-'86. He was involved in evaluating the fluid transients and heat transfer in safety and non-safety systems in nuclear power plants.

Dr. Ramakrishna is a Member of IEEE and a Fellow of ASME. He was the General Chair, ITherm '04, Program Chair, ITherm '02 and Program Co-Chair, ITherm '00. In addition, he co-organized technical sessions on thermo-mechanical and thermal aspects of electronic packages at ITherm '98, InterPack '95 & '97, 2nd ASME/JSME Joint Conference on Electronic Packaging, '93 and at ASME IMECE conferences. He co-authored more than 50 conference and journal papers and an on-line book chapter on thermal management. Rama is an Associate Editor, IEEE Trans. on Components and Packaging Technologies (since 1998) and ASME Trans. Journal of Electronic Packaging (2003-'06). Rama was the Co-Chair of the Modeling, Simulation and Design TWG, NEMI Roadmap 2000 & 2002. He received 2005 Mehboob Khan Award for outstanding mentoring of the SRC projects and Mentor of the Year (2002) & High Impact Technology (1997) Awards from Motorola, Inc. He co-advised two MSME students on their theses. His current interests are in the areas of on-chip Joule heating effects, intrinsic reliability of Cu/low-k interconnects for future CMOS technology nodes, TDDB behavior of interlayer dielectrics, intrinsic reliability of MIM decoupling capacitors and delamination in Cu/low-k interconnects.

Dr. Shi-Wei Ricky Lee is the current Editor-in-Chief for Trans. CPT along with Dr. Koneru Ramakrishna. Ricky Lee received his PhD degree from Purdue University in 1992. Currently he is Associate Professor of Mechanical Engineering and Director of Electronic Packaging Laboratory (EPACK Lab) at the Hong Kong University of Science & Technology (HKUST). He is also appointed Technology Director of Nano and Advanced Materials Institute (NAMI) Ltd., which is a Hong Kong Government sponsored R&D center. His research activities cover wafer bumping and flip chip assembly, wafer level and chip scale packaging, microvias and high density interconnects, lead-free soldering and solder joint reliability, and mechanics for sensors and actuators. Ricky has substantial publications international journals and conference proceedings. He also owns one US patent and co-authored three books. Ricky is a two-time recipient of JEP Best Paper Award (2000 & 2001) conferred by *ASME Transactions: Journal of Electronic Packaging*. He also won the Best Poster Paper Award of IEEE Electronic Components & Technology Conference (ECTC2004) and the Philips Best Paper Award of International Conference on Electronic Packaging Technologies (ICEPT2005). Furthermore, he serves as Editor-in-Chief for *IEEE Transactions on Components & Packaging Technologies*. He also sits on the Editorial Advisory Board of two other international journals. Ricky is very active in professional societies and international conferences. He is an ASME Fellow, an IoP Fellow, and a Senior Member of IEEE. He was Chair of IEEE CPMT-Hong Kong Chapter (2001-2002), Member-at-large of Board of Governors (2003) and Vice-President of IEEE CPMT Society (2004-2005). In addition, he was General Co-Chair of 2nd International Symposium on Electronic Materials and Packaging (EMAP2000) and 60th Chinese Association for Science & Technology Forum for Young Scientists (FYS2001). Currently Ricky is Chair of ASME-Hong Kong Section and Chair of ASME Electronic & Photonic Packaging Division (EPPD). He will serve as General Chair of 8th International Conference on Electronic Materials and Packaging (EMAP2006).

We will introduce you to our other two Editors-in-Chief in the next issue of the NEWSLETTER.