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### CPMT Senior Members

Submitted by Ms. Marsha Tickman, Executive Director,  
IEEE CPMT Society

Congratulations to the following CPMT Society members for achieving Senior Member status after December, 2006:

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### IEEE CPMT Society Newsletter

Send inputs, suggestions, and articles by email  
to [nlstr-input@cpmt.org](mailto:nlstr-input@cpmt.org)

..... Editor

### Obituary:



### Dr. Arthur T. Murphy – IEEE Fellow

Submitted by Daniel I. Amey, DuPont Corporation  
[Daniel.I.Amey@usa.dupont.com](mailto:Daniel.I.Amey@usa.dupont.com)

Dr. Arthur T. “Murph” Murphy, Jr. passed away peacefully on July 2<sup>nd</sup>, 2007 after a short illness; he was 78. Born in Hartford, CT he was an only son to Marye (Beakey)

and Arthur Thomas Murphy, Sr.

Art worked for E.I. DuPont de Nemours and Co. Inc., and was a DuPont Fellow “Emeritus” the highest technical position in the corporation. Art joined DuPont in 1979 following a distinguished 25-year career in academia. He was Brown Professor and Head of Mechanical Engineering at Carnegie-Mellon University, Vice-president and Dean of Engineering at Widener University, Head of Electrical Engineering at Wichita State University, and Visiting Professor at MIT and University of Manchester (England) and Adjunct lecturer at Penn State University.

Art began his DuPont career working in the Electronics Connector Division where he developed electronic connectors and components and introduced the first 3-D computer aided design system that DuPont had for mechanical design. He developed a unique filter component for control of electromagnetic interference (EMI) and was awarded patents and marketing excellence awards for this work.

In 1986 he moved to the DuPont experimental station in Wilmington in Departmental Research and Development where he established an Electronic Systems Research group with emphasis on Computer Aided Design of interconnections and high frequency applications. He developed a computer software system for the analysis and simulation of electronic packaging and interconnection systems, which was applied to DuPont materials and customer product development. He then accepted an assignment to work for three years in Japan, working for two years at the Sony Research Center in Yokohama, Japan as a Visiting Research Fellow where he developed semiconductor packaging for high speed integrated circuits. This was followed by a one-year position as DuPont’s representative to the International Superconductivity Technology Center in Tokyo, Japan where he developed an active superconducting mixer antenna array. Art returned to the US in DuPont Central Research and Development working on business growth initiatives, university liaison and also serving as an internal consultant with various Dupont businesses. He ended his DuPont career in the DuPont Engineering organization.

Art published numerous technical papers on electronic modeling and simulation and component design, was awarded a number of patents and was co-author of a book, *Introduction to System Dynamics*.

He was very active in industry professional organizations, particularly in the areas of professional development and educational activities. He was a member of the American Society of Mechanical Engineers, a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) and a Fellow of the American Association for the Advancement of Science (AAAS). He was life member and Fellow of the American Society of Engineering Education (ASEE) and DuPont’s representative to the ASEE. After his re-

tirement he continued to represent DuPont and served for four years as the society's Vice President of Finance. Working with the National Academy of Engineering, he was involved in projects of national scope dealing with the reform of engineering education. In 1998 Art served as acting President of the Pennsylvania Institute of Technology. He was an evaluator for the Accreditation Board for Engineering and Technology

(ABET) evaluating engineering programs at numerous schools of engineering, most recently this past spring at Columbia University. Art received the B.E.E. from Syracuse University and the Ph.D. and M.S. degrees in electrical engineering from Carnegie-Mellon University and was a registered professional engineer. He was a member of seven honor societies; Eta Kappa Nu, Tau Beta Pi, Phi Theta Kappa to name just a few.

Art was a loving husband, father, and grandfather, caring friend, mentor, and inspiration to all who came in contact with him. Art passed away peacefully with his family at his side. He is survived by his loving wife of 54 years, Jane, and seven children: son Thomas (wife Karen and son Patrick), Chattanooga, TN; daughter Patricia (partner Kendra), Stockton, NJ; daughter Mary (husband Karl and son Brendan), Albany, NY; son Jack (wife Trina, and sons Connor, Devon, and Mason), Radford, VA; daughter Sheila, Lahaina, HI; daughter Jane Ann, Drexel Hill, PA; and son Joseph (wife Chanda), Memphis, TN and a multitude of friends around the world. Art spent years researching family genealogy; however, his greatest pleasure was time spent with his family as they traveled the world creating lasting memories and lifelong friendships.

Art and Jane would have celebrated their 55th anniversary on August 16th, 2007. They recently established a dual endowment Scholarship for Study abroad in Engineering and Music at Syracuse University, where they met. In lieu of flowers, contributions can be made to this fund:

**The Arthur T. and Jane M. Murphy Endowed Scholarship at Syracuse University for Study Abroad**

c/o Mr. Steve Savage  
Senior Director of Development  
Syracuse University  
LC Smith College of Engineering & Computer Science  
223 Link Hall  
Syracuse, NY 13244

**Chapter Reports:**

**Contribution to IEEE CPMT Newsletter by Singapore REL/CPMT/ED Chapter August 2007**

Submitted by Alastair Trigg, Chair - IEEE Singapore Rel/CPMT/ED Chapter

In June, Chapter organized three technical talks. On 22th June, Drs Chih-Hsun Chu and Yong-Fen Hsieh a husband and wife team from Taiwan who started, and now run, the company Materials Analysis Technology which specializes in providing failure analysis service to the semiconductor industry gave two talks. In his talk on "Non-Planar Oxidation of Silicon" Dr Chu discussed different scenarios and

gave many examples that he has seen over the course of his career. Dr Hsieh spoke on "Ion Implantation and Related Defect Formation by Latent Stress".

On 25<sup>th</sup> June, an EDS Distinguished lecturer, Prof. Vijay K. Arora of Wilkes University USA, gave a talk entitled "Performance Evaluation of Nano Circuits and Systems with Ballistic Carriers."

In July the Rel/CPMP/ED Singapore Chapter and ED/SSC Hong Kong Chapter jointly organized the 13<sup>th</sup> Workshop and IEEE EDS Mini-colloquium on NANometer CMOS Technology (WIMNACT) which was held in Hong Kong on 23<sup>rd</sup> July and Singapore on 25<sup>th</sup>. The workshops were co-sponsored by the EDS Distinguished Lecturer (DL) Program.

The Singapore workshop, attracted about 70 people and was opened with a welcome address by the Chapter Chair, Dr. Alastair Trigg, followed by an Introduction to EEE Microelectronics Center, co-organizer of the workshop, by the Director, Prof. Kin-Leong Pey. DLs from Singapore, Hong Kong, Malaysia, USA and India presented talks at the Singapore workshop.

- Prof. Juin Liou from Univ. of Central Florida: "On-Chip Spiral Inductors in CMOS Technology for RF Applications"
- Prof. Ramgopal Rao from IIT-Bombay: "Device Design and Optimization Challenges for Nano-scale Multi-gate MOS-FETs",
- Prof. Kin-Leong Pey: "Silicided Hyper-shallow p+/n- Junctions Formed by Pulsed Laser Annealing for Nanoelectronic Devices"
- Prof. Mansun Chan of HKUST: "Application of Integrated Circuit Technology for Biological Material Analysis"
- Prof. Xing Zhou from Nanyang Technological Univ.: "Unified Compact Modeling of Emerging Multiple-Gate MOSFETs",
- Mr. Chih-Hang Tung from Institute of Microelectronics: "Advanced Transmission Electron Microscopy for Nano-electronics Device and Process Analysis".
- Prof. Vijay Arora of Wilkes University and is visiting professor at Universiti Teknologi Malaysia: "Physics-Based Models for Performance Evaluation of a Nanoscale MOSFET".

This first attempt at a joint mini-colloquia, proved very successful as well as economical due to shared travel funds.



DL speakers at WIMNACT-Singapore.: From left to right: Xing Zhou, Kin-Leong Pey, Vijay Arora, Juin Liou, Mansun Chan, Ramgopal Rao, Chih-Hang Tung.