SEMINAR ANNOUNCEMENT

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IEEE Distinguished Lecture

Jointly organized by
IEEE Singapore Solid-State Circuits Society Chapter
and
Department of Electrical and Computer Engineering, NUS

TOPIC :	**Trends in Solar Cell Technology**
SPEAKER :	**Dr. Betty Prince** **New Energy Strategies International**
DATE :	**18th October 2010**
TIME :	**2:30pm to 3:30pm**
VENUE :	**LT2**

ABSTRACT

This talk will discuss recent trends in photovoltaic technology beginning with an overview of solar energy and solar cells. This will be followed by: discussion of silicon solar cell process techniques to improve efficiency, amorphous silicon heterojunctions, III-V materials PV(GaAs, InP, GaInAs, etc.), developments in Cadmium Teluride (CdTe) and CIGS/CIS thin film PV. Recent advances in dye-sensitized PV technologies, and various new organic polymer PV technologies are covered followed by discussion of the use of nanocrystals/quantum dots, carbon nanotubes and nanowires in photovoltaics and recent advances in quantum wells.

BIOGRAPHY

Dr. Betty Prince is CEO of New Energy Strategies International. She has 35+ years engineering experience in the semiconductor industry with several companies including: Texas Instruments, N.V. Philips, Motorola, R.C.A. and Fairchild. She is a Senior Life member of the IEEE, an IEEE SSCS Distinguished Lecturer on Solar and has given DL talks in the Solar area in several U.S. cities as well as in Delhi and Bangalore India. She spoke on Advanced Solar Technologies at the Solar Technology Workshop in Austin, Texas in 2010. She is author of four technical books in the semiconductor memory area. She has served on the Technical Advisory Board of Cavendish Kinetics, Emerging Memory Technologies and Silicon Access Networks and was on the Board of Directors of Mosaid Technologies. She holds patents in the memory, processor and interface areas. She has a B.S. and M.S. in physics and math from the University of New Mexico and the University of California, and an M.B.A. and a Ph.D. from the University of Texas with doctoral dissertation on fractal modeling.

REMARKS

Refreshment will be provided.

Please register with Dr Heng Chun Huat of ECE Dept by Email: elehch@nus.edu.sg

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TOPIC :	**Scaling Trends for Memory Technologies**
SPEAKER :	**Dr. Betty Prince** **Memory Strategies International**
DATE :	**18th October 2010**
TIME :	**4:00pm to 5:00pm**
VENUE :	**LT2**

ABSTRACT

This talk will discuss the latest technologies and scaling trends for the three historical memory types - DRAM, Non-Volatile Flash Memory and SRAM. Each memory type will be followed by discussion of the Emerging Memory technology that appears most likely to replace that established memory. DRAM could potentially be replaced by 3D-DRAM, Floating Body DRAM or Thyristor RAM. Floating Gate Flash is being challenged, in the short term, by Charge Trapping Flash and, in the longer term, by the PC-RAM, ReRAM or Memristor. The embedded SRAM could be replaced by the MRAM.

BIOGRAPHY

Dr. Betty Prince is CEO of Memory Strategies International. She has 35+ years experience in the semiconductor industry having worked with Texas Instruments, N.V. Philips and Motorola in memory technology and marketing management, at R.C.A. in the development of an early microprocessor and at Fairchild in semiconductor process technology. She is author of the books: Semiconductor Memories (1982), Semiconductor Memories 2nd Edition (1992), High Performance Memories, (1996, revised 1999) all published by John Wiley & Sons, Emerging Memories - Technologies and Trends, (2002) published by Kluwer Academic, and Modern Memories-Static RAMs to be published by John Wiley & Sons. She is a Senior Life Member of the IEEE, an IEEE SSCS Distinguished Lecturer on Memory, and served from 1991-1994 on the Technical Advisory Board of IEEE Spectrum magazine. She was founder of the JEDEC JC-16 Interface Standards Committee, Co-Chair of the JC-42 SRAM Memory Committee and U.S. representative to the IEC SC47A WG3 Memory Standards Committee. She has served on the Technical Advisory Board of several memory companies including: Cavendish Kinetics, Emerging Memory Technologies and Silicon Access Networks and was a Director of Mosaid Technologies for many years. She holds patents in the memory, processor and interface areas. She has a B.S. and M.S. in physics and math from the University of New Mexico and the University of California, an M.B.A. and a Ph.D. from the University of Texas with doctoral dissertation on fractal modeling.

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