



IEEE Crosstalk



The Newsletter of the Mid-Hudson Section of the IEEE

Volume XLV, No 4, November 2006

Volunteers Needed!

Want to meet great people in the Hudson Valley? Attend valuable workshops for personal and professional development? Find out how IEEE *really* works? The IEEE Mid-Hudson Section's officers serve annual terms coinciding with the calendar year. We have some volunteers, but we are soliciting nominations for all positions listed in the side bar to the right ("Mid-Hudson Section Leadership"). We especially need volunteers for the positions currently vacant. We will have elections for contested positions. The following members have volunteered for the positions below:

- Chair: Lisa Shay
- Vice-Chair: Mike Otis
- Treasurer: David J. Dittman II
- Members-at-Large Larry Boland, Bill McCarthy
- Program Chair: Kwok Soohoo

For more information, see http://www.ieee.org/web/geo_activities/rab/scs/Resources/Officer_Training/job-desc.html. The time commitment is around 5 hours per month, excluding attendance at general section meetings and technical talks.

Upcoming Events

December 6, 2006: Senior member elevation meeting (5:30-6:30) and Electron Devices Society Talk (6:30-7:30). See pages 3 and 4 for details.

January 2007: New year kick-off dinner. Meet fellow members, welcome the new officers and let us know what events you would like to see. Additional information in next month's Crosstalk.

February 21, 2007: Engineering Day at SUNY New Paltz. The day's events will include: a hands-on workshop for Mid-Hudson area Middle- and High-school students; guest speakers to include Diane Bollen from the Mars Rover project; and a kiosk area displaying the areas high-tech industries and talent. A SUNY New Paltz sponsored Job-Fair for Science, Engineering, and Business students will take place in the afternoon.

Not open to the public, but co-sponsored by Mid-Hudson IEEE.

March 2007: Look for a presentation by Marist College on their new Master's in Management Technology Program. See page 2 for additional information.

March 24, 2007: Dutchess County Science Fair. Looking for IEEE members to judge projects. Additional information to follow.

Mid-Hudson Section Leadership

- Chair:** Rob Atkins
- Immediate Past Chair:** Bob Sadowski
- Vice Chair:** Lisa Shay
- Treasurer:** David J. Dittmann II
- Secretary:** Michael Otis
- Members-at-Large:** Larry Boland
Bill McCarthy
* opening
- Program Chair:** Kwok Soohoo

Society Chairs:

- Computer:** Baback Izadi
- Education:** Michael Otis - temp
- Electron Devices:** Fernando Guarin
- Power:** Hal Turner
- WIE Affinity Group:** * opening

- Student Activities Membership:** Michael Otis - temp
- Awards Chair:** Casimer M. DeCusatis
- Newsletter Editor:** Lisa Shay
- Associate Editor:** Brett Arteta
* opening

- PACE Chair:** Larry Winkler
- Publicity Chair:** * opening
- Engineer's week:** * opening
- Tech Societies Liaison:** Vic Melville
- Webmaster:** Larry Winkler



Mid-Hudson Section Website

<http://www.ewh.ieee.org/r1/mid-hudson/index.htm>



Mid-Hudson Section General Contact

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* Focuses on corporate visits and presentations by professors from non-U.S. universities and professionals in relevant fields.



Electronic Devices Society Meeting

Beyond Scaling Realizing Value Through the Integration of Memory and Autonomic Chip Features

Subramanian S. Iyer, IBM

When: Wednesday December 6, 2006

Time: 6:00 to 7:30 PM

Where: IBM East Fishkill Conference Room 42. See map and directions on following page:

Abstract

As we scale into 45 nm and beyond, there is a bewildering number of choices that present themselves to us. These include a variety of advanced strain engineering for improved performance on one end and vastly simplified technologies for low cost low power applications. One thing that remains constant is the expectations of increased functional value per unit cost and this may only be met with a more holistic technology integration based on systems needs. We consider two approaches: leveraging embedded dense memory. We examine the scalability and performance issues of embedded memory and exploring the autonomic chip – where a judicious use of circuit innovation, material and physical phenomena are employed to yield self diagnosing and self healing and perhaps even self reconfiguring chips extending both the lifetime and scope of the chip.

About the Speaker



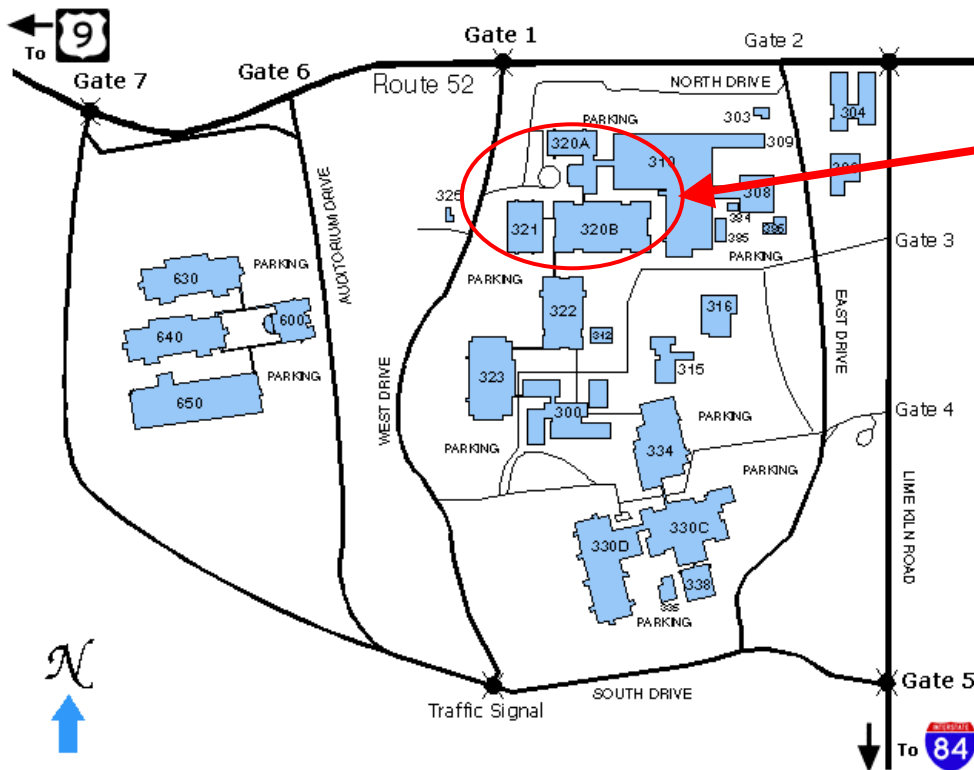
Subramanian S. Iyer is a Distinguished Engineer and Director of 45nm and eTechnology Development at the IBM Microelectronics Division, Semiconductor Research and Development Center . He obtained his B.Tech in Electrical Engineering at the Indian Institute of Technology, Bombay in 1977, and his M.S. and Ph.D. in Electrical Engineering at the University of California at Los Angeles in 1978 and 1981 respectively. He joined the IBM T. J. Watson Research Center in 1981 and was manager of the Exploratory Structures and Devices Group till 1994, when he founded SiBond LLC to develop and manufacture Silicon-on-insulator materials. Dr. Iyer has received a Corporate award and three Outstanding Technical Achievement awards at IBM for the development of the Titanium Salicide process, the fabrication of the first SiGe Heterojunction Bipolar Transistor and the development of embedded DRAM technology. He holds over 35 patents and has received 18 Invention Plateau awards. He received the Distinguished Alumnus award from the Indian Institute of Technology, Bombay in 2004. Dr. Iyer has authored over 150 articles in technical journals and several book chapters and co-edited a book on bonded SOI .He has served as an Adjunct Professor of Electrical Engineering at Columbia University, NY. Dr. Iyer is a Fellow of IEEE and a Distinguished Lecturer of the IEEE.

Senior Membership Elevation Night

If you are interested in elevating your IEEE Membership to Senior status please join us at IBM Fishkill before the talk (5:30 – 6:30 PM.)

- All interested candidates should email their resume to Lisa Shay at lisa.shay@ieee.org by 12/1/2006 and bring 3 copies of their resume with them to the event. Members must be present to be considered for the elevation.
- We are looking for current Senior members (and above) to write letters of recommendations. You do not have to be present at the meeting as long as you are comfortable writing the letter based solely on the applicant's resume. Please email Lisa Shay at lisa.shay@ieee.org by 12/1/2006 if you are interested in helping out your fellow members.

Directions to Building 320 IBM East Fishkill are given in the map below, once you arrive to the Building 320 Lobby (between 320A and 320 B on map) you will need to sign in and get a visitor's badge. An IBM employee will escort you to conference room 42, which is on the 2nd floor on the right side of the cafeteria.



The conference room is located between Buildings 320A and 320B.

Meeting is Free and open to the public.

***We will provide snacks at 6:00PM and will start the lecture at 6:30 PM.**



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Are you an IEEE Senior Member?

Becoming a Senior Member is not as difficult as you might think. According to the IEEE bylaws, "a candidate shall be an engineer, scientist, educator, technical executive or originator in IEEE-designated fields. The candidate shall have been in professional practice for at least ten years and shall have shown significant performance over a period of at least five of those years." If you qualify and would like to become a senior member, see the information on our Senior Member Elevation Night on page 3.

More information on Senior Member Elevation:
<http://www.ieee.org/organizations/rab/md/smforms.htm>