IEEE
ELECTRON DEVICES SOCIETY
Newsletter

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2007 IEEE International Electron Devices Meeting (IEDM)

53rd IEEE International Electron Devices Meeting to Feature TSMC Chairman, Morris Chang, as Luncheon Speaker

The IEEE International Electron Devices Meeting (IEDM), the Election Devices Society's annual technical conference, is the world's premier forum for cutting-edge research into electronic, microelectronic, and nanoelectronic devices and processes. This year the IEDM will be held in Washington, D.C. at the Hilton Washington Hotel December 10-12, 2007.

No other meeting presents as much leading work in so many different areas of microelectronics, encompassing both silicon and non-silicon device and process technology, molecular electronics, nanotechnology, optoelectronics and MEMS (microelectromechanical system) technology.

Highlights of IEDM 2007 will include a luncheon talk by Morris Chang, Chairman of Taiwan Semiconductor Manufacturing Com-

The Washington Monument in Washington, D.C. is among the world's tallest masonry structures, standing 555 feet (169.29 m) in height and made of marble, granite, and sandstone

(continued on page 6)

Your Comments Solicited
Your comments are most welcome. Please write directly to the Editor-in-Chief of the Newsletter at nstojadinovic@elfak.ni.ac.yu

ELECTRON DEVICES SOCIETY

NEWSLETTER EDITORIAL STAFF

CONTRIBUTIONS WELCOME

Readers are encouraged to submit news items concerning the Society and its members. Please send your ideas/articles directly to either the Editor-in-Chief or appropriate Editor. The e-mail addresses of these individuals are listed on this page. Whenever possible, e-mail is the preferred form of submission.

Newsletter Deadlines

Issue	Due Date
January	October 1st
April	January 1st
July	April 1st
October	July 1st

The EDS Newsletter archive can be found on the Society web site at https://www.ieee.org/portal/pages/society/eds/pubs/newsletters/newsletter.html. The archive contains issues from July 1994 to the present.

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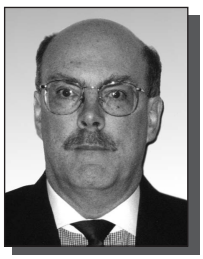
June 2007 AdCom Meeting Summary



John K. Lowell

The 2007 Spring meeting of the IEEE Electron Devices Society was called to order by President Ilesanmi "Ade" Adesida on Sunday, June 3 at the Xijao Hotel in Beijing, China.

Executive Reports

After approval of the December 2006 meeting minutes, **President Adesida** expressed the Society's appreciation and recognition to Tian-Ling Ren, Beijing Chapter Advisor and Chen Yang, Chapter Chair of the ED Tsinghua University Student Branch Chapter who with Albert Wang were the key coordinators for the EDS AdCom Meeting Series. His further remarks addressed the formation of the IEEE Technology Management Council (TMC). At the December AdCom, EDS approved its joining of the TMC as a sustaining member. By September of this year, EDS must appoint a representative to the TMC Board to serve either 2 or 3 years. In reviewing the February TAB meeting, President Adesida reported the approval of the EDS Field of Interest Statement revision. Also approved were the IEEE Intelligent Transportation System Society's proposal for a new periodical, and a new periodical by the IEEE Robotics and Automation Society. The preliminary net financial outcome for 2006 for all societies, councils and TAB showed a total surplus of $32.2M. The net outcome for IEEE overall resulted in a surplus of $36M.

Treasurer, Stephen Parke reports that EDS finances are doing well with conference income for 2006 closing at $474.3K [Note: All finances given in $US], Conference Publication profits were $1037K, EDS investments returned $473.3K and the total net surplus for the Society was $1045.7K. As of June 2006, our current reserve balance is $5906K. Stephen listed EDS initiatives for the 2008 budget (see chart at right) with a total cost of $140K. He also detailed how initiatives are funded. If a society or council (S/C) initiative is under $100K and it does not cause the S/C to go negative, it can be included directly in the S/C budget. Options exist that allow any society with an expense to reserve ratio of 50% or greater (EDS is 85.8% as of 2006) to budget for initiatives equal to about 3% of its reserves, if necessary. For EDS, this amount would be $177K (3% of $5906K). Although the new initiative process addresses the 2008 budget, EDS can consider implementing a 2008 initiative in late 2007.

President-Elect, Cor Claeys, giving the ExCom report, reviewed the EDS Strategic Plan and updates thereto, the state of EDS finances, changes to the EDS Technical Committees, the 2008 new initiatives, TAB approval of the EDS Field of Interest Statement revision, and the status of new membership benefits. Also decided was the site of the Spring 2008 AdCom Meeting series which will be in Athens, Greece, 31 May and 1 June.

In his **EDS Executive Office** report, **Bill Van Der Vort**, listed all projects completed since the December 2006 meeting. The Office's list of accomplishments include developing an EDS Education Award brochure for distribution at IEDM, finalization of approvals for the revised EDS Field of Interest Statement, leading an IEEE office-wide project to gather requirements for society web-sites and their support, getting trained on the new IEEE membership/fulfillment system (BMS), researching history of EDS chapters towards preparing a document on the subject, worked with EduCom and VP-Publications on the possibility of converting short course videotapes to CD/DVD and offering as a new member benefit, explored with EduCom a possible Career Guide CD/DVD for students and advisors based on the EDS Field of Interest Statement and related to school curriculum to increase EDS presence and promote membership, worked with members of the IRPS committee and IEEE staff towards digitizing the legacy years of the IRPS *Proceedings* (1970-87) adding them to IEEE Xplore, coordinated with T-ED editor and IEEE staff to digitize the VLSI *Symposium* (1981-87) legacy years adding them to IEEE Xplore, supported IEEE-wide process to encourage conferences to improve the timeliness of obtaining an Xplore-compatible CD for their proceedings and Xplore posting, obtained data to define EDS meetings from both a regional and a topical perspective as part of the evaluation process, and coordinated with the Meetings-VP on getting the necessary approvals for four meetings requesting EDS support. Also presented were the IEEE Executive Office's efforts to identify key EDS technically co-sponsored (and well attended by EDS AdCom members) meetings where promotional material on membership could be distributed, propose a possible "EDS rate" for conference registrations lower than the IEEE member rate, development of a proposal for an EDS Education Award, worked with EduCom on web-based course

Proposed New EDS Initiatives for 2008	Cost
Hold a GOLD Conference at IEDM	**$10K**
Increase Chapter Subsidy Budget	**$20K**
Increase Budget for DL & SRC Development to Support Mini-Colloquia	**$25K**
Increase budget for Expert Now Program	**$40K**
Develop Student CD/DVD Career Guide	**$10K**
Digitize EDS Conference Legacy Material to Be Added to IEEE Xplore	**$20K**
Conduct Member Survey on Emerging Technical Areas	**$15K**
Total Cost	$140K

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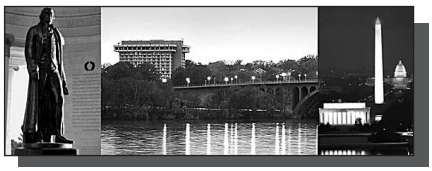
Upcoming Technical Meetings

2007 IEEE Semiconductor Interface Specialists Conference (SISC)



The 38th IEEE Semiconductor Interface Specialists Conference (SISC) will be held December 6-8, 2007, at the Key Bridge Marriott in Arlington, VA, immediately prior to the IEDM. The Key Bridge Marriott overlooks the nation's capital and Georgetown from the Virginia side of the Francis Scott Key Bridge, and is only minutes from Washington, D.C. The SISC is a workshop-style conference that provides a unique forum for device engineers, solid-state physicists, and materials scientists to openly discuss issues of common interest. Principal topics for discussion at SISC are semiconductor/insulator interfaces, the physics of insulating thin films, and the interaction among materials science, device physics, and state-of-the-art technology.

An important goal of the conference is to provide an environment that encourages interplay between scientific and technological issues. Invited and contributed talks, as well as a lively poster session, are presented in an informal setting designed to stimulate discussion, and conference participants enjoy numerous opportunities for social gatherings with leading researchers and experts in the field. The conference alternates between the east and west coasts, and meets just before the IEDM to encourage the participation of IEDM attendees.

Conference focus

The program includes approximately 50 talks from all areas of MOS science and technology. The topics evolve with the state-of-the-art, and include but are not limited to the following:

- physics of thin dielectrics and their interfaces
- gate-dielectric conduction and breakdown
- alternative and high-k gate dielectric materials and metal gates
- nitrogen-containing oxides and stacked interfaces
- physical and electrical characterization of Si/SiO2 interfaces
- micro-roughness measurement, modeling, and device-related effects
- hot carrier, plasma damage and radiation effects
- surface cleaning technology and effects on dielectrics and interfaces
- theory of oxide and interface defects
- silicon carbide and its interfaces
- insulators on Ge and III-V materials
- ferroelectric layers and stacks on semiconductors

Invited presentations

This year's invited presentations will include

- **Dr. Gennadi Bersuker**, SEMATECH, USA
  Reversible and irreversible instabilities in high-k/metal gate stacks
- **Prof. Torgny Gustafsson**, Rutgers University, USA
  Structure and composition of high-k films on alternative channel materials
- **Prof. Marc Heyns**, IMEC, Belgium
  Ge and III/V: the CMOS of the future
- **Prof. Hyunsang Hwang**, GIST, Korea
  Resistance switching characteristics of doped metal oxide for nonvolatile memory applications
- **Dr. Kingsuk Maitra**, AMD, USA
  Electron Transport in Bulk-Si NMOSFET's in presence of high-k gate insulator - Charge Trapping and Mobility
- **Prof. Seiichi Miyazaki**, Hiroshima University, Japan
  Photoemission study of Metal/High-k Dielectric Gate Stack
- **Prof. Alfredo Pasquarello**, EPFL, Switzerland
  First Principles Investigation of Defects at Semiconductor-Oxide Interfaces

Unique poster session

A unique feature of SISC is the attention paid to the poster presentations. Each author of a poster presentation has the opportunity to introduce their work orally, using 2-3 visuals, to the entire SISC audience during special poster introduction sessions. The posters are then presented during a separate poster reception on Thursday evening.

Student participation encouraged

SISC is a popular conference with students, who can get immediate and candid feedback on their latest results from the experts in the field. In addition to a strongly reduced registration fee for students, a Best Student Presentation award is given every year in memory of E.H. Nicollian, who made many important contributions to the field and had a strong presence within the SISC.

Accompanying program

The scientific content of the conference is complemented by informal events designed to encourage lively discussion and debate. Hospitality suite with complimentary drinks is available to attendees to continue their discussions on every evening of the conference. Friday afternoon has no scheduled talks, to allow time to meet informally, relax, or visit local Washington D.C. attractions. On Friday evening the conference hosts a banquet and awards ceremony, complete with the now-famous (and always riotous) limerick contest. The limericks never fail to give the conference presentations, people and events an entirely new perspective!

SISC is always a rewarding experience for specialists, students, as well as newcomers to the field. For more information about the conference, to consult its program and to register, please visit http://www.ieeesisc.org. We hope you will include SISC in your IEDM itinerary.

Dina Triyoso
2007 SISC Arrangements Chair
Freescale Semiconductor Inc.
Austin, Texas, USA

2008 IEEE International Reliability Physics Symposium (IRPS)

The IEEE International Reliability Physics Symposium (IRPS) will be held at Phoenix Civic Plaza Convention Center/Hyatt Regency Phoenix at Civic Plaza, Phoenix, Arizona, from April 27 to May 1, 2008. For over 40 years, IRPS has been the premiere conference for engineers and scientists to present new and original work in the area of microelectronic device reliability.

Originally started in the early 1960's by the military and aerospace community, IRPS is now co-sponsored by the IEEE Reliability Society and the IEEE Electron Devices Society. This co-sponsored event has drawn participants from the United States, Europe, Asia and all other parts of the world. IRPS 2008 promotes the reliability and performance of integrated circuits and microelectronic assemblies through an improved understanding of failure mechanisms in the user's environment, while demonstrating the latest state-of-the-art developments in electronic reliability.

The focus of the symposium is the 3-day plenary/parallel sessions featuring original work that identifies new microelectronic failure or degradation mechanisms, improves understanding of known failure mechanisms, demonstrates new or innovative analytical techniques, or demonstrates ways to build-in reliability.

Specific areas to be addressed during the 2008 IRPS are reliability concerns associated with silicon (integrated circuits, discrete devices, MEMS), non-silicon (GaAs, LEDs and diode lasers, optical fiber and flat panel displays), and emerging technologies including organic electronics and nanotechnology:

- Product Reliability and Burn-In
- Non-Volatile Memory
- Qualification Strategies
- Circuits and Systems
- Soft Error Effects
- Assembly and Packaging
- Failure Analysis
- Transistors
- High Power Devices
- Devices and Processing
- Interconnects
- Device Dielectrics
- ESD and Latch-Up
- Process Induced Damage
- MEMS
- Nanoelectronics Device Reliability

Other opportunities at the symposium include:

• A 2-day **Tutorial Program** featuring a set of bound notes from all tutorials. Attendees have the opportunity to learn a new area in some technical depth from an industry expert or brush up on the fundamentals with introductory tutorials. There are typically about 20 tutorials that are offered on topics ranging from back-end reliability to gate dielectric and transistor reliability to circuit/product reliability to assembly/packaging reliability.

• **Reliability Year-In-Review Seminar.** This seminar provides a summary of important work published from the previous year in key reliability areas. Industry experts serve as the "tour guide" and save you time by collecting and summarizing this information to bring you up to date in a particular area as efficiently as possible.

• **Evening Session Workshops** enhance the synergy of the symposium by affording the attendees an opportunity to meet in informal groups to discuss key reliability physics topics with the guidance of experienced moderators. Some of the workshop topics are directly coupled to the tutorial program to allow more discussion on a particular topic.

• **Equipment Demonstrations** held in parallel with tutorials and technical sessions are a unique aspect of this symposium. Manufacturers of state-of-the-art analytical and test and stress equipment are on hand to demonstrate their products and systems to individuals and small groups. Attendees are encouraged to bring samples or questions for on-site analysis and discussion.

• **An Evening Poster Session** has become an important part of the IRPS for authors and attendees to discuss recent research and results in a very interactive environment.

There are lots of opportunities to be involved in increasing your understanding of this technically important field.

We look forward to seeing you in Phoenix!

For further information, please visit the IRPS web site at www.irps.org or contact Dr. John Suehle, the IRPS 2008 General Chair, by email, John.suehle@nist.gov.

John Suehle
2008 IRPS General Chair
NIST
Gaithersburg, MD, USA

The 24-acre Phoenix Convention Center, in the heart of Copper Square, will be the home of the 46th Annual IRPS. A $600 million expansion elevated Phoenix's convention center into the top 20 in North America

(continued from page 1)

pany; an Emerging Technology Session focused on the crucial topic of energy; a revamped Tuesday evening panel session/program track; insightful invited plenary talks; two Short Courses; the presentation of prestigious IEEE/EDS awards; and the outstanding technical program.

Short Courses

Two Short Courses will be offered on Sunday, December 9 before the conference begins. They are "Performance Boosters for Advanced CMOS" and "Emerging Nanoelectronics." They will be presented by experts in the fields. Lectures will start with introductory material for the general audience and progress towards description of the latest developments. Attendees will have the opportunity to learn about emerging new areas and important developments. Advance registration is required.

Plenary Presentations

This year's Plenary presentations will be given by:

- Hiroyuki Sakaki, Toyota Technological Institute, on the roles of quantum nanostructures in the evolution and future advances of electronic and photonic devices;
- Larry Hornbeck, Texas Instruments, on DLP status and outlook;
- Claus Schmidt, Robert Bosch GmbH, on automotive electronics

Evening Panel Discussions

On Tuesday evening, December 11, the IEDM will offer one evening Panel Discussion on the topic, "Looking for a New Switch - a Pipe Dream or is there Gold at the End of the Rainbow?" plus a special program track on Circuit-Technology Interaction and Design for Manufacturability.

Emerging Technology Session

IEDM 2007 will feature a special session on Tuesday, December 11 with papers focused on energy-harvesting electron devices.

Technical Program

This year's technical areas of coverage are:

- CMOS Devices
- CMOS and Interconnect Reliability
- Displays, Sensors and MEMS
- Integrated Circuits and Manufacturing
- Modeling and Simulation
- Process Technology
- Quantum, Power and Compound Semiconductor Devices
- Solid State and Nanoelectronic Devices

CMOS Devices sessions will cover breakthroughs and advancements in device physics; novel MOS device structures (such as multiple-gate and non-planar FETs); circuit/device interaction and co-optimization; CMOS scaling issues; high-performance, low-power and analog/RF devices; SOI; high-mobility channel devices such as strained silicon and SiGe MOS devices; noise behavior of MOS structures and device measurements and characterization.

CMOS and Interconnect Reliability sessions will cover all areas of reliability for both the front- and back-end of the process. Topics will include but are not limited to hot carriers; gate dielectric wear-out and breakdown; process charging damage; latch-up, ESD and soft errors; bias temperature instabilities; reliability of high-k and low-k materials, circuits and packaging; interconnect reliability, electromigration, and the impact of back-end processing on devices; manufacturing technologies for reliability; physics of failure analysis; and reliability issues for memory and logic technologies.

Displays, Sensors and MEMS sessions will cover critical devices, structures and integration for imaging, displays, detectors, sensors, and MEMS. A subset of key topics would include CMOS imagers; CCDs; TFTs; organic, amorphous and polycrystalline devices; vacuum microelectronics; emissive displays; and sensors for chemical, molecular and biological detection. MEMS topics include resonators, switches and passives for RF applications; integrated sensors; micro-optical, micro-fluidic and biomedical devices, and micro-power generators. Particular emphasis will be placed on integrated implementations. Other relevant subjects include design, fabrication, reliability, theory and modeling.

Integrated Circuits and Manufacturing sessions will focus on advances in integrated circuits technology; full process integration for memory, logic and mixed-mode (SOC) applications; and manufacturing. Areas of interest include process architecture for performance and manufacturing, high-speed logic, advanced memories and multifunction integrated circuits; and integrated passives, low-power, low-noise, analog, RF and mixed signal ICs. Topics also include IC manufacturing technology and methodology, 3-D integrated circuits, process control, yield enhancements and modeling.

Modeling and Simulation sessions will discuss all areas of analytical, numerical, and statistical approaches to the modeling of electronic, optical and multiphysical devices, their isolation and interconnection. Topics include physical and compact models for devices and interconnects, and the modeling of fabrication processes and equipment, including simulation algorithms, process characterization, parameter extraction, early compact models for advanced technologies; performance evaluation and technology benchmarking methodology. Submissions should advance the modeling and simulation art or apply existing techniques to gain new insights into devices.

Process Technology sessions will cover front- and back-end process modules for fabrication of logic,

memory and 3-D integrated circuits. Front-end topics will include substrate technologies; lithography; etching; isolation; thin dielectrics; high-k materials and metal electrodes for transistors and MIM capacitors; shallow junctions; silicides; self-assembly techniques and new materials. Back-end topics will include conductor systems; low-k materials, contact and via processes; barrier materials; planarization, design considerations for multi-level interconnects, and advanced packaging.

Quantum, Power and Compound Semiconductor Devices sessions will cover compound semiconductors with electronic and optoelectronic device applications (e.g. GaAs, InP, GaN, SiC, SiGe, antimonides and related alloys). Papers also will discuss discrete and integrated high-power/current/voltage devices including those on silicon. Topics will include FETs, HBTs, LEDs, lasers, external modulators, and high-power and compound RF and millimeter-wave devices. Also, devices with ballistic and quantum effects; spintronics, optoelectronic ICs, optical interconnects; photonic bandgap structures and crystals, and integrated RF components including inductors, capacitors and switches.

Solid State and Nanoelectronic Devices sessions will focus on novel solid state and nanoelectronic devices such as novel memory cells; nanoelectronic devices including nanotubes, nanowires, and quantum dots; devices for bioelectronic applications; spintronic based devices; NEMS-based logic and memory devices; molecular devices and new device characterization and performance evaluation methodologies.

For registration and other information, visit the 2007 IEDM home page at www.ieee.org/conference/iedm or contact Conference Manager Phyllis Mahoney, 16220 S. Frederick Ave., Gaithersburg, MD 20877, USA; tel. (301) 527-0900, ext. 103; fax (301) 527-0994; or email: phyllism@widerkehr.com. The submission date for regular papers has already passed, but a limited number of Late-News Papers will be accepted for presentation until September 14, 2007. A "How to write for the IEDM" article can be found at http://www.his.com/~iedm/call/authorguide.doc

The Washington, D.C. area provides many attractions for visitors and we encourage attendees to explore them in the off hours of the conference. The IEDM committee members look forward to seeing you in December.

Meikei Leong
2007 IEDM Publicity Chair
TSMC
Hsinchu, Taiwan

Kazunari Ishimaru
2007 IEDM Publicity Vice Chair
Toshiba
Yorktown Heights, NY, USA

June 2007 AdCom Meeting Summary

(continued from page 3)

offerings of IEEE's Expert Now Short Courses, coordinated the efforts of the Regions & Chapters program to revitalize the Chapter Partners program, and continued solicitation of all EDS Fellows and AdCom members to become Distinguished Lecturers. With manuscript handling, Bill's group continued to define the specifications on EDL manuscripts entered and reviewed on the web using Manuscript Central, coordinated implementation of a new electronic service which allows EDS members to submit technical questions called "QuestEDS", updated the "Information for Authors" document for T-ED, EDL, & T-DMR, and investigation of establishing a society office-wide user focus group for publication manuscript handling.

Vice-President and Technical Reports

Albert Wang, Membership V-P, reported that as of October 2006, EDS membership stands at 10,780 members, down from an 11,219 total at the end of 2005. In total, 6,637 are regular members, 3,336 are permanent members, 782 are students, and 25 remain affiliate members. The demographics can be seen in the first table.

He reviewed his group's efforts at recruitment such as conference onsite credit vouchers, distribution of promotional material at EDS supported conferences, TIP mailing, promotional material for Senior Member (SM), coordination of the Membership Fee Subsidy Program, and membership promotion by Distinguished Lecturers. Albert also reviewed an aggressive list of action items for membership including distribution of an application/member benefit brochure to recruit members, students, and affiliates, giving out appreciation plaques to hosts of an EDS officer visit. He also updated the AdCom on results from focus visits to China

IEEE Region	Count	% of Total
1-6 (United States)	5,945	**53.1**
7 (Canada)	180	**1.7**
8 (Europe, Middle East, & Africa)	1,883	**17.5**
9 (Latin America)	168	**1.6**
10 (Asia Pacific)	2,604	**24.1**
Total	10,780	100

EDS Membership Demographics (as of 10/31/06)

and India, Senior Member statistics, and recent numbers showing that IEEE membership in 2006 increased by 2% while society memberships declined by an average of 2.5%. In the near future, Albert and his committee plan to address membership issues in Regions 1-6 & 8, increase promotion in emerging semiconductor manufacturing locations such as India and China, possibly Vietnam as well, and work on the proposed "EDS Member" conference fees.

Renuka Jindal, Publications V-P, discussed circulation and financial numbers for both T-ED & EDL, the financial status of T-DMR, and enhanced member benefits stimulated by the EDS Archival CD, the annual DVD Update Package, the new QuestEDS query system, digitization of EDS Short Courses on CD/DVD, and electronic delivery of customized "Table of Contents" from EDS publications and conferences. Renuka also reviewed the updated EDS Field of Interest Statement.

Paul Yu, Education V-P, cited Distinguished Lecture (DL) statistics indicating that both the number of lecturers (152) and number of scheduled lectures (in 2006) increased significantly. Many chapters are holding Mini-Colloquia, mixed with DL's, to encourage attendance and participation. His group continues to encourage elected Fellows to become DL speakers. Of the 23 new fellows elected this year, 9 have agreed to serve as speakers. A new initiative was introduced for a 2007 EDS GOLD member conference to include a guest speaker, and discussion and networking sessions to be held on December 9th prior to IEDM as a way to stimulate and encourage participation. **Cary Yang** reported that 56 Fellow nominations have been received for election in 2007. **Past President, Hiroshi Iwai**, encouraged nominations for the 2007 AdCom elections in December. **Nanotechnology Technical Committee Chair, Edwin Kan**, reviewed past issues between the committee, the IEEE Nanotechnology Committee (NTC) and EDS AdCom over the IEEE Nanotechnology Magazine (published by the NTC). In December EDS AdCom supported funds to support this publication which was not supported by the Nanotech Technical Committee. The Technical Committee has chosen not to respond to this controversy. Instead, the committee plans to strengthen the ties between all three groups by nominating EDS representation on the NTC, and encouraging participation areas such as individually addressable nanoscale electronic devices, nanoscale geometry and materials that enable better functionality, efficient modification of manufacturing process, new switching principles based on promising nanoscale physics, theory and physical models, and basic circuit implementations (design).

The EDS Spring 2007 AdCom Meeting, June 3, at Xijao Hotel in Beijing, China

Attendees of the 2007 Spring AdCom Dinner, held at Tingliguan Imperial Tingli Hall (Pavilion for Listening to the Orioles), Summer Palace, Beijing, China

Closing Reports and Summary of AdCom Actions

The meeting closed with reports from the IEEE Beijing Office, and the SRC Chair for Northwest America, Paul Yu, discussed the Regions 4-6 Chapters Meeting in December 2006, revision of committee membership, a mini-colloquia held in Santa Clara Valley, and the 2007 IEEE Workshop on Microelectronics and Electron Devices held by the ED Boise Chapter. He also reviewed plans to visit chapters in Regions 4-6 and plans to hold more colloquia within the SRC NAW region.

Ning Hua, Director of the Beijing Office, explained the reasoning for the establishment of the Office and the current services being offered along with future plans.

Only the approval of the December 2006 meeting minutes were voted on and approved at this session of AdCom. The next meeting of EDS AdCom will be on Sunday, December 9, 2007 in conjunction with the 2007 IEDM in Washington, D.C. at the Washington Hilton & Towers Hotel.

John K. Lowell
EDS Secretary
Lowell Consulting
Dallas, TX, USA

William F. Van Der Vort II Executive Director IEEE Electron Devices Society wins the 2007 IEEE Eric Herz Outstanding Staff Member Award

We are pleased to inform our EDS members that Bill Van Der Vort, our Executive Director since 1990, is the recipient of the 2007 IEEE Eric Herz Outstanding Staff Member Award. This award is given annually by the IEEE Board of Directors, and is named in honor of Eric Herz, who had a long and illustrious career as both a volunteer and staff member of the IEEE. The award is presented for demonstrated contributions over a long period of time by a present or past full time staff member. This award carries a cash honorarium and covers travel expenses to the award ceremony at the next IEEE Board of Directors meeting in Boston, MA on November 16.

Those of us who have worked closely with Bill appreciate what a delight it is to be his colleague. His willingness to take on new tasks, initiate new programs and volunteer suggestions makes the position of an EDS volunteer a rewarding activity. All EDS members should be proud of our Society's outstanding reputation, much is due to Bill's dedication to our members. He has helped to initiate and provide support for numerous programs including increasing our membership, increasing our global presence, achieving rapid turn around time for our journals, creating our archival DVD, stimulating the creation of new journals, supporting the management of our conferences, and creating the Newsletter and Directory. His can-do attitude influences EDS volunteers and his outstanding staff, who have the highest regard for him. I have attended IEEE TAB meetings where I have heard words such as, "Do it the way EDS does it." That is a tribute to Bill and his influence on EDS and IEEE activities. This award is richly deserved.

2007 - William F. Van Der Vort
"For leadership, management and strategic planning that have contributed to the IEEE and the Electron Devices Society"

Alfred U. Mac Rae
Vice President, EDS Awards
Mac Rae Technologies
Berkeley Heights, NJ, USA

IEEE Annual Election - Did You Vote Yet?

This is a reminder for EDS members to vote in the 2007 IEEE Election for the following positions and candidates. Listed below are the positions and candidates that will appear on the 2007 IEEE Annual Election ballot.

Position	Candidates
IEEE President-Elect, 2008	Marc T. Apter (Nominated by IEEE Board of Directors) Pedro A. Ray (Nominated by IEEE Board of Directors) John Vig (Nominated by IEEE Board of Directors)
Region 1 Delegate-Elect/ Director-Elect, 2008-2009	Babak D. Beheshti (Nominated by Region 1) Charles P. Rubenstein (Nominated by Region 1)
Region 3 Delegate-Elect/ Director-Elect, 2008-2009	Eric S. Ackerman (Nomin ated by Region 3) Donald W. Hill (Nominated by Region 3) Clarence L. (Lee) Stogner (Nominated by Region 3)
Region 5 Delegate-Elect/ Director-Elect, 2008-2009	Donald Dunn (Nominated by Region 5) Stuart A. Long (Nominated by Region 5) Sandra (Candy) L. Robinson (Nominated by Region 5)
Region 7 Delegate-Elect/ Director-Elect, 2008-2009	Robert L. Anderson (Nominated by Region 7) O. (Om) P. Malik (Nominated by Region 7) Hilmi M. Turanli (Nominated by Region 7)
Region 8 Delegate-Elect/ Director-Elect, 2008+	Józef W. Modelski (Nominated by Region 8) Jaafar M. Al-Ibrahim (Nominated by Region 8)
Region 9 Delegate-Elect/ Director-Elect, 2008-2009	Enrique S. Draier (Nominated by Region 9) Gustavo A. Giannattasio (Nominated by Region 9) Tania L. Quiel (Nominated by Region 9)
Standards Association President-Elect 2008	W.C. (Chuck) Adams (Nominated by Standards Assoc.) Forrest D. (Don) Wright (Nominated by Standards Assoc.)
Standards Association Board of Governors Member-at-Large, 2008-2009	Lester F. Eastwood (Nominated by Standards Assoc.) Steve M. Mills (Nominated by Standards Assoc.)
Standards Association Board of Governors Member-at-Large, 2008-2009	Richard H. Hulett (Nominated by Standards Assoc.) T.W. (Ted) Olsen (Nominated by Standards Assoc.)
Technical Activities Vice President-Elect, 2008	Harold L. Flescher (Nominated by Technical Activities) Robert (Bob) C. Rassa (Nominated by Technical Activities)
IEEE-USA President-Elect, 2008	Gordon W. Day (Nominated by IEEE-USA) Gregg L. Vaughn (Nominated by IEEE-USA)
IEEE-USA Member-at-Large, 2008-2009	Gary L. Blank (Nominated by IEEE-USA) Jean M. Eason (Nominated by IEEE-USA)

Petition Candidates
There are no petition candidates for any elective position in the 2007 IEEE Annual Election.

Completed ballots must be received by noon U.S. Central Time (17:00 Greenwich Mean Time) on 1 November. Members can also access the ballot and related materials electronically. To learn more, visit the election site at http://www.ieee.org/elections.

Report from the EDS Vice-President of Membership

Albert Z.H. Wang

As of December 2006, the total number of EDS members was 10780. While membership related activities have been strong in 2006, we unfortunately saw a decline in total EDS membership of -3.9% from 2005. In 2006, total IEEE membership increased by 2% to 374,767, fueled by a strong 9% increase in student membership that accounts for more than 20% of the total IEEE membership; while in the meantime, IEEE society memberships decreased by -2.5% on average. Apparently, almost all IEEE societies have been experiencing the southbound trend in membership development (Table 1). However, it does make sense for us to understand the plain statistics a little better and to extract any useful hints. An often-heard argument to explain the membership loses in recent years has been that, with the valuable e-library available online and subscribed by employers, people have little motivation to join IEEE because the discount for technical article subscription has long been regarded as the major benefit for being an IEEE member. Yet the IEEE membership count indeed increased in 2006 and the north-bound trend seems to continue in 2007 so far. This suggests that people still see the benefits of being an IEEE member in the internet era: career networking, professional prestige, and conference fee discount, etc., to name a few. Hence, there should be a motivation and room for membership growth. During the 2007 IEEE Membership Development Retreat held at the IEEE Headquarters, May 4-5, there were discussions about whether we need to worry about losing ground in Society membership at a time when IEEE membership development continues to be positive. Yet, the reality is that IEEE is a technical society and ALL valuable IEEE technical activities, which are the main reason for people to join IEEE, are organized by different technical societies and their members. It is hard to believe that a weak and/or disappearing technical society can maintain active technical activities. The technical societies are always the foundation of IEEE. The opposite membership development trends in IEEE as a whole and its technical societies may suggest that the IEEE umbrella is taking away the most meaningful membership benefits from its technical societies, for which these technical societies are doing all the real work in motivating people to join IEEE. For example, one key membership benefit is the sizable conference registration fee discount. However, IEEE-only membership already qualifies for all the conference fee discounts with zero extra benefit for being an IEEE technical society member in this regard. But it is the technical societies and their volunteers who are organizing all these attractive technical conferences and events. Unfortunately, the current one-tier IEEE conference fee discount policy certainly discourages people to join IEEE technical societies in this regard. Another interesting observation from the membership statistics in Table 1 is that, while almost all technical societies suffer from membership count decrease, the Power Engineering Society did enjoy a healthy increase of 5.2% in membership development and this positive trend remains true into 2007. The discussion with representative from PES during the IEEE MD Retreat meeting revealed that PES does have some active membership development activities, such as, annual chapter competition for new member recruitment with financial incentive, etc. On the other hand, it is believed that the recent energy crises (high energy costs and fragile power grid networks) and demand for both alternative energy and reliable energy distribution solutions may be a key driving force attracting people to the PES field. This understanding certainly suggests one thing to us at EDS, which is, one would really be motivated when feeling the needs, technically and/or for career well-being, of joining a professional society. PES it seems, quickly grasped the opportunity of global alternative energy demand and took swift action to position itself in the right spot of being the most qualified professional society for exploring solutions to the new energy challenges. The new technical challenges and demand for solutions translate into new career opportunities, which certainly is a compelling reason for people to join the right society. In this regard, the EDS certainly has been exposed to similar opportunities in recent years, for example, both MEMS and nano thrusts, to name a few. These two emerging technology fevers seem to be excellent opportunities for EDS to offer exciting and compelling incentives for people to join the society, should they feel that the EDS is the right technical society to be with in dealing with these emerging technical challenges and being rewarded with new career opportunities. Unfortunately, it seems that other technical societies have taken the buzz words of MEMS and Nano more successfully when facing the new opportunities. Did EDS take actions quickly and forcefully enough to convince people that EDS is the society where one should be to deal with the emerging technical challenges and to seek new career opportunities? After all, technical interests and career development may be the most critical reason for people to join a professional society! We shall certainly think more creatively and act accordingly in our EDS membership development planning.

In 2006, the Membership Committee had been working hard and collaborating with the Regions/Chapters Committee and the Education Committee to promote EDS membership. We continued the new on-site Membership Credit Voucher promotion at the annual IEDM that rewarded us with a net gain of 122 new members (49 IEEE & EDS members, 39 EDS-only members and 34 renewal EDS members). New EDS membership promotional packets were provided to Distinguished Lecturers for local distribution during their DL visits to chapters. The EDS Membership Fee Subsidy Program (MFSP) continues to work well in 2006, which

Entity/Member Type	# of Members Dec. 2006	Δ% from Dec. 2005
Total Society Memberships	337,755	-2.5%
- Circuits & Systems	11,040	-3.6%
- Communications	41,016	-2.3%
- Components, Packaging & Manufacturing Tech.	2,927	0.5%
- Computer	86,057	-9.1%
- Lasers & Electro-Optics	7,238	-4.9%
- MicrowaveTheory & Techniques	11,651	-1.7%
- Power Engineering	22,445	5.2%
- Reliability	1,937	-2.4%
- Signal Processing	15,155	-1.6%
- Solid-State Circuits	11,724	-2.6%
Total EDS Membership	10,780	-3.9%
- EDS Members	6,637	-.35%
- EDS Permanent Members	3,336	-11.0%
- EDS Student Members	782	-0.1%
- EDSAffiliates	25	-16%
Total IEEE Membership	374,767	2.0%
- IEEE Higher Grade	294,276	0.3%
- IEEE Students	80,491	9.0%

Table 1. IEEE and Society Membership Statistics

subsidizes IEEE and EDS memberships for individuals who have an annual income lower than US$12,600, with 15 Chapters and 166 members being benefited from the MFSP program in 2006. The MFSP initiative proves to be an efficient way to help jump-start a new chapter and we will continue this program as long as EDS maintains healthy finances. EDS continues the effort in coordinating the EDS Senior Member Program to encourage EDS members to apply for Senior Membership. In this effort, EDS sent emails to approximately 6,000 members with the grade of 'M', encouraging them to apply for Senior Member grade and as a result 172 EDS members were promoted to Senior Member grade in 2006. EDS will keep this Senior Membership promotion effort because it is critical to maintain the member interests in the society. Moving into 2007, while keeping our existing successful membership development activities, we are actively exploring creative new incentives for EDS membership drives. A new EDS Membership Committee will be in place soon, which will ensure a balanced representation of the Society's global presence and will further strengthen our volunteer workforce in emerging regions. Globalization of the electronics industries is an irreversible reality, which is already clearly observed in the statistics. For example, EDS member count percentage continues to decrease in North America, while increasing overseas, particularly in Region 10, which is rapidly becoming a global electronic R&D and industrial hub. Our Society ought to adjust our strategy to enhance our presence in emerging regions, while holding ground in the traditional areas. We are currently working on a proposal for a two-tier IEEE conference registration fee discount program, which will give EDS members a significantly deeper discount than non-IEEE/EDS members for EDS sponsored conferences. We kindly call for any suggestions, critiques, and particularly, volunteer involvement from all society members to address the challenges that we are facing and to strengthen EDS.

Albert Z.H. Wang
EDS Vice-President of Membership
University of California, Riverside
Riverside, CA, USA

Report from the EDS Vice-President of Technical Activities

April S. Brown

I would like to start this article off with a sincere thank you to Mark Law for his leadership and vision as the past EDS Vice President for Technical Activities. Mark made substantive changes to the structure and operations of EDS Technical Activities and I would like to outline some of these, and indicate how my efforts will build upon his vision and activities.

Mark was the first to suggest the streamlining of EDS conferences and was successful in working with the EDS V-P of Meetings to merge and/or co-locate complementary meetings. This effort provides improved operations and financial efficiency for EDS, and also benefits the conference attendee offering greater variety and technical information in a single conference trip.

Mark also initiated the process of a more formal review of conferences and the more active engagement of the technical committee

chairs in meeting support, especially for those conferences EDS financially co-sponsors, and oversight. With his initiation, we are also implementing a more comprehensive conference review process, in which technical committees will review the vitality of the meeting - both in member interest and in financial health - to insure we are providing support to those areas of most interest to EDS membership.

In addition, Mark made a number of changes to the technical committee chairs and in the chart below, we have a listing of the current technical committees and chairs. Note that there are currently 14 technical committees and the technical areas have been identified to best capture the needs of the EDS membership. We are continually reviewing these committees and looking for partnerships with other societies and IEEE entities to bring the most varied and timely technical information to our membership. Finally, Mark also championed- and this planning activity continues- the formation of a new meeting to capture emerging areas in EDS.

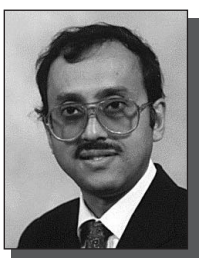
I plan to build on this last activity initially through a comprehensive EDS member survey. This activity will allow us to get direct feedback from you- the EDS member- on emerging technical areas of interest and how we can best provide technical information to you. In addition, we will also learn of areas that are considered mature by the membership and therefore will be of less interest as the core of EDS technical products. The survey will be constructed to provide input to Technical Activities, Meetings, and Publications- given the common core mission of each of these areas in communicating new technical information to the member.

We plan to launch the survey early next year and we look forward to your feedback on new and emerging technical areas of interest.

EDS Technical Committee	Committee Chair
Compact Modeling	Samar Saha
Compound Semiconductor Devices and Circuits	Supriyo Bandyopadhyay
Device Reliability Physics	Anthony S. Oates
Electronic Materials	Judy L. Hoyt
Microelectromechanical Systems	Chang Liu
Nanotechnology	Edwin C. Kan
Optoelectronic Devices	Shaya Fainman
Organic Electronics	Ananth Dodabalapur
Photovoltaic Devices	Dennis J. Flood
Power Devices and ICs	Toshiaki Yachi
Semiconductor Manufacturing	Robert R. Doering
Technology Computer Aided Design	Enrico Sangiorgi
Vacuum Devices	Dan M. Goebel
VLSI Technology and Circuits	Bin Zhao

April S. Brown
EDS Vice-President of Technical Activities
Duke University
Durham, NC, USA

EDS Compound Semiconductor Devices and Circuits Committee Report



Supriyo Bandyopadhyay

The technical committee on compound semiconductor devices and circuits is concerned with all aspects of electrical engineering related to the theory and application of compound semiconductors to devices and circuits. The committee co-sponsors IEEE activities related to this sub field and generally remains informed of major advances made in this critical area.

Compound semiconductors dominate optoelectronic and magneto-electronic applications. The most recent foray of compound semiconductors is in the area of spintronics. Another burgeoning area that is receiving focused attention is organic semiconductors which are carving out a niche in optical display devices, particularly organic light emitting diodes. These semiconductors are inexpensive and compatible with flexible substrates.

In the past few months, the Technical Committee welcomed two new members: Prof. Yoon-Ha Jeong from POSTECH, South Korea and Prof. Giovanni Ghioni from Politecnico di Torino, Italy. These two new members add to the global outreach of the EDS.

The Technical Committee on Compound Semiconductor Devices and Circuits looks forward to offering technical co-sponsorships to conventions, workshops and conferences in areas related to compound semiconductors. Requests for such sponsorships can be addressed to the EDS Executive Office.

Supriyo Bandyopadhyay
EDS Compound Semiconductor Devices and Circuits Technical Committee Chair
Virginia Commonwealth University
Richmond, VA, USA

ELECTRON DEVICES SOCIETY

IEEE

2008 IEEE EDS MASTERS STUDENT FELLOWSHIPS CALL FOR NOMINATIONS

At the December 2005 EDS Administrative Committee Meeting, EDS approved a Masters level student Fellowship Program.

Description: One-year fellowships awarded to promote, recognize, and support graduate Masters level study and research within the Electron Devices Society's field of interest: all aspects of engineering, physics, theory, experiment and simulation of electron and ion devices involving insulators, metals, organic materials, plasmas, semiconductors, quantum-effect materials, vacuum, and emerging materials. Specific applications of these devices include bioelectronics, biomedical, computation, communications, displays, electro and micro mechanics, imaging, micro actuators, optical, photovoltaics, power, sensors and signal processing. Five fellowships will be awarded, with the intention of at least one fellowship being given to eligible students in each of the following geographical regions every year: Americas, Europe/Mid-East/Africa, Asia & Pacific. Only one candidate can win per educational institution.

Prize: US$2,000 and a certificate to the student, to be presented by the Dean or Department head of the student's enrolled graduate program.

Eligibility: Candidate must: be an IEEE EDS student member at the time of nomination; be accepted into a graduate program or within the first year of study in a graduate program in an EDS field of interest on a full-time basis; and continue his/her studies at a graduate education institution. Nominator must be an IEEE EDS member and preferably be serving as the candidate's mentor or faculty advisor. Previous award winners are ineligible.

Basis for Judging: Demonstration of his/her significant ability to perform research in the fields of electron devices and proven history of academic excellence in engineering and/or physics as well as involved in undergraduate research and/or supervised project.

Nomination Package:
- Nominating letter by an EDS member who served as candidate's mentor or faculty advisor.
- Two-page (maximum) statement by the student describing his or her education and research interests and accomplishments
- One-page biographical sketch of the student (including student's mailing address and e-mail address)
- One copy of the student's transcripts/grades
- A letter of recommendation from an individual familiar with the student's research and educational credentials. Letters of recommendation cannot be from the nominator.

Timetable:
- Nomination packages are due at the EDS Executive Office no later than March 15, 2008
- Recipients will be notified by May 15, 2008
- Monetary awards will be presented by the Dean or Department Chair of the recipient's graduate program at the beginning of the next academic term.
- Nomination packages can be submitted by mail, fax or e-mail, but a hard copy must be received at the EDS Office.

Send completed package to:
IEEE Operations Center
EDS Executive Office
EDS Masters Student Fellowship Program
445 Hoes Lane, Piscataway, NJ 08854 USA

For more information contact:
edsfellowship@ieee.org
or visit: http://www.ieee.org/society/eds/education/fellowship.xml

TWO EDS MEMBERS NAMED RECIPIENTS OF 2007 IEEE AWARDS

Nicolaas Frans de Rooij

Nicolaas Frans de Rooij of the University of Neuchatel, Neuchatel, Switzerland was named recipient of the **2007 IEEE Jun-Ichi Nishizawa Medal**. His citation states, "For pioneering contributions to microsystem technology and effective transfer into industrial products and applications"

Dr. Nicolaas Frans de Rooij is a leading researcher in the area of micro electro mechanical systems (MEMS) in Europe, whose work led to drastic improvements in the design and production of technological devices. His achievements have had a huge affect on medical and space exploration technology.

Currently serving as director of the Institute of Microtechnology at the University of Neuchatel, Switzerland, Dr. de Rooij built up the Sensors, Actuators and Microsystems Laboratory (SAMLAB) as one of the first university laboratories on MEMS in Europe. Over 300 scientific and technical publications and presentations in major journals and at international conferences have resulted from research done at SAMLAB. De Rooij was a key player in the development of silicon etching technologies that became the basis for forming precise microstructures used in applications such as pressure sensors and accelerometers. A strong advocate of MEMS, de Rooij has made numerous contributions to organizing international conferences, workshops and summits. He also has directed projects that have resulted in the integration of fully functional MEMS for sensing and control aboard the Space Shuttle's Space Lab. Most recently, de Rooij's group contributed to the production of the first micromechanical silicon-based components, such as microgears and microsprings, for use in high-performance mechanical watches.

An IEEE Fellow, de Rooij has authored or co-authored over 250 technical papers. Dr. de Rooij has a master's of science from State University of Utrecht, the Netherlands, and a doctorate from Twente University of Technology, Enschede, The Netherlands.

Michael Shur

Michael Shur of Rensselaer Polytechnic Institute, Troy, New York, was named recipient of the **2007 IEEE Leon K. Kirchmayer Graduate Teaching Award**. His citation states, "For inspirational guidance of graduate students & development of novel teaching materials in solid-state electronics"

Michael S. Shur has been the Patricia W. and C. Sheldon Roberts Professor of Solid State Electronics in the Electrical, Computer, and Systems Engineering (ECSE) Department at Rensselaer Polytechnic Institute in Troy, N.Y. for the past 10 years. He has served as distinguished lecturer for the IEEE Electron Devices and the IEEE Microwave Theory and Technique Societies, given tutorials at conferences worldwide, taught courses for practicing engineers and given IEEE-sponsored lectures for academic researchers worldwide. He has taught at the University of Virginia, University of Minnesota, Oakland University, Cornell University, and Wayne State University and conducted research at the A.F. Ioffe Institute in St. Petersburg, Russia and at IBM in Yorktown Heights, N.Y. He has published and edited many key graduate texts in solid state electronics that have been translated into many languages. Dr. Shur has developed new courses on advanced semiconductor devices and novel teaching techniques among them, the development of a WEB Remote Laboratory for giving students hands-on experience and allows professors from many countries to exchange course materials.

Michael Shur was also named **co-recipient of the 2007 IEEE Donald G. Fink Prize Paper Award** along with Dr. Arturas Zukauskas for their paper entitled, "Solid-State Lighting: Towards Superior Illumination".

Alfred U. Mac Rae
EDS Vice-President of Awards
Mac Rae Technologies
Berkeley Heights, NJ, USA

EDS Region 10 Chapters Meeting Summary

The EDS Region 10 Chapters Meeting was held on June 3, 2007, at the Xijiao Hotel in Beijing, in conjunction with the EDS AdCom Meeting, first time held in China. The nearly 40 attendees included chapter chairs, vice-chairs and representatives, and AdCom members. Twenty-two chapters (including 3 student branch chapters) presented their activities at the meeting. Representatives from 3 chapters in formation also attended the meeting. This is truly a fast-growing region with very enthusiastic participants.

The meeting started with a welcome address and opening remarks by Juin J. Liou, EDS Vice-President of Regions/Chapters. Juin presented statistics on chapter formations in various regions, which showed 21 chapters in Region 10 under development among the total 44 potential chapters in all regions. Xing Zhou, SRC Chair for Region 10, gave an overview of SRC-Asia & Pacific (AP), past activities, resources, as well as plans in 2007. He briefed the attendees on the history of WIMNACT – Workshop and IEEE EDS Mini-colloquium on NAnometer CMOS Technology – a Distinguished Lecturer (DL) mini-colloquia series initiated in 2002 and has become a hallmark of EDS-sponsored events in Region 10. He also addressed that the WIMNACT format can also be extended to the other regions of EDS. Xing encouraged chapter chairs to tap into the DL program to enhance their activities, in addition to various other resources such as the Chapter Partners and Chapter Subsidy Programs as well as the PhD/Masters Fellowships. Chapters were also encouraged to promote and work towards receiving the Chapter of the Year Award and write articles on their activities for the EDS quarterly Newsletter. Paul Yu, Vice-President of Educational Activities, also briefed the participants on the DL program and encouraged the nomination of more DLs that can better serve the need in regional activities.

The meeting was followed by presentations from 22 chapters in two sessions and a lively discussion. During the first session, 10 chapters (Bangalore, Bangladesh, Bombay, Calcutta, Delhi, SRI JCE, Malaysia, Penang, Singapore, Japan) shared their activities. After the break, another 9 chapters (ED Seoul, ED/SSC Seoul, Beijing, Hangzhou, Harbin, Hong Kong, Shanghai, Taipei, Xi'an) presented their chapter activities, followed by presentations from 3 student branch chapters (Tsinghua University, UEST, Peking University), which brought a refreshing atmosphere to the meeting by the enthusiastic young students. The aim of the Chapters Meeting is to bring the chapter leaders in Region 10 together and, through interaction and sharing ideas, they can learn from one another and discuss on issues concerning their chapters and members. This meeting encompassed chapters with more than 10 years of existence and experience as well as newly formed chapters. Many established chapters have their own flagship conferences in addition to a wide-range of activities. Newly formed chapters have already been very active. The meeting also provided first-hand information and ideas for those chapters in formation. Soon after the Region 10 Chapters Meeting in June, there have already been petitions to form the ED Chengdu Chapter as well as the newly formed ED/SSC/LEO Western Australia Chapter. During the discussion session, participants raised issues confronting the chapters and shared suggestions and solutions. Some of the problems faced by chapters, such as lack of resources for funds and DLs, were addressed and chapters were given information on the available chapter subsidy and DL programs; other long standing problems, such as paying membership dues in foreign currency, remain to be problems at the IEEE level. Suggestions have been proposed for chapters to make flexible use of subsidy funds for memberships, as keeping and raising membership has always been a challenging task, especially in low average income countries.

Through this Region 10 Meeting, we clearly see a trend of growing interest and activities in this region. Participants expressed interest to

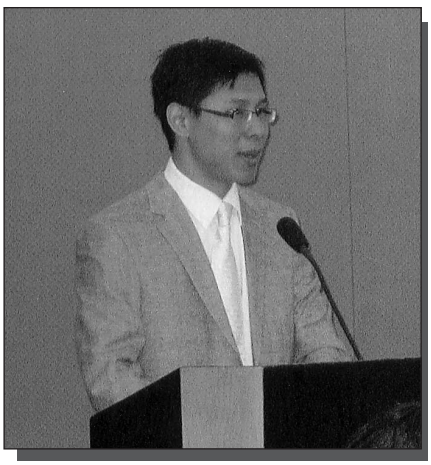
Participants of the Region 10 Chapters Meeting at Xijiao Hotel, Beijing, on June 3, 2007

have more such interactions among chapters to share ideas and experiences as well as technical visits. The newly established student branch chapters also demonstrated their enthusiastic and creative ideas in promoting technical and social activities to attract interest in EDS among younger generations. SRC-AP has such rich resources with many well established chapters and many potential new chapters under development, and we plan to have more interactions to promote activities for the EDS members in the region.

The Chapters Meeting completed successfully, with a group photo taken for all the participants. We would like to thank the hard work by the Tsinghua University Student Branch Chapter in the preparation of this meeting, and special thanks go to the Chapter Chair, Chen Yang, and its advisor, Tian-Ling Ren, as well as its honorary advisor, EDS Vice-President of Membership, Albert Wang.

Xing Zhou
Chair SRC-AP
Nanyang Technological University
Singapore

Steve Chung
Vice-Chair SRC-AP
National Chiao Tung University
Taiwan



Ning Hua, Director of China Operations, IEEE, speaking on the establishment of the new office in China

Workshop Organized by ED UNICAMP Student Chapter and the ED South Brazil Chapter

- by Felipe Della Lucia and João Antonio Martino

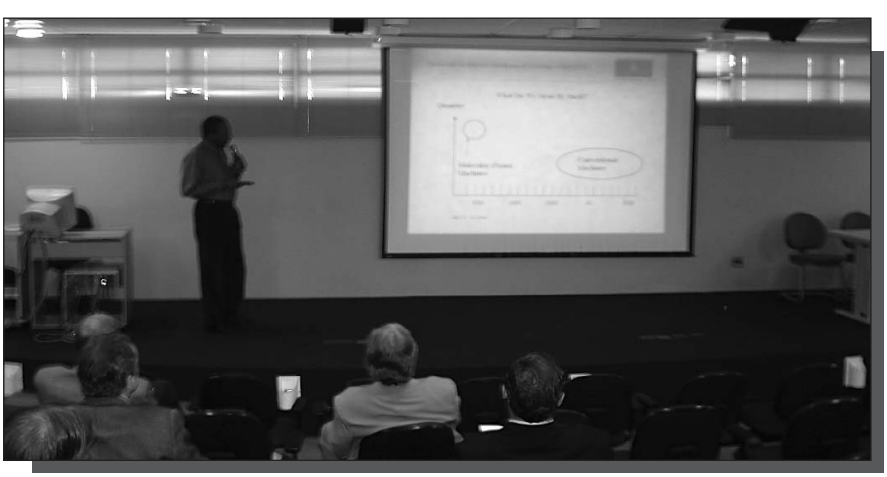
The 3rd workshop on Semiconductors and Micro & Nano Technology – SEMINATEC 2007 – was held on May 17-18 at UNICAMP and organized by ED South Brazil and the ED Student Chapter at UNICAMP, in collaboration with other local institutions. Several lectures and presentations were given by researchers, university professors and industry members, aiming to show and to share results obtained at their institutions and enhance the cooperation between them.

This year, two international lecturers were invited. The IEEE Distinguished Lecturer, Dr. Héctor de Los Santos, from NanoMEMS research, USA, presented a very interesting lecture about NanoMEMS, including RF/Wireless MEMS, his specialty. The second lecture, entitled "Fundamentals and Applications of Deep Reactive Ion Etching", was delivered by Michiel Blauw from the Holst Centre, The Netherlands. The third lecture was presented by Stanislav Moshkalev, from the Center for Semiconductors Components, UNICAMP, called "Micro and Nano Fabrication by Focused Ion Beam and Inductive Plasma Etching Techniques". Antonio Seabra gave a presentation about a research network on nanofabrication, called NANOFAB, involving different Brazilian institutions.

A poster session with 40 papers was held in order to expose the recent works accomplished in the regional research centers. After that, as a social event, a cocktail party took place in order to welcome the participants.

Additionally, oral presentations about recently created Brazilian Design Houses were given as well as a presentation about the IC Brazil Program. A round table was held with industry members to discuss new industry initiatives and a panel discussion with government, industry and university representatives was held with the title "Semiconductors and the PAC (Advanced Growth Program)".

More than 120 people attended the workshop and more details can be found at www.ccs.unicamp.br/seminatec.



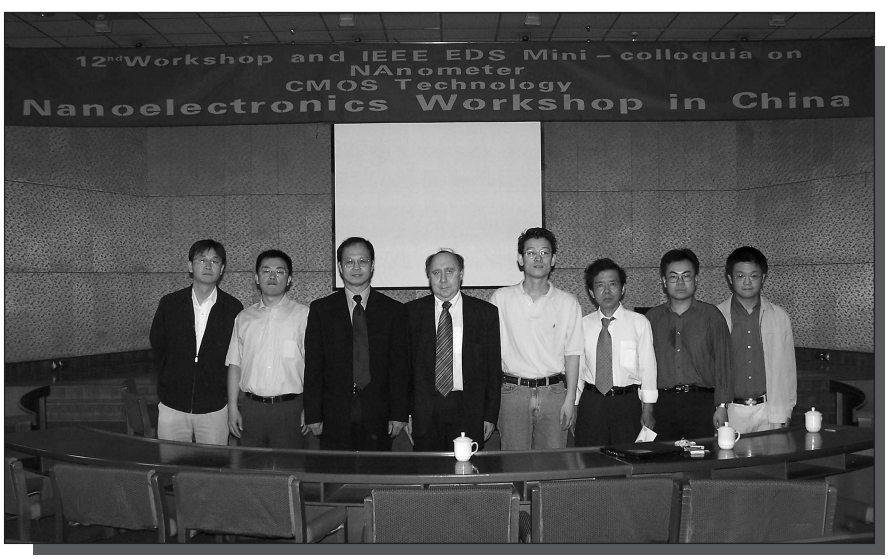
Invited speaker Dr. Héctor de Los Santos during his lecture

Report on the IEEE EDS Mini-Colloquium held in China - WIMNACT-12

The 12th Workshop and IEEE EDS Mini-colloquia (MQ) on NAnometer CMOS Technology (WIMNACT-12) was successfully held in China in June 2007. The WIMNACT-12 consisted of three MQ's held in Beijing (MQ-1 on June 4th), Kunming (MQ-2 on June 7th) and Shanghai (MQ-3 on June 8th), respectively. The three seminars consisted of a broad band of technical topics related to nano and CMOS technologies, ranging from materials, process, devices, circuits to systems.

MQ-1 took place at Tsinghua University, Beijing, right after the EDS AdCom Meetings in Beijing on June 2nd and 3rd, concurrently with the 1st IEEE International Workshop on Electron Devices and Semiconductor Technology (IEDST2007), which was technically co-sponsored by the Electron Devices Society and organized by the IEEE Beijing Section, Tsinghua University and Peking University. A rich list of technical topics, related to nano and CMOS technologies, were presented by a group of EDS Distinguished Lecturers, including Prof. Ilesanmi Adesida from University of Illinois Urbana-Champaign, Prof. Cor Claeys of IMEC, Prof. Paul Yu from University of California, Prof. Xing Zhou from Nanyang Technological University, Prof. James Kuo from National Taiwan University, Prof. Juin Liou from University of Central Florida, Prof. Steve Chung from National Chiao Tung University, Prof. Renuka Jindal from University of Louisiana at Lafayette, and Prof. Hiroshi Iwai from Tokyo Institute of Technology. Other invited speakers who presented at the MQ-1 were Prof. Roger Lake from University of California, Dr. Frank Yang from AMD, Prof. Q. Xu from the Institute of Microelectronics, The Chinese Academy of Sciences, and Prof. J. Lee from Kyungpook National University. The IEDST also held two Poster Sessions that hosted more than 40 technical papers selected from around the world.

Kick-off of the MQ-1 in Beijing with a presentation of the EDS Appreciation Plaque to Prof. Tianling Ren (left) of Tsinghua University, by Prof. Ilesanmi Adesida, EDS President (right)



MQ-2 hosts and speakers: Prof. X. Zhang (Left-1, Yunnan University), Prof. J. Liou (left-3, EDS), Prof. C. Claeys (left-4, EDS), Prof. A. Wang (left-5, EDS) and Prof. Wang (left-6, Yunnan University)

MQ-2 was held on June 7th at Yunnan University, Kunming City in southwestern China. The three EDS DL speakers who participated in the MQ-2 were Prof. Cor Claeys from IMEC, Prof. Juin Liou from University of Central Florida and Prof. Albert Wang from Illinois Institute of Technology. MQ-2 was hosted by the School of Information Science and Engineering, Yunnan University, and jointly organized by the Yunnan Computer Association. EDS ExCom members, Claeys, Liou and Wang also held discussions with local professionals, led by Prof. Xuejie Zhang, Dean of the School of Information Science and Engineering at Yunnan University, who was the host to this MQ-2 event. General agreement was made in further exploring the details to establish an EDS chapter in Yunnan Province, to serve the southwestern part of China.

MQ-3 was held on June 8, 2007 in Shanghai, China. Prof. Yuhua Cheng, the Dean of Shanghai Research Insti-

MQ-3 attendees and the distinguished lecturers (from Left to Right in front row) Prof. Yuhua Cheng , Jamal M. Deen, Prof. Cary Yang, Prof. Mansun Chan, and Prof. Marcel D. Profirescu

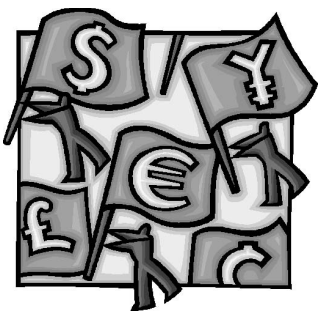
tute of MicroElectronics (SHRIME) at Peking University, hosted the workshop. IEEE EDS Distinguished Lecturers Prof. Cary Yang of Santa Clara University, Prof. Jamal M. Deen of McMaster University, Prof. Mansun Chan of Hong Kong University of Science and Technology, Prof. Marcel D. Profirescu of the Technical University of Bucharest, and Prof. Yuhua Cheng of Peking University, delivered talks respectively at the workshop, which were well received by about 80 people from local industry and universities who attended.

In conclusion, the 12th EDS MD/WIMNACT Series was a great success. It not only provided a technical forum for international renowned experts to interact with local Chinese professionals and students in the EDS-related fields, but also served to promote the IEEE EDS values to the Chinese community and helped to create opportunities to establish greater presence of EDS in the Greater China region. This MQ-China series is part of the Society's successful outreach efforts to the under-served portions of the world, in order to maintain IEEE EDS as a real global organization in the field of electronics.

Albert Z. H. Wang
EDS Vice-President of Membership
University of California, Riverside
Riverside, CA, USA

EDS future hope: our Chinese student assistants to the MQ series from the three local EDS student branch chapters, i.e., Tsinghua University, Peking University and University of Electronic Science and Technology of China

EDS Membership Fee Subsidy Program (MFSP)



The EDS Membership Fee Subsidy Program (MFSP) is a chapter program that enables chapters in low income geographical areas to increase their membership. This program is also used to help launch new IEEE EDS chapters.

The MFSP guidelines are as follows:

IEEE policy currently allows a 50% discount on IEEE dues and one society membership for any individual whose annual salary is less than US$12,600. This offering is referred to as the Minimum Income Special Considerations Option. The Electron Devices Society currently has a program for its chapters called the Membership Fee Subsidy Program (MFSP), which both complements the IEEE Minimum Income offering and provides a significant additional benefit for qualified individuals.

With the EDS Membership Fee Subsidy Program, EDS will pay 50% of the IEEE and EDS dues for any new/existing member or student qualifying for the Minimum Income option. EDS will cover up to twelve (12) chapter members/students per year. Each member/student can only be covered 'one time' under this program and four of the twelve members/students each year must be new IEEE/EDS members/students. The individuals can be applying for either regular membership or student membership. This program is also available to all unemployed members. Although the IEEE Minimum Income option allows individuals to purchase publication subscriptions for one society at a 50% reduced rate, the EDS MFSP does not cover the payment of publication subscriptions.

If a chapter has individuals who qualify for the reduced IEEE Minimum Income offering and the EDS MFSP, all the Chapter Chair needs to do is obtain the IEEE/EDS membership application forms or IEEE Renewal Bills from all individuals participating in the program (maximum 12) and submit them to Spring Shen of the EDS Executive Office, for processing. Once received, the application forms will be coded with a special account number and submitted to the pertinent IEEE department for processing.

For any questions concerning the program, please contact Laura Riello (l.riello@ieee.org) of the EDS Executive Office.

Albert Z. H. Wang
EDS Vice President of Membership
University of California, Riverside
Riverside, CA, USA

Congratulations to the EDS Members Recently Elected to IEEE Senior Member Grade!

Hamid Tony Bahramian*	Lan Fu	Hideharu Matsuura	Kenji Shiraishi*
Victor Bright*	Satoshi Inoue	Shamsoddin Mohajerzadeh*	Alexander Slade
Gyoung-Ho Buh	Nando Kaminski	Yasuo Nara	Soichiro Tsujino
Marco Corsi	Atsushi Kurobe	Venkateswara Rao*	Terence Worton*
Vincenzo Ditommaso	Souvik Mahapatra*	Azzouz Sellai*	Dong Xu
Robert Eisenberg	Jose Maiz*		Regan Zane

* = Individual designated EDS as nominating entity

If you have been in professional practice for 10 years, you may be eligible for Senior Membership, the highest grade of membership for which an individual can apply. New senior members receive a wood and bronze plaque and a credit certificate for up to US $25 for a new IEEE society membership. Upon request, a letter will be sent to employers, recognizing this new status.

For more information on senior member status, visit http:// www.ieee.org/web/membership/senior-members/status.html. To apply for senior member status, fill out an application at http://www.ieee.org/ organizations/ rab/md/smelev.htm.

On-Line Access to IEEE Journals Available to EDS Members

As an EDS member, you have FREE on-line access to the full articles of the following publications:

- **Electron Device Letters** (All Issues From 1980 through current)
- **Transactions on Electron Devices** (All Issues From 1954 through current)
- **International Electron Devices Meeting** (All Digests From 1955 through current)
- ***EDS Newsletter***
- ***Journal of Lightwave Technology***

These publications can be viewed through the on-line delivery system, IEEE *Xplore*, which provides IEEE members with the following benefits/capabilities:

- Online access to their IEEE personal subscriptions
- Full-text PDF image files for content, including all original charts, graphics, diagrams, photographs and illustrative material, from an integrated-circuit schematic to a topographic map to a photograph of a new crystalline structure
- Full-text search allows you to search metadata fields and the associated full-text journal/transaction
- Links to references and cross linking between EDS publications and other IEEE publications is available in articles
- CrossRef search offers outbound links to publications by other leading publishers, employing the google search engine
- Online version available prior to the print equivalent
- Free and unlimited access to abstract/citation records
- Unlimited printing of bibliographic records and full-text documents
- Includes cover to cover material (starting in 2004) i.e., letters to editor, editorial boards, call for papers

In addition to the above benefits, EDS members can purchase a combined paper and on-line subscription to *Transactions on Semiconductor Manufacturing* and/or the *Journal of Microelectromechanical Systems.* Other publications offered by EDS that have both an electronic only version and a combination paper and electronic version, also available for an additional cost, include; *Transactions on Applied Superconductivity, Transactions on Computer-Aided Design of Integrated Circuits and Systems, Transactions on Device and Materials Reliability, Journal of Display Technology, Journal of Electronic Materials, Transactions on Nanotechnology, Nanotechnology Magazine, and the Sensors Journal.*

To use the *Xplore* system, you must establish an IEEE Web Account. This account is also used for renewing your IEEE membership online. If you need to establish an IEEE Web Account, please visit www.ieee.org/web/accounts/. IEEE members can go to the *Xplore* site through the URL www. ieeexplore.ieee.org. We encourage all members of the Society to use this dynamic system and leverage their membership benefits to the fullest extent.

Annual DVD Update Package Available to EDS Members

The 2006 Annual DVD update package is now ready for distribution. It includes all issues from 2004 through 2006 of *Electron Device Letters* (EDL) and *Transactions on Electron Devices* (T-ED), as well as the proceedings of the International Electron Devices Meeting (IEDM) over the same period. This update is fully compatible with the EDS Archival Collection DVD and the two products work together seamlessly providing extensive search capabilities to all issues of EDL, T-ED and all technical digests of the IEDM. The DVDs include comprehensive author, subject and publications indices, abstract pages and all articles are in searchable PDF format.

The 2006 EDS DVD Update Package is available exclusively to EDS members for a bargain price of US$30 (students $15) through the IEEE online Store http://shop.ieee.org/store/ or using a downloadable order form from the EDS web-site at. http://www.ieee.org/portal/pages/society/eds/pubs/pubs.html

You can request the 2007 EDS DVD Update Package in advance as a subscription via your 2008 IEEE Membership renewal bill when you receive it this Fall. The 2007 EDS DVD Package will be available at the latest by June 2008. Once you sign-up to receive the 2007 package via your member renewal bill, you will automatically be billed each year for subsequent versions of the package.

For those interested, the EDS Archival Collection is still in stock and available solely to EDS members for US$30 ($9.95 students) through the IEEE online store at http://shop.ieee.org/store/. This archival collection includes all issues of *Transactions on Electron Devices* (1954-August 2004), *Electron Device Letters* (1980-August 2004), and all the technical digests of the International Electron Devices Meeting (IEDM) (1955-2004).

These products are being made available to our members in the spirit of providing technical information at a most affordable price possible. Hand-in-hand with this goes the concept of individual ownership. We hope that you will adhere to this concept and encourage others interested in using them to acquire their own copy. If you are currently not an EDS member, we encourage you to become one to avail of these exceptional products designed to empower our members.

Renuka P. Jindal
EDS Vice-President of Publications
University of Louisiana at Lafayette
Lafayette, LA, USA

ELECTRON DEVICES SOCIETY®

11 June 2007

Dear Professor Huang & Professor Ren:

On behalf of the Electron Devices Society, I would sincerely like to thank you and your students for your outstanding and extraordinary work in supporting the EDS AdCom Meeting Series in Beijing. The extensive amount of time spent and the caring and special effort displayed was way above and beyond anything we had ever expected. EDS is extremely grateful for your work as you were the reason for EDS having a very successful and especially enjoyable meeting series.

The hotel, meeting room and food arrangements were handled impeccably by Chen Yang. He was extremely thorough in his work and no one could be more responsive, as he provided us with information on either the same or next day from the early morning hour until late into the night. No one would ever know there was a twelve hour time difference between China and the US. Chen should also be highly commended for his quality work in handling all visa invitation letter requests and the arrangements of the International Workshop on Electron Devices and Semiconductor Technology (IEDST) and EDS mini-colloquia (Part 1 of WIMNACT XII).

The support provided by the students of Tsinghua University during the AdCom Meeting Series was incomprehensible. They were so energetic, polite and helpful, always asking what they could do and working very hard once you gave them an assignment. They were a real help to the EDS office staff and EDS AdCom members.

The airport pick-up led by Chen Li and the tour of the Summer Palace organized by the Peking University team were extremely well planned, informative and enjoyable. Having dinner at the famous Tingli Guan Restaurant was a great ending to a special afternoon. It was so thoughtful of Tsinghua University and Peking University to sponsor such an event for the EDS AdCom and chapter members. As with the students of Tsinghua University, the Peking University students were equally energetic, polite and helpful, in addition to being very knowledgeable and personable in their roles of tour guides.

Even after the conclusion of the AdCom Meeting Series, the students of Tsinghua University continued their hard work and helpfulness by planning two days of tours for some of the AdCom members. Each day was very well organized and extremely informative and enjoyable. The students again were a pure joy to be with and could not be any more attentive to our needs. All they wanted to do was please us, and this is exactly what they did. No matter how long the day or how many things we requested, it was never a problem and they just kept asking what else they could do for us.

It was a true pleasure having the students of both Tsinghua University and Peking University work with and interact with us, and very encouraging to know what nice young men and women are potentially going to be involved in shaping the future of EDS. They set a standard and level of performance that will be very difficult for others to match. The EDS AdCom was impressed beyond words with the work ethics, attitude and personal integrity of all the students. EDS should be so lucky to have these students continue to participate with the Society in the future. Again, our sincere thanks.

Best regards,

William F. Van Der Vort

William F. Van Der Vort
EDS Executive Director

cc: EDS Executive Committee

IEEE
The IEEE Electron Devices Society
EDS Executive Office • 445 Hoes Lane • Piscataway NJ 08854, USA
Phone +1 732 562 3926 • Fax +1 732 235 1626 • E-mail eds@ieee.org • www.ieee.org/eds/

Regional and Chapter News

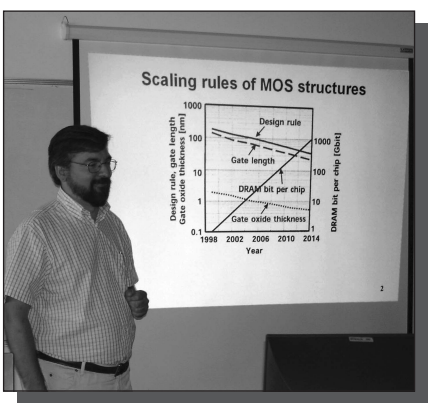
USA, Canada & Latin America (Regions 1-6, 7 & 9)

CAS/ED/PEL Venezuela

- by A. Ortiz-Conde

The CAS/ED/PEL Venezuela Chapter continued with its series of seminars and workshops. On Monday, July 2, 2007, the Chapter organized a two-hour technical seminar at Simón Bolívar University, Caracas, entitled "Post-Breakdown Current in MOS Structures: Physical models and applications." Dr. Enrique Miranda, who is an EDS Distinguished Lecturer and a Professor with the Escola Técnica Superior d'Enginyeria, Universitat Autònoma de Barcelona, Spain, UAB, was the special invited speaker for this occasion. Prof. Miranda is well-known internationally for his research devoted to the electron transport problem through the gate insulator in MOS devices under different circumstances.

The seminar presented a comprehensive and up-to-date description of the physical models of breakdown current and the post-breakdown conduction in MOS structures. Strong emphasis was made in very thin oxide thickness which is very important due to aggressive device feature size reduction in the present semiconductor industry.



Professor Miranda during his presentation

There was very active participation by the audience, with many interesting questions and answers. The following two days, Dr. Miranda met with different research groups of Simón Bolívar University to discuss ongoing collaborative activities.

For additional information, contact Professor Adelmo Ortiz-Conde at ortizc@ieee.org.

~ Jacobus W. Swart, Editor

Europe, Middle East & Africa (Region 8)

ED Israel

- by Gady Golan

1. On Wednesday, April 25, 2007, Prof. Gady Golan, ED Israel Chapter Chair presided over the seminar "Silicon Based LED Micro-Displays for NTE (Near-to-the-Eye) Applications", delivered by Prof. Alex Smirnov - Republic of Belarus, at the Holon Institute of Technology (HIT), Holon, Israel.
2. On Sunday, June 17, 2007, IEEE conference on electromagnetic radiation, electric and magnetic fields in ELF and protection systems for electromagnetic radiation was held at the Holon Institute of Technology (HIT), Holon, Israel. The EDS session was chaired by Prof. Gady Golan. In the session, Prof. Golan presented 'Novel concepts in photovoltaics systems'.
3. Professor Anthony O'Neill, Newcastle University, England, delivered his talk on 'Strain Engineering in Silicon Technology' at the University of Manchester, Manchester, England, on Thursday June 7, 2007. Professor O'Neill is an IEEE Distinguished Lecturer. The talk was well received.

~ Zhirun Hu, Editor

MIXDES 2007

- by Andrzej Napieralski

On June 21-23, 2007, in Ciechocinek, Poland, the 14th International Conference MIXDES 2007 took place. The event was organized by the Technical University of Lodz together with the Warsaw University of Technology, Poland. The conference was co-sponsored by The IEEE Poland Section, IEEE ED & CAS Chapters, the CARE Project (Coordinated Accelerator Research in Europe), the Ministry of Scientific Research and Information Technology, and the Polish Academy of Sciences, Committee of Electronics and Telecommunication, Section of Microelectronics and Section of Signals, Electronic Circuits and Systems.

In addition to the regular program, four special sessions were organized:

- *"Compact Modelling"* organized by Dr. Daniel Tomaszewski (Institute of Electron Technology Poland), Dr. Władysław Grabiński (GMC Suisse, Switzerland) and Prof. Hiroshi Iwai (IT Tokyo, Japan),
- CARE Project Special Session organized by Dr. Mariusz Grecki (Technical University of Lodz, Poland),
- *"Advanced Logic Synthesis with Application to FPGA-based Implementations"* organized by Prof. Tadeusz Łuba (Warsaw University of Technology, Poland),
- *"CLEAN Workshop: Leakage Aware Design of Nanometer CMOS Circuits"* organized by Prof. Wiesław Kuźmicz (Warsaw University of Technology, Poland).

The conference was attended by over 140 scientists coming from 28 countries from around the world. During the conference, five invited papers and 125 regular papers were presented at oral, poster, and special sessions. The conference proceedings (ISBN: 83-922632-4-3) and CD ROM (ISBN: 83-922632-9-4) were published by the Technical University of Lodz.

The following invited keynote presentations were given:

- *"Evolution of the Classical Functional Integration Towards a 3D Heterogeneous Functional Integration"* - J.-L. Sanchez, A. Bourennane, M. Breil, P. Austin, M. Brunet, J.P. Laur

(LAAS-CNRS and Univ. Toulouse, FRANCE),

- *"Modelling of Thin Film Transistors for Circuit Simulation"* - B. Iniguez (Univ. Rovira i Virgili, Spain), R. Picos (Univ. Illes Balears, Spain), M. Estrada, A. Cerdeira (CINVESTAV, Mexico), T.A. Ytterdal (Norwegian Univ. of Science and Techn., Norway), W. Jackson (HP Labs, USA), A. Koudymov, D. Veksler, M.S. Shur (Rensselaer Polytechnic Inst., USA),
- *"STARC's Semiconductor Design Technology Research Activities and the HiSIM2 Advanced MOSFET Model Project"* - Y. Furui (STARC, Japan), M. Miura-Mattausch, N. Sadachika, M. Miyake, T. Ezaki, H.J. Mattausch (Hiroshima Univ., Japan), T. Ohguro, T. Iizuka, R. Inagaki, N. Fudanuki (STARC, Japan),
- *"Tradeoffs and Optimization in Analog CMOS Design"* - D.M. Binkley (The Univ. of North Carolina at Charlotte, USA).

Based on evaluation of the quality of the papers and presentations, thirteen of the papers have received the Best Paper Award. Additionally, the paper entitled *"Hardware Fault Free Simulation for SoC"* (V. Hahanov, M. Kaminska, W. Ghribi, A. Hahanova - Kharkov National Univ. of Radioel., Ukraine) received the IEEE ED Poland Chapter Special Award from the Section Chairman.

The next MIXDES 2008 Conference will take place in Poznań, one of the oldest and largest cities in Poland. The Preliminary Call for Papers is already available at http://www.mixdes.org/downloads/call2008.pdf. More information about the past and the next MIXDES conferences can be found at http://www.mixdes.org.

~ Andrzej Napieralski, Editor

The ED Japan DL meeting on May 31, 2007. From the third person from the left at the back: Prof. Kazuo Tsutsui, EDS Newsletter Editor, Prof. Jacobus W. Swart of State University of Campinas, Brazil and Prof. Hiroshi Iwai, Partner and EDS Jr. Past President

ASIA & PACIFIC (REGION 10)

ED Japan

- by Atsushi Kurobe

A DL talk entitled "Alternative processes for synthesis of high k dielectrics and CNT's" was given by Prof. Jacobus W. Swart, State University of Campinas, Brazil, at the Suzukakedai Campus of Tokyo Institute of Technology, Yokohama, Japan, on May 31, 2007. The lecture was followed by fruitful discussion on the CNT's for future applications. This DL meeting attended by 15 people was very meaningful.

On June 25, 2007, the chapter also organized a DL meeting entitled "Organic Electronics and RF devices" at the Hongo Campus of University of Tokyo, Japan. Three Japanese DLs made presentations on their topics and offered the attendees the opportunity to get to grips with up-to-date, interesting and useful research. Prof. Takao Someya, the University of Tokyo, talked about the current status and future applications of Organic Electronics. The title of his lecture was "Ambient Electronics application of Sheet devices." Prof. Mitsumasa Iwamoto, Tokyo Institute of Technology, Yokohama, lectured on "Probing and Control of Surface Polarization Phenomena in Molecular Films for Organic Electronics." And Prof. Kenya Hashimoto, from Chiba University, Chiba, talked about the research trends of RF filters, focusing on their possible integration into RF ICs. His lecture was entitled, "RF SAW/BAW Devices: Current Status and Future Prospects." These lectures were followed by lively discus-

The MIXDES 2007 Conference participants in front of the Targon Palace – the conference site

The DL meeting on June 25, 2007. The meeting entitled "Organic Electronics and RF devices" was held at the Hongo Campus of University of Tokyo, Tokyo, Japan. It was very successful with more than 50 participants

sions between the lecturers and the audience. The meeting, with more than 50 participants, was a great success.

In addition, in the first half of the year from January 2007 - June 2007, the ED Japan Chapter held 4 joint technical meetings with the Japan Society of Applied Physics, the Association of Super-Advanced Electronics Technologies, etc.

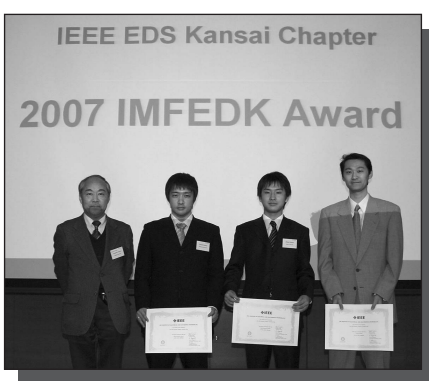
ED Kansai

- by Takashi Ipposhi

The ED Kansai Chapter held the 5th International Meeting for Future of Electron Devices, Kansai (2007 IMFEDK) at Osaka University Nakanoshima Center, Osaka, Japan, April 23-24, 2007. This year, Dr. D. Park from Samsung Electronics Co., Ltd., Prof. K. Wada from the University of Tokyo and S. Sugahara from Tokyo Institute of Technology delivered keynote speeches concerning Nano-CMOS technology, Si photonics-electronics and Spin-transistor electronics, respectively. The meeting included four regular sessions: 1) Simulation and Modeling, 2) Silicon Devices, 3) Compound Semiconductor Devices, and 4) Emerging Devices. There were also two poster sessions. Prior to the sessions, we had two tutorial lectures focusing on organic electronics and organic solar cell. About 230 attendees participated in the sessions. It was a great opportunity to promote cross disciplinary interactions among the participants with different backgrounds, which was one of the main purposes of holding the meeting in Kansai.

Three papers were selected for the IMFEDK Awards. Prof. Y. Omura, Vice Chair of Executive Committee of the ED Kansai Chapter, honored Mr. Y. Hirano (Renesas Technology Corp.) for the Grand Award, Mr. T. Kimura (Hokkaido University) and Mr. H. Minari (Osaka University) for the Student Award.

~ Kazuo Tsutsui, Editor



Winners of IMFEDK Awards, and Prof. Omura, Vice Chair of the ED Kansai Chapter

Prof. Islam giving his talk at East West University

ED Bangladesh

- by Anisul Haque

The ED Bangladesh Chapter arranged two technical talks for the past quarter. Dr. Syed Kamrul Islam, Associate Professor, ECE, University of Tennessee, gave a talk on Wide Bandgap Semiconductor Devices for Vehicular Applications in BUET on June 25. The talk was attended by around 75 people. He gave another talk on Challenges for RF Circuit Design in East West University on June 26. This second talk was attended by around 60 people.

IWJT 2007

- by Kyoichi Suguro

The 7th International Workshop on Junction Technology (IWJT 2007) was held on June 8th and 9th at Kyoto University. The purpose of the workshop is to provide an open forum for all engineers and scientists who are working with junction technologies. The number of attendees exceeded 130 and there were a lot of famous engineers and scientists from Japan, Korea, China, Taiwan, Singapore, USA , Germany, France, and Belgium.

The technical program of this 7th IWJT consisted of 39 excellent papers, including 1 keynote speech (from USA), 11 invited papers (4 from USA, 1 from Germany, 2 from Japan, 3 from Singapore, and 1 from China), 27 contributed papers (6 from USA, 2 from Belgium, 1 from France, 14 from Japan, 3 from Korea and 1 from Taiwan). These papers were categorized into 8 technical sessions, Advanced Device/Integration, Modeling/Simulation, Characterization, Doping/Shallow Junction, Silicide/Germanide 1&2, Advanced Equipments, and Activation of Impurity Atoms.

One feature of the IWJT 2007 is that each invited paper presents not only the review of the authors' previous works but brand-new results on their work. Therefore, attendees understood both the background technology and the brand-new technology with a lot of novel data. New proposals were made on Device integration and Modeling, Doping Technology, Activation Technology for Ultra-shallow junction, Silicidation/Germanidation Technology and Characterization Technology. In order to honor the authors of the most excellent papers, two papers will be selected as "The Best Paper Award of IWJT" which was established this year. The authors of this award will be honored at the next IWJT.

Attendees with committee members at IWJT 2007

AP/EDS/MTT Penang

- by Richard Keating

The AP/EDS/MTT Penang Joint Chapter is a new chapter recently formed in Penang, Malaysia, whose members are mainly from the high-tech companies in and around Penang. We were fortunate to have 3 excellent presentations over the last quarter.

The first on April 25th - "Integrated Circuit Polysilicon Resistors" by Albert V. Kordesch, and "Novel Physical-Based SPICE Model to capture CMOS Hook Shaped Drive Current behavior in Nanotechnology" by Philip Tan, both from Silterra Sdn. Bhd. Kulim, Malaysia.

The second talk on May 14th - "Characterizing transient active device behavior using pulse I-V technique", by Yuegang Zhao, Keithley Instruments Inc.

And the final talk of the quarter was on June 12th - "Trends and challenges in antenna technologies for personal devices", by Dr. Soo Liam Ooi, Motorola Laboratories, Plantation, Florida, USA.

Richard Keating (left) presenting a certificate of appreciation to Al Kordesch for his talk on Integrated Resistors

Philip Tan (right) accepting the Chapter's certificate for his talk on his new model for CMOS transistors

Upcoming talks include "Photonic integrated circuits and ultra-broadband semiconductor quantum-dot lasers", by Prof. Boon S. Ooi, Electrical and Computer Engineering Dept., Lehigh University, Bethlehem, PA, USA, and "Microwave Devices", by Prof. Ken-ya Hashimoto, Graduate School of Engineering, Dept. Electrical and Electronic Engineering, Chiba University, Japan

We would like to thank PSDC and Motorola for their support of our Chapter.

REL/CPMT/ED Singapore

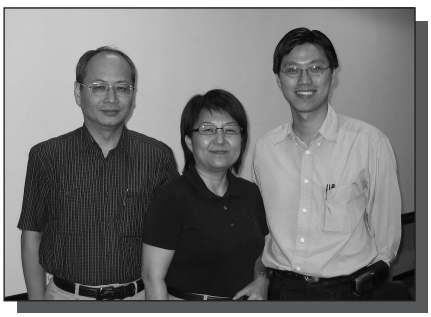
- by Alastair Trigg

One of the key activities during this quarter was the 2nd Pall-NTU Technology Workshop on Si-based Nanodevices held at Nanyang Technological University (NTU) in May. A full account of the workshop can be found in the article following this report.

In June we had two DL talks. The first one was by Prof. Vijay K. Arora of Wilkes University, USA on "Performance Evaluation of Nano Circuits and Systems with Ballistic Carriers", organized by IMRE at National University of Singapore (NUS). The second one by Prof. Mansun Chan (HK University of Science & Technology) on the "IC Industry in China: Challenges and Opportunities". The latter was rather different from our usual technical talks in that it concentrated on the business rather than technical aspects of IC design and looked at the opportunities and challenges for start-up IC design houses in China. It was conducted at NTU and attracted nearly 50 participants.

June was a busy month with another two technical talks by the husband-and-wife team of Dr Chih-Hsun Chu & Dr Yong-Fen Hsieh of Materials Analysis Technology, a company they started 4 years ago to provide failure analysis to the Taiwan semiconductor industry. Dr Chu discussed the different scenarios of non-planar oxidation of Si, giving many examples that he had seen over the course of his career. Dr Hsieh gave the second talk on "Ion Implantation and Related Defect Formation by Latent Stress". Some of the results were actually obtained during her postdoctoral research at Bell Labs.

Prof. Mansun Chan giving a DL talk on 27 June



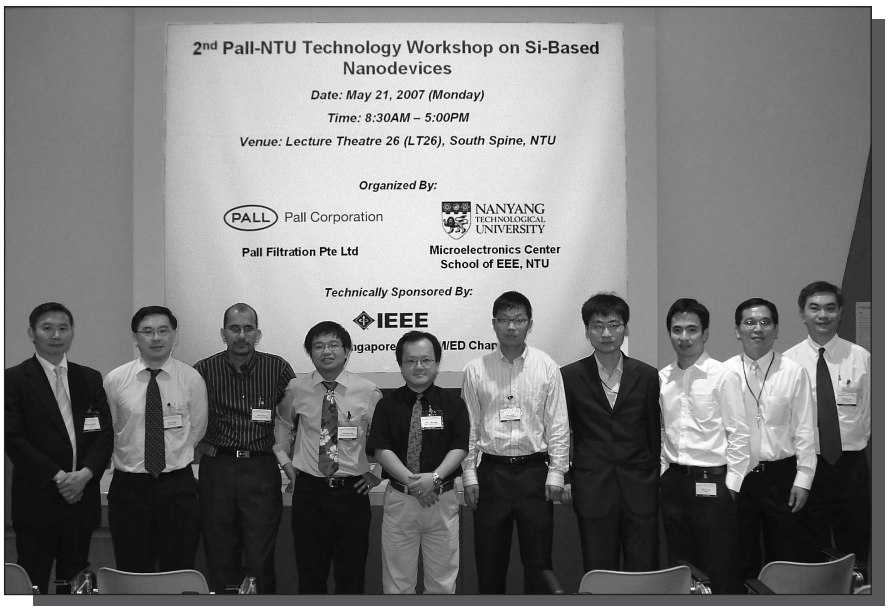
Dr Chih-Hsun Chu (left), Dr Yong-Fen Hsieh (centre) and Dr Gan Chee Lip of NTU (right) at the Technical talk on 25 June

Pall-NTU Technology Workshop

- by Chuan Seng Tan

Jointly organized by Pall Filtration Private Limited & the Microelectronics Center, School of EEE, Nanyang Technological University (NTU), and the Singapore IEEE Rel/CPMT/ED Chapter, the 2nd Pall-NTU Technology Workshop on Silicon-based Nanodevices was successfully held on May 21, 2007 in NTU. Pall Filtration sponsored the workshop. Two overseas speakers and six local speakers presented talks on topics ranging from new filtration technologies to advanced sub-45 nm transistor technologies. Emerging technology on silicon nanowires transistors and three-dimensional ICs were also presented. The details of the talks are as follows:

- The State-of-Art Nano-Era Filtration in Wet Process, Dr. Fumitomo Kunimoto, Nihon Pall, Japan
- Fabrication of 3-D Structures via Nanoimprint Lithography, Dr. Hong Yee Low, Institute of Materials Research and Engineering
- Stress Engineering for sub 65 nm CMOS Technologies, Dr. Jinping Liu, Chartered Semiconductor Man-



Pall-NTU Workshop speakers and organizers. Left to right: Fumitomo Kunimoto, Voon Leong, Navab Singh, Chuan Seng Tan, Chih-Hang Tung, Jinping Liu, Hong-Yu Yu, Marcus Yee, Kin Leong Pey, Timothy Lam

ufacturing

- Dual Metal Gate Technologies for 45nm and Beyond CMOS Devices, Dr. Hong-Yu Yu, IMEC, Belgium
- GAA Nanowire MOSFET: Device Architecture with Enhanced Electrostatic Control for Excellent Short Channel Performance, Navab Singh, Institute of Microelectronics
- Wafer Level 3-D ICs, Dr. Chuan Seng Tan, Nanyang Technological University
- Advanced Transmission Electron Microscopy Platform for Nano-electronics Device and Interface Characterization, Chih-Hang Tung, Institute of Microelectronics
- Understanding Electronic Structure Properties of Nanodevices Using 1st Principles Calculation, Dr. Marcus Yee, Atomistix Singapore

The workshop attracted about 146 participants from the industry, research institutions and universities. The center plans to organize a similar workshop annually.

ED SJCE

- by P. M. Pavan

The IEEE ED SJCE student chapter in its continuing efforts to increase the ***technical knowledge base*** of the students, has conducted many events, one such being a workshop regarding ***"Lossy Compression Technologies in Multimedia"*** by Mr. Vinay M. K (co-founder Path Partners Technology).

The workshop started off with the "Probability theory" and some briefs about "Measured theory". Then it underwent a brief introduction regarding the basic concepts of Signal Processing. Thereafter the main course consisted of the concepts of "Audio Signal Processing", "Image Processing" and "Speech Processing". Each of them were covered in a separate session in detail regarding the losses that is encountered during the processing and also on how can these losses can be reduced in practical applications.

As a part of the regular events, weekly tests were conducted based on the basic electronics, digital design and others.

"When the going gets tough, the tough gets going" being the motive of the **IEEE ED SJCE** student chapter, it has well proved that it is a very good platform for the students to improve their technical base and it will continue doing so in the coming future.

ED/SSCS/LEO Western Australia

- by Adam Osseiran

The Western Australia joint EDS, SSCS and LEOS Chapter was founded in June 2007. Our objective is to promote the networking and sharing of information and knowledge among researchers and engineers in Western Australia. We hope that we can serve as the community hub for our IEEE EDS, SSCS and LEOS Society members as they progress through their professional career. Furthermore, the WA Chapter will serve as a platform to organize workshops, conferences, short courses and presentations by Distinguished Lecturers and local experts. The Chapter will also support participation of local industry and provide it with the most relevant information from the community. For further information, please contact the new Chapter Chair, Associate Professor Adam Osseiran a.osseiran@ecu.edu.au

~ Xing Zhou, Editor

In front: from the left Mr.Vinay M. K., Dr. C. R. Venugopal and the students who attended the workshop

EDS MEETINGS CALENDAR
(As of August 24, 2007)

The complete EDS Calendar can be found at our web site:
http://www.ieee.org/society/eds/meetings/meetings_calendar.xml Please visit!

October 1 - 4, 2007, * **IEEE International SOI Conference** Location: Miramonte Resort & Spa, Indian Wells, CA, USA, Contact: Bobbi Armbruster, E-Mail: bobbi@bacminc.com, Deadline: Not Available, www: www.soiconference.org

October 2 - 5, 2007, T **International Conference on Advanced Thermal Processing of Semiconductors**, Location: Grand Hotel Baia Verde, Cannizzaro, Catania, Sicily, Italy, Contact: Bo Lojek, E-Mail: blojek@atmel.com, Deadline: 5/31/07, www: www.ieee-rtp.org

October 3, 2007, T **Workshop on Compact Modeling for RF/Microwave Applications**, Location: Boston Marriott Long Wharf Hotel, Boston, MA, USA, Contact: Ramses Van Der Toorn, E-Mail: ramses.van.der.toorn@ieee.org, Deadline: Not Available, www: http://hitec.ewi.tudelft.nl/cmrf07/

October 3 - 6, 2007, T **International Forum on Strategic Technology**, Location: Mongolian University of Science and Tech, Ulaanbaatar, Mongolia, Contact: Tuul Davaa, E-Mail: intrel@must.edu.mn, Deadline: Not Available, www: www.must.edu.mn/ifost2007

October 7 - 12, 2007, T **Symposium on ULSI Process Integration**, Location: Hilton, Washington, DC, USA, Contact: Cor Claeys, E-Mail: c.claeys@ieee.org, Deadline: 5/26/07, www: N/A

October 8 - 10, 2007, T **IEEE International Conference on Computer Design**, Location: Squaw Creek Resort, Squaw Valley, CA, USA, Contact: Kevin Rudd, E-Mail: Kevin.w.rudd@intel.com, Deadline: Not Available, www: www.iccd-conference.org

October 8 - 12, 2007, T **European Symposium on Reliability of Electron Devices, Failure Physics and Analysis**, Location: Palatium-Arcachon, Bordeaux, France, Contact: M. Garcia E-Mail: esref@adera.fr, Deadline: 3/16/07, www: http://esref07.ixl.fr/welcome/index.html

October 8 - 10, 2007, T **IEEE European Microwave Integrated Circuits Conference**, Location: ICM, Munich International Congress Centre, Munich, Germany, Contact: Fred Schindler, E-Mail: m.schindler@ieee.org, Deadline: 2/25/07, www: www.eumweek.com

October 8 - 10, 2007, T **International Workshop on Computational Electronics**, Location: Campus Center of University of Massachusetts, Amherst, MA, USA, Contact: Massimo Fischetti, E-Mail: fischett@ecs.umass.edu, Deadline: 6/1/07, www: www.ecs.umass.edu/iwce

October 9 - 14, 2007, T **International School on Chaotic Oscillations and Pattern Formation**, Location: School of Chaotic Oscillations and Pattern Formati, Saratov, Russia, Contact: CHAOS 2007, E-Mail: chaos07@nonlin.sgu.ru, Deadline: Not Available, www: http://nonlin.sgu.ru/chaos2007/

October 14, 2007, T **Reliability of Compound Semiconductors Workshop**, Location: Portland, OR, USA, Contact: Anthony Immorlica, E-Mail: anthony.a.immorlica@baesystems.com, Deadline: Not Available, www: Not Available

October 14 - 17, 2007, * **IEEE Compound Semiconductor IC Symposium**, Location: Hilton Portland & Executive Tower, Portland, OR, USA, Contact: Mohammad Madihian, E-Mail: madih@mve.biglobe.ne.jp, Deadline: 5/7/07, www: http://www.csics.org/

October 15 - 16, 2007, T **International SoC Design Conference**, Location: Coex Conference Center, Seoul, Korea, Contact: Seongsoo Lee, E-Mail: sslee@ssu.ac.kr, Deadline: Not Available, www: www.isocc.org

October 15 - 17, 2007, * **International Semiconductor Conference**, Location: Sinaia Hotel, Sinaia, Romania, Contact: Cristina Buiculescu, E-Mail: cas@imt.ro, Deadline: 6/10/07, www: www.imt.ro/cas

October 15 - 18, 2007, * **IEEE International Integrated Reliability Workshop**, Location: Stanford Sierra Conference Centers, South Lake Tahoe, CA, USA, Contact: Roy and Becky Walker, E-Mail: roy@sar101.com, Deadline: 7/13/07, www: www.iirw.org

October 15 - 17, 2007, T **IFIP International Conference on Very Large Scale Integration**, Location: Georgia Tech Hotel, Atlanta, GA, USA, Contact: Vincent Mooney, III, E-Mail: vlsisoc2007@gatech.edu, Deadline: 4/9/07, www: www.vlsisoc2007.gatech.edu

October 28 - 31, 2007, T **IEEE International Conference on Sensors**, Location: Hyatt Regency Atlanta, Atlanta, GA, USA, Contact: Katharine Cline, E-Mail: kkcline@pmmiconferences.com, Deadline: 4/3/07, www: www.ieee-sensors2007.org

November 4 - 8, 2007, T **IEEE International Conference on Computer Aided Design**, Location: DoubleTree Hotel San Jose, San Jose, CA, USA, Contact: Kathy Embler, E-Mail: kathy@dac.com, Deadline: 4/11/07, www: www.iccad.com

November 5 - 8, 2007, T **International Microprocesses and Nanotechnology Conference**, Location: Kyoto International Conference Hall, Kyoto, Japan, Contact: IMNC secretariat, E-Mail: secretariat@imnc.jp, Deadline: 6/30/07, www: www.imnc.jp

November 6, 2007, T **IEEE Electron Devices Activities in Western New York Conference**, Location: University of Rochester, Rochester, NY, USA, Contact: Martin Margala, E-Mail: margala@ece.rochester.edu, Deadline: Not Available, www: Not Available

November 10 - 13, 2007, T **Non-Volatile Memory Technology Symposium**, Location: Hyatt Regency Albuquerque, Albuquerque, NM, USA, Contact: Kristy Campbell, E-Mail: kriscampbell@boisestate.edu, Deadline: 6/2/07, www: coen. boisestate.edu/nvmts

December 3 - 7, 2007, T **International Photovoltaic Science & Engineering Conference** Location: Fukuoka International Congress Center, Fukuoka, Japan, Contact: Yoshio Ohsita, E-Mail: pvsec17@toyota-ti-ac.jp, Deadline: 7/15/07, www: http://www.pvsec17.jp

December 6 - 8, 2007, * **IEEE Semiconductor Interface Specialists Conference**, Location: Key Bridge Marriott, Arlington, VA, USA, Contact: Dina Triyoso, E-Mail: dina.triyoso@freescale.com, Deadline: 7/21/07, www: www.ieeesisc.org

December 10 - 12, 2007, * **IEEE International Electron Devices Meeting**, Location: Washington Hilton and Towers, Washington, DC, USA, Contact: Phyllis Mahoney, E-Mail: phyllism@widerkehr.com, Deadline: 6/22/07, www: http://www.ieee.org/conference/iedm

December 12 - 14, 2007, T **International Conference on Field-Programmable Technology**, Location: Kitakyusyu International Conference Center, Kitakyusyu, Japan, Contact: Tadao Nakamura, E-Mail: nakamura@archi.is.tohoku.ac.jp, Deadline: 6/25/07, www: www.kameyama.ecei.tohoku.ac.jp/icfpt07

December 12 - 14, 2007, T **International Semiconductor Device Research Symposium**, Location: Stamp Student Union, Unv. Of Maryland, College Park, MD, USA Contact: Phillip Thompson, E-Mail: phillip.thompson@nrl.navy.mil, Deadline: 9/4/07, www: www.ece.umd.edu/isdrs2007

December 15 - 19, 2007, T **Advanced Workshop on 'Frontiers in Electronics'**, Location: Park Royal Hotel, Cozumel, Mexico, Contact: Michael Shur, E-Mail: shurm@rpi.edu, Deadline: 10/1/07, www: nina.ecse.rpi.edu/shur/wofe07/

December 16 - 20, 2007, T **International Workshop on the Physics of Semiconductor Devices**, Location: Indian Inst. Of Tech., Bombay & TIFR Mumbai, Mumbai, India, Contact: V.Ramgopal Rao, E-Mail: rrao@ee.iitb.ac.in, Deadline: 5/31/07, www: http://www.iwpsd.net/

December 20 - 23, 2007, T **IEEE International Workshop and Tutorials on Microtechnologies in Electronics**, Location: Novosibirsk State Technical University, Novosibirsk, Russia, Contact: Alexander Gridchin, E-Mail: ieeensk@yandex.ru, Deadline: 8/20/07, www: Not Available

December 20 - 22, 2007, T **IEEE Conference on Electron Devices and Solid State Circuits**, Location: Southern Taiwan University of Technology, Tainan, Taiwan, Contact: T.K. Chiang, E-Mail: tkchiang@mail.stut.ed.tw, Deadline: 7/29/07, www: www2.eecs.stut.edu.tw/~edssc2007

December 29 - 31, 2007, T **International Conference on Microelectronics**, Location: Nile Hilton, Cairo, Egypt, Contact: Mohab Anis, E-Mail: manis@vlsi.uwaterloo.ca, Deadline: 6/15/07, www: www.ieee-icm.com

January 4 - 8, 2008, T **International Conference on VLSI Design**, Location: HICC, Hyderabad, India, Contact: VLSI Secretariat, E-Mail: secretary@vlsiconference.com, Deadline: 7/10/07, www: www.vlsiconference.com/vlsi2008

January 22 - 24, 2008, T **IEEE Radio and Wireless Symposium**, Location: Long Beach Convention Center, Orlando, FL, USA, Contact: Tom Weller, E-Mail: weller@eng.usf.edu, Deadline: 7/13/07, www: http://www.radiowireless.org

February 3 - 7, 2008, T **IEEE International Solid-State Circuits Conference**, Location: San Francisco Marriott, San Francisco, CA, USA, Contact: Diane Melton, E-Mail: isscc@courtesyassoc.com, Deadline: 9/17/07, www: www.isscc.org/isscc

February 25 - 29, 2008, T **International Conference on Nanoscience and Nanotechnology**, Location: Melbourne Convention Centre, Melbourne, Australia, Contact: Paul Mulvaney, E-Mail: mulvaney@unimelb.edu.au, Deadline: 7/1/07, www: http://www.ausnano.net/

March 12 -14, 2008, T **Workshop on Ultimate Integration of Silicon Devices**, Location: Palazzo Antonini, Udine, Italy, Contact: Luca Selmi, E-Mail: luca.selmi@uniud.it, Deadline: 1/1/8/08, www: http://www.ulis-conference.org/2008/index.html

March 15 - 17, 2008, T **International Semiconductor Technology Conference**, Location: Holiday Inn Pudong Shanghai China, Shanghai, China, Contact: Beibei Li, E-Mail: emmaxu@ecsasia.org, Deadline: 10/15/07, www: www.ecsistc.org

March 17 - 19, 2008, T **IEEE International Symposium on Quality Electronic Design**, Location: San Jose, CA, USA, Contact: Ali Iranmanesh, E-Mail: alii@isqed.org, Deadline: 9/30/07, www: http://www.isqed.org/

March 17 - 19, 2008, T **IEEE International Conference on RFID**, Location: MGM Grand Hotel, Las Vegas, NV, USA, Contact: Dilip Kotak, E-Mail: dilip.kotak@shaw.ca, Deadline: 11/21/07, www: www.ieee-rfid.org/2008

March 24 - 27, 2008, T **IEEE International Nanoelectronics Conference**, Location: Riverfront Business Hotel, Shanghai, China, Contact: Cher Tan, E-Mail: ecmtan@ntu.edu.sg, Deadline: 9/18/07, www: www.ieeenec.org

March 24 - 28, 2008, T **International Scientific & Practical Conference of Students, Post Graduates & Young Scientists "Modern Technique & Technology"**, Location: Tomsk, Russia Contact: Lyudmila Zolnikova, E-Mail: mtt_eng@tpu.ru, Deadline: 2/15/08, www: www.tpu.ru/files/event/ctt-eng.doc

April 21 - 23, 2008, T **International Symposium on VLSI Technology, Systems and Applications**, Location: Ambassador Hotel Hsinchu, Hsinchu, Taiwan, Contact: Clara Wu, E-Mail: clara@itri.org.tw, Deadline: 10/15/07, www: http://vlsitsa.itri.org.tw/2008/general

April 21 – 24, 2008, T **International Conference on Microwave and Millimeter Wave Technology**, Location: Nanjing, China, Contact: Wei Hong, E-Mail: weihong@seu.edu.cn, Deadline: Not Available, www: Not Available

April 22 - 24, 2008, @ **IEEE International Vacuum Electronics Conference**, Location: Portola Plaza Hotel, Monterey, CA, USA, Contact: Ralph Nadell, E-Mail: RalphNadell@pcm411.com, Deadline: Not Available, www: Not Available

April 23 - 25, 2008, T **International Symposium on VLSI Design, Automation and Test** Location: The Ambassador Hotel-Hsinchu, Hsinchu, Taiwan, Contact: Elodie Ho, E-Mail: elodieho@itri.org.tw, Deadline: 10/15/07, www: vlsidat.itri.org.tw/ 2008/general

April 27 - May 1, 2008, * **IEEE International Reliability Physics Symposium**, Location: Hyatt Regency Phoenix at Civic Center, Phoenix, AZ, USA, Contact: John Suehle, E-Mail: john.suehle@nist.gov, Deadline: 10/1/07, www: http://www.irps.org

May 11 - 16, 2008, * **IEEE Photovoltaic Specialists Conference**, Location: Manchester Grand Hyatt, San Diego, CA, USA, Contact: Americo Forestieri, E-Mail: pvsc@wowway.com, Deadline: Not Available, www: www. 33pvsc.org

May 11 - 14, 2008, * **International Conference on Microelectronics**, Location: University of Nis, Nis, Serbia & Montenegro, Contact: Ninoslav Stojadinovic, E-Mail: nstojadinovic@elfak.ni.ac.yu, Deadline: Not Available, www: Not Available

May 11 - 14, 2008, T **International Workshop on Expert Evaluation & Control of Compound Semiconductor Materials & Technologies**, Location: Lodz, Poland, Contact: Stanislas Krawczyk, E-Mail: stanislas.krawczyk@ec-lyon.fr, Deadline: Not Available, www: Not Available

May 18 - 23, 2008, T **International Symposium on Dielectrics for Nanosystems: Materials Science, Processing Reliability & Manufacturing**, Location: Phoenix, AZ, USA, Contact: Amir Zaman, E-Mail: amir.zaman@electrochem.org, Deadline: Not Available, www: http://www.electrochem.org/ index.htm

May 18 - 22, 2008, @ **IEEE International Symposium on Power Semiconductor Devices & Integrated Circuits**, Location: Wyndham Orlando Resort, Orlando, FL, USA, Contact: Don Disney, E-Mail: ddisney@analogictech.com, Deadline: 10/21/07, www: www.ecse.rpi.edu/conf/ispsd08

May 18 - 21, 2008, T **International Conference on Memory Technology and Design**, Location: Cedex, France, Contact: Richard Eguchi, E-Mail: richard.eguchi@freescale.com, Deadline: 1/23/08, www: www.ewh.ieee.org/soc/eds/nvsmw

May 18 - 21, 2008, T **IEEE Non-Volatile Semiconductor Memory Workshop**, Location: Cedex,France, Contact: Richard Eguchi, E-Mail: richard.eguchi@freescale.com, Deadline: 1/23/08, www: http://www.ewh.ieee.org/soc/eds/nvsmw/

May 21 – 23, 2008, T **International Conference on Microwaves, Radar and Wireless Communication**, Location: Poznan, Poland, Contact: Edward Sedek, E-Mail: sedek@pit.edu.pl, Deadline: 1/5/08, www: www.irs.edu.pl/irs2008.html

May 24 - 27, 2008, @ **International Conference on Microelectronic Test Structures**, Location: University of Edinburgh, Edinburgh, United Kingdom, Contact: Les Haworth, E-Mail: Les.Haworth@ee.ed.ac.uk, Deadline: 9/14/07, www: http:// www.see.ed.ac.uk/ICMTS/

May 25 - 29, 2008, @ **International Conference on Indium Phosphide and Related Materials**, Location: Palais des congres Versailles, Versailles, France, Contact: Beatrice Valdayron, E-Mail: beatrice.valdayron@see.asso.fr, Deadline: Not Available, www: http://www.ieee.org/portal/site/leos/

May 27 - 31, 2008, T **International Power Modulator Symposium**, Location: Mandalay Bay Resort & Casino, Las Vegas, NV, USA, Contact: Teresa Stewart, E-Mail: tstewart@cavs.msstate.edu, Deadline: Not Available, www: www.cavs.msstate.edu/pmc2008

June 2 - 6, 2008, T **International Conference on Unsolved Problems of Noise**, Location: Lyon, France, Contact: Lino Reggiani, E-Mail: lino.reggiani@unile.it, Deadline: Not Available, www: Not Available

June 5 - 7, 2008, T **International Conference on Ion Implantation Technology**, Location: Monterey Converence Center, Monterey, CA, USA, Contact: Susan Felch, E-Mail: susan_felch@amat.com, Deadline: Not Available, www: www2.avs.org/ conferences/insight/08/generalinfo.html

June 15 - 17, 2008, T **IEEE Radio Frequency Integrated Circuits Symposium**, Location: George World Congress Center, Atlanta, GA, USA, Contact: Jenshan Lin, E-Mail: jenshan@ieee.org, Deadline: Not Available, www: www.rfic2008.org

June 17 - 19, 2008, @ **IEEE Symposium on VLSI Technology**, Location: Hilton Hawaiian Village, Honolulu, HI, USA, Contact: Phyllis Mahoney, E-Mail: phyllism@widerkehr.com, Deadline: Not Available, www: www.vlsisymposium.org

June 18 - 20, 2008, T **IEEE Symposium on VLSI Circuits** Location: Hilton Hawaiian Villiage, Honolulu, HI, USA, Contact: Phyllis Mahoney, E-Mail: phyllism@widerkehr.com, Deadline: Not Available, www: www.vlsisymposium.org

July 1 - 5, 2008, T **International Siberian Workshop and Tutorial on Electron Devices and Materials**, Location: Novosibirsk State Technical University, Novosibirsk, Russia, Contact: Alexander Gridchin, E-Mail: ieeensk@yandex.ru, Deadline: 3/15/08, www: http://www.nstu.ru/edm

July 13 – 16, 2008, T **University/Government/Industry Microelectronics Symposium**, Location: University of Louisville, Louisville, KY, USA, Contact: Kevin Walsh, E-Mail: walsh@louisville.edu or walsh@ieee.org, Deadline: Not Available, www: louisville.edu/micronano/UGIM2008

July 13 - 17, 2008, @ **IEEE International Vacuum Nanoelectronics Conference**, Location: Wroclaw University, Wroclaw, Poland, Contact: Jan Dziuban, E-Mail: jan.dziuban@pwr.wroc.pl, Deadline: Not Available, www: http://www.nstu.ru/edm

July 21 - 25, 2008, T **European Electromagnetics Conference**, Location: Swiss Federal Inst. Of Technology, Lausanne, Switzerland, Contact: Farhad Rachidi, E-Mail: farhad.rachidi@epfl.ch, Deadline: 1/31/08, www: www.euroem.org

July 27 – August 1, 2008, T **International Conference on the Physics of Semiconductors**, Location: Rio de Janeiro, Brazil, Contact: ICPS, E-Mail: icps2008@cetuc.puc-tio.br, Deadline: 3/1/08, www: icps2008.org

August 20 - 24, 2008, T **International Conference on Hot-Wire (Cat-CVD) Process**, Location: Contact: Karen Gleason, E-Mail: kkgleasn@mit.edu, Deadline: Not Available, www: Not Available

September 7 - 12, 2008, T **Electrical Overstress/Electrostatic Discharge Symposium**, Location: Westin La Paloma, Tucson, AZ, USA, Contact: Lisa Pimpinella, E-Mail: info@esda.org, Deadline: Not Available, www: http://www.esda.org/index.htm

September 9 - 11, 2008, @ **IEEE International Conference on Simulation of Semiconductor Processes and Devices**, Location: Yumoto Fujiya Hotel, Hakone-machi, Japan, Contact: Kazuya Matsuzawa, E-Mail: kazuya.matsuzawa@toshiba.co.jp, Deadline: Not Available, www: http://www6.eie.eng.osaka-u.ac.jp/sispad/2008/

September 21 - 24, 2008, T **International Symposium on Ultra Clean Processing of Silicon Surfaces**, Location: Oud Sint-Jan Convention Center, Brugge, Belgium, Contact: Conference Organizer, MOMENTUM, E-Mail: ucpss@momentum-pco.be, Deadline: 3/31/08, www: http://ucpss.org/

September 21 - 24, 2008, T **IEEE Custom Integrated Circuits Conference**, Location: Double Tree Hotel, San Jose, CA, USA, Contact: Melissa Widerkehr, E-Mail: melissaw@widerkehr.com, Deadline: Not Available, www: http://www.ieee-cicc.org

September 23 - 26, 2008, T **International Conference on Solid-State Devices and Materials**, Location: Tsukuba International Congress Center, Ibaraki, Japan, Contact: Naomi Kutsuna, E-Mail: ssdm@intergroup.co.jp, Deadline: Not Available, www: www.ssdm.jp

Your Career and Networking with IEEE Electron Devices Society AdCom Members

-by Ravi Todi

Come join us on Sunday evening, 9 December, 5:00-7:00 p.m. at the Washington Hilton and Towers Hotel for an EDS sponsored, career development strategy session, especially designed for graduate students and young professionals, who are Graduates of the Last Decade (GOLD). The session includes a seminar on career development strategies in today's globally competitive world and a panel discussion focusing on career options and career path selection with expert panelists from academia, research, design, development and manufacturing and will be followed by a golden opportunity for you to meet with EDS Officers and Administrative Committee (AdCom) members at a special networking session. Establishing a network with successful EDS AdCom members and enjoying some of the other key EDS benefits (e.g., online access to ED Letters and Transactions and the IEDM proceedings) are some of the primary reasons for joining EDS. This event will be held in conjunction with EDS' flagship conference, the IEEE International Electron Devices Meeting (IEDM), held December 10-12. For information visit the web-site at http://www.his.com/~iedm/.

Mary Ann Bopp, Manager for Career Development at IBM, will present a seminar entitled **Career Development: Imagine the Possibilities.** She will talk about how to approach career development, whether you are tenured in your profession and want to continue to grow in your field of expertise, or you want to change your career path but don't know how to start, or you're fresh out of college and are just beginning your career journey. The discussion will include how to use mentoring as a means to developing your career, no matter whether you work in a small company or large corporation. Leveraging many relationships throughout your career is instrumental in helping you progress along a career path; develop new expertise and skills — or just using a network to "socialize" within the company.

For additional details on this first EDS sponsored GOLD event, please contact EDS GOLD representative, Dr. Ravi Todi at rtodi@ieee.org.