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## 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. All contact information is listed on the back cover page. Whenever possible, e-mail is the preferred form of submission.

### Newsletter Deadlines

<u>Issue</u>	<u>Due Date</u>
January	October 1st
April	January 1st
July	April 1st
October	July 1st

# IEEE Electron Devices Society Newsletter

## 1996 Bipolar/BiCMOS Circuits and Technology Meeting (BCTM)



Photograph courtesy of The Greater Minneapolis Convention & Visitors Association

The 1996 Bipolar/BiCMOS Circuits and Technology Meeting will be held in Minneapolis, Minnesota from September 29 to October 1, 1996. This year's conference will have a short course, evening panel discussions on future challenges and controversial issues, several invited papers on emerging technologies, and a presentation of the best student paper award.

The meeting begins with a short course titled "Design, Measurement, and Modeling for RF and Microwave Integrated Circuits (Case Studies)". The course will have Low-Noise Amplifiers and Mixers as the theme and will discuss circuit design, transistor modeling, and measurements. Three two hour sessions make up the short course. The first session is titled "Design of Bipolar Low Noise Amplifiers and Mixers for Wireless Applications". In this session, an RF Receiver Architecture will be used as a vehicle to describe how specifications for LNA and mixers are defined. Topologies and tradeoffs of the LNAs and mixers will be discussed. The second session is "Bipolar Transistor Modeling for High-speed Circuit Design". Basics of bipolar transistor modeling, operation principles of compact models, compact models for real transistors and parameter extraction and application of circuit design will be discussed. Modeling of parameters which affect noise, non-linearity, and s-parameters will be emphasized. The third session "Device and Circuit Measurements at Microwave Frequencies," will discuss the need for high-frequency measurements, device measurements for transistor modeling: s-parameters,  $f_T$ ,  $f_{max}$

(continued on page 3)

## Your Comments Solicited

Your comments are most welcome. Please write directly to the Editor-in-Chief of the Newsletter at the address given on the back cover page.

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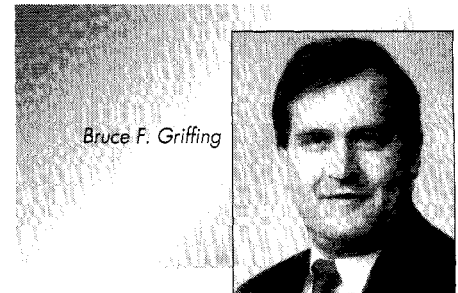
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## 1995 EDS Meetings 'Best Practices' Workshop



Bruce F. Griffing

As I reported last year, the Electron Devices Society sponsors or co-sponsors a large number of technical meetings for the benefit of its membership. These are meetings for which EDS takes responsibility for the meeting's technical content, format, location and finances. During 1995, 42 such meetings were held, and another 53 are scheduled for 1996.

In total, EDS has 69 active meetings for which it provides sponsorship, co-sponsorship or technical co-sponsorship support. EDS also provides non-financial 'cooperation' support for another 33 meetings. A calendar of all 102 EDS meetings for which EDS provides support is included in the *EDS Newsletter* as well as *Electron Device Letters*.

In December of 1994, we held our first Meetings 'Best Practices' Workshop. Our intent was to cross-fertilize our meetings with the best practices of other meetings. We gathered the meeting chairpersons from almost all EDS sponsored or co-sponsored meetings at a workshop coinciding with the International Electron Devices Meeting (IEDM). The first workshop was a good starting point, but needed some improvement.

This past year, we held a second workshop which was attended by 47 representatives from 28 meetings. Having learned from our experience, we were able to make the second workshop much better. We are now well on our way to providing a continuous improvement mechanism for our meetings.

Some of the effects of cross-fertilization fostered by the workshop are apparent in the meetings scheduled for this year. These results range from techniques for abstract evaluation to novel ways to present poster sessions.

If you are involved in organizing an EDS sponsored or co-sponsored meeting, I encourage you to contact Bill Van Der Vort about attending our third Best Practices Workshop. It will be held on Sunday, December 8th in conjunction with the 1996 IEDM at the San Francisco Hilton & Towers Hotel, San Francisco, CA. The Workshop is free of charge. We are looking forward to seeing you there.

### EDS ADCOM ELECTED MEMBERS-AT-LARGE

Term Expires:

1996

B.F. Griffing  
T. Ikoma  
R.P. Jindal  
J.B. Kuo  
J.K. Lowell  
I. Mojzes  
T.H. Ning  
R.J. Van Overstraeten

1997

H.S. Bennett  
J.T. Clemens  
H. Iwai  
J.L. Merz  
K. Tada  
R.J. Temkin  
S. Verdonck-Vandebroek

\*1998

S. Asai  
A.S. Brown  
T.P. Chow  
M.A. Shibib  
R.D. Sivan  
J.M. Woodall  
C.Y. Yang

\* Members elected 12/95

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## Upcoming Technical Meetings

### BCTM

(continued from page 1)

and parasitic extraction; as well as circuit measurements of the LNAs and mixers: Noise, IP3, P1dB, Load and Source Pull for Power measurements.

The paper presentation follows with papers given in the following areas: Design, Radio Frequency Design, Innovative Packaging, Device Physics Modeling and Simulation, Structures and Processes, CAD Tools, and Power Devices and ICs. The Design session will feature papers in analog ICs, Digital ICs, Mixed analog/digital ICs, Novel design concepts and methods, DACs and ADCs, Amplifiers, Integrated filters, Communications ICs, Sensors, Gate arrays, Cell libraries, Analog master chips, and Analog ICs describing novel subsystems within a VLSI chip. The Radio Frequency Design session will contain papers on Low noise amplifiers, Automatic gain control, Low phase noise VCOs, Active mixers, Active gyrators, and Radio subsystems. The Innovative Packaging session is a new session that will deal with new concepts and methods for packaging dense high-speed, high-power analog or digital chips that substantially improve the state of the art. The Device Physics, Modeling and Simulations session covers the following areas: Improved BJT models, Bipolar scaling and limits, Reliability, Electrostatic discharge phenomena, Hot electron phenomena, Measurement techniques, Process monitoring and control, and Process manufacturability. The Structures and Processes session is intended to address: Advances in processes and device structures demonstrating capabilities of high speed, low power, low noise, high current, high voltage, etc.; BiCMOS processes, advanced process techniques - Si, III-V and GeSi heterojunction bipolar/BiCMOS devices. The Cad Tools session is another new session that will feature software tools for placement, routing, cell generation, etc.. Device, process, and circuit simulation software and behavioral modeling techniques and tools will also be addressed. The final session of Power Devices and ICs will contain papers on discrete and integrated bipolar/BiCMOS power devices and high-voltage ICs, Automotive electronics, disc drives, display drives, power supplies, electric utility, medical electronics, motor controls, regulators,

amplifiers, converters and aerospace electronic applications, BiCMOS circuits for controlling power devices, CAD and modeling of power devices.

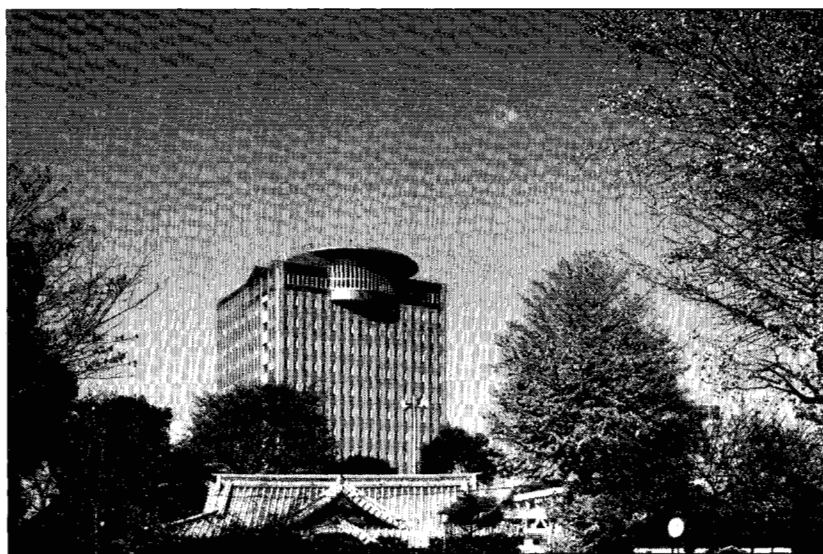
Minneapolis features many beautiful parks and lakes. One can rent a canoe or go running on a jogging path at one of the many lakes. Minneapolis is also the home of the largest fully enclosed retail and family entertainment complex in the United States - The Mall of America. Here you can shop at over 400 stores, ride a roller coaster, shoot a round of miniature golf, or dine in sunlight or candlelight. There are two wonderful zoos and many other tourist

attractions in the Twin cities.

The General Chairman of the 1996 IEEE BCTM is Krishna Shenai of the University of Illinois at Chicago, Chicago, IL, and the Technical Program Chairman is Tad Yamaguchi of Maxim, Beaverton, OR. For further information, please contact: BCTM Conference Manager, Janice Jopke (CCS Associates, 6611 Countryside Drive, Eden Prairie, MN 55346; TEL: (612) 934-5082; FAX: (612) 934-6741; E-mail: jjopke@aol.com.

— John Leighton  
VTC  
Bloomington, MN

## 1996 International Conference on Simulation of Semiconductor Processes and Devices (SISPAD'96)



The 1996 SISPAD will be held September 2-4, 1996, in Tokyo, Japan. The conference is a continuation of VPAD previously held in Japan, NUPAD in the USA, and SISDEP in Europe. These three conferences were merged into one international conference that is now called SISPAD. SISPAD is held each year and takes place in turn in Japan, the USA and Europe. SISPAD is aimed at providing an opportunity for scientists, process engineers, device and circuit designers, and CAD developers to present and discuss the latest topics in process, device and circuit simulations for the semiconductor industry.

The 1996 SISPAD will cover a wide range of TCAD and related topics from basic physical and chemical models for processing phenomena and carrier transport to their applications for processing equipment and device design. It also will include computer related topics such as numerical algorithms and user interfaces. Scientists, engineers and others from industry, government and academia from all parts of the world will come together to discuss the latest developments in a wide variety of fields. The participants and attendees will gain deeper understandings of  
(continued on page 4)

## SISPAD'96

(continued from page 3)

the current status and the future prospects for TCAD.

The 1996 SISPAD will have seven oral sessions and one poster session. In each oral session an invited paper will be given by an expert in the field. Several contributed papers, selected by our program committee, will also be presented in each session. In the afternoon poster session on September 3, hot topics are expected to be discussed extensively. In addition to these technical sessions, a welcome party is scheduled on September 3. All conference attendees are invited.

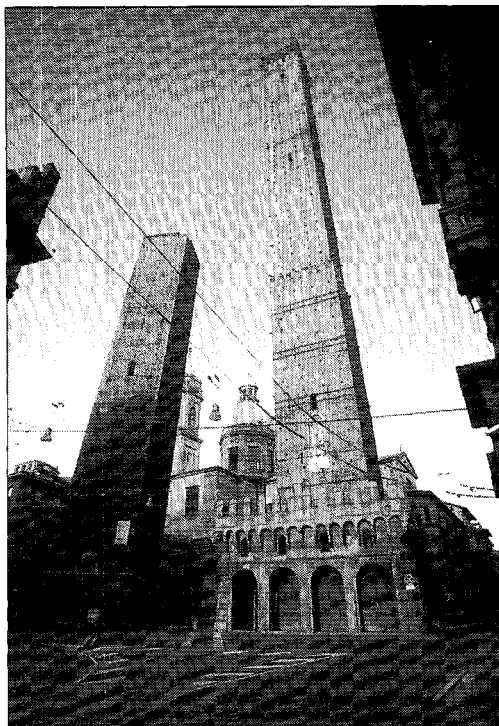
Professor T. Sugano of Toyo University, Japan, will give the keynote address in the 1996 SISPAD Plenary Session. After the Plenary Session, the following sessions are scheduled:

- Equipment Modeling and Simulation
- Device Modeling and Simulation for Si and Compound Semiconductor Devices
- Integration of Process, Device, and Circuit Simulations and User Interfaces
- Process Modeling and Simulation Including Chemical and Physical Phenomena
- Measurement Techniques for Modeling Processes and Devices
- Advanced Numerical Algorithms and Methods for Process, Device, and Circuit Simulations
- Miscellaneous topics

Each of the technical sessions will begin with an invited talk on the present status and future prospects for the topic of that session. The invited talks given here might be slightly changed because they have not been finalized.

- Dr. K. Nakao, Tokyo Electronics, Japan; Wafer process simulation
- Prof. G. Zandler, Muenchen T. U., Germany; Monte Carlo simulations and cellular automata as a new method for simulating small geometry devices
- Dr. J. Mar, INTEL, USA; Effectiveness and role of TCAD from the semiconductor manufacturing viewpoint
- Dr. N. Khalil, DEC, USA; Profile determination by inverse modeling as a method to determine precise two-dimensional impurity profiles in small devices and thereby to confirm process modeling TCAD
- Prof. Selberherr, T. U. Vienna, Austria; Generation of effective meshes for three dimensional simulations
- Prof. P. Losleben, Stanford University, USA; A new research paradigm using the Internet for TCAD

## 1996 European Solid-State Device Research Conference (ESSDERC-96)



The European Solid-State Device Research Conference (ESSDERC) is the most outstanding Euroconference devoted to research in the field of solid-state devices. Over the years, it has strongly contributed to the development of new device concepts and innovative technologies for the fabrication of microelectronics and optoelectronics devices. ESSDERC will be held in Bologna from September 9-11, 1996, and

for the first time, it is technically co-sponsored by the IEEE and the Electron Devices Society (EDS). ESSDERC-96 will be the 26th in a series of annual meetings, and the second to be organized in Italy after the 1987 conference, which took place during the celebration of the 9th Centennial of the University of Bologna.

The Conference traditionally covers 6 subareas: Silicon Devices; Silicon Integrat-

The site for the 1996 SISPAD is Toyo University located in central Tokyo. Toyo University recently built a new high-rise building on its campus. The top floor of this building is available for convention activities. From the 1996 SISPAD conference room, attendees can enjoy the beautiful scenery of downtown Tokyo on a fine day. The campus is situated near Ikebukuro. Ikebukuro is one of the busiest sections in Tokyo, and has many high quality hotels. It is close to Kourakuen, an amusement park offering a variety of entertainment. The many museums in Ueno and historical places, such as Asakusa, are not far from here. As Toyo university is in downtown Tokyo, it is conveniently located near a wide array of activities, such as business and shopping. Short trips to Hakone, Kamakura, and Nikko, and so on, are also available for those who are interest-

ed. All who attend SISPAD'96 will find it a memorable occasion.

Even though the conference will take place in a university setting, the accommodation facilities will be elsewhere. The Secretariat for the 1996 SISPAD has made arrangements at several hotels near Ikebukuro and at other hotels in Tokyo from which transportation to the university is convenient. Thus, attendees can easily enjoy their free time. We look forward to seeing you in Tokyo.

For information concerning registration and accommodations, please contact the Secretariat for SISPAD'96, c/o Business Center for Academic Societies Japan, Conference Dept., 5-16-9 Honkomagome, Bunkyo-ku, Tokyo 113, Japan; TEL: +81-3-5814-5800; FAX: +81-3-5814-5823

— Akira Yoshii

SISPAD '96 Conference Chair

ed Circuit Technology; Process and Device Modeling; Compound Semiconductor Devices and Technology; Sensors, Actuators and Displays; Packaging and Reliability. The Conference has a tradition of excellence which the Organizing and the International Program Committees are striving to perpetuate. The scientific program is being composed under the direction of the Program Committee, chaired by Massimo Rudan. Keynote speakers from Europe, the U.S.A., and Japan have been carefully selected. They include: F. Capasso, AT&T (U.S.A.); W. Fichtner, ETHZ (Switzerland); M. Fischetti, IBM (USA); T. Ikegami, NTT (Japan); B. Murari, ST-Microelectronics (Italy); A. Nathan, University of Waterloo (Canada); T. Skotnicki, CNET (France); G. Crisenza, SGS-Thomson (Italy); K. Tsukamoto, Mitsubishi (Japan); J. Lloyd, Lloyd and Thompson (U.S.A.). Other distinguished speakers have been invited; their participation is being confirmed.

In addition to the conference, a related scientific event, a workshop on "Thin-Film Devices for Flat-Panel Displays" organized by Guglielmo Fortunato and Olivier Bonnaud, two leading experts in the field, will be held on September 8 on the University premises. Invited speakers at the workshop include: Ibaraki, Toshiba (Japan); I-Wei Wu, Xerox (U.S.A.); Kanicki, Michigan University (U.S.A.); and Kuriyama, Sanyo (Japan).

At ESSDERC Conferences, the informal exchange of ideas and information between participants is encouraged and much appreciated. The Congress Center, at the Fiera District in Bologna, offers ample space and opportunities for discussion with colleagues.

The Conference's idyllic site, the capital city of Emilia-Romagna, Bologna (population approximately 500,000) is situated at the intersection between northern and central Italy. Medieval buildings and churches line the streets of one of the best preserved towns in Europe, and highlight its cultural heritage through the ages. A celebrated landmark of the town is the line of porticoes adorning the streets, stretching 40 kilometers. The Conference dinner will be held in Palazzo Re Enzo, a major historical building overlooking Piazza Maggiore, the central square in Bologna. A welcome drink will be offered on September 8 at the Baglioni Hotel. Also, a concert will be available to participants on September 9 in the Aula Magna of the University, formerly the Santa Lucia church. Bologna enjoys easy connections with Venice, Florence and Ravenna, among other cities.

## 1996 International SOI Conference



SOI: silicon-on-insulator, is a technology you've been hearing a lot about recently, but probably haven't seen yet in any of the products you are actually using. Or have you? Is it in the sensor that controls your car's engine temperature? Is it in the satellite electronics that connect your cellular phone to your distant neighbor? Is it in the memory chips that drives your PC? You might be surprised to discover all the products and markets that SOI technology is entering. And where better to learn about SOI than the premier gathering of SOI experts, the 1996 IEEE International SOI Conference?

Beautiful and idyllic Sanibel Harbour Resort and Spa, a luxurious Victorian mansion surrounded by a sanctuary of primitive natural grandeur on Florida's Gulf coast, will be the site of the SOI Conference this year. The Conference, held from

October 1 to 3, 1996, will feature presentations and poster papers on all aspects of current research on silicon-on-insulator materials, devices, and circuits, including material formation and characterization, device physics and modeling, device reliability, process integration and manufacturability, new circuit applications, and novel structures. A Tutorial Short Course featuring state-of-the-art sessions on current topics presented by leaders in each field will precede the Conference on September 30.

The Electron Devices Society-sponsored International SOI Conference, now in its 22nd year, has grown and evolved from its early years as the SOS Workshop. But the Conference has never lost sight of its original goal, namely, to bring together a host of international scientists and technologists in a quiet setting to hear the latest technical developments and share common experiences in an ongoing effort to bring this exciting new technology to its full and timely fruition. Alternating between eastern and western U.S. locales, the Conference has taken great pride in affording its participants an opportunity to learn about the latest advances in silicon-on-insulator technology, while enjoying a secluded retreat showcasing some of America's most scenic landmarks.

Sanibel Harbour, this year's Conference location, overlooks Sanibel and Captiva Islands in one of southwestern Florida's most scenic and rustic coastal locales. Conference visitors will experience  
(continued on page 6)

We have planned an enjoyable accompanying-person program comprising visits to these cities, ensuring an interesting and pleasant stay.

I am confident that ESSDERC-96 will be a successful Conference, and I hope that many readers of the EDS Newsletter will be able to participate. For further information, please contact: Herbert Gruenbacher, Conference Chair. TEL: +43-1-58801-8150; E-mail: gruenbacher@vlsivie.tuwien.ac.at.

— Giorgio Baccarani  
University of Bologna  
Bologna, Italy



## SOI Conference

(continued from page 5)

the grandeur of a coastal paradise overlooking miles of pristine beaches and acres of native vegetation. Some 40 percent of the acreage on Sanibel Island and its neighbor Captiva Island is preserved as wildlife sanctuaries. The J.N. "Ding" Darling National Wildlife Refuge, located on the north side of the island and encompassing more than 5,000 acres of wetlands, lists more than 200 species of birds as residents. Sunning, shelling, fishing, boating, swimming, golf and tennis are the activities of choice at Sanibel.

The Conference will focus on recent developments in silicon-on-insulator technologies, which show continuing promise of supplanting bulk CMOS for many applications, such as low-power, high-performance digital applications, integrated optoelectronics, smart power, or operation in high-temperature environments. DRAM manufacturers have begun looking at SOI due to its inherent low-leakage, simple capacitor structures, SEU immunity, and

low-voltage operation. A number of challenges continue to confront the development of SOI technologies, including the formation and characterization of ultrathin SOI films, accurate modeling of floating body and temperature effects, and the reliable manufacture of thin buried oxides and 3-dimensional structures. These and other issues will be discussed by researchers from industry, universities, and the government communities during the scheduled Technical Sessions at this year's Conference.

The one-day Short Course preceding the Conference this year will focus on SOI circuit applications. Topics will include degradation mechanisms and characterization techniques in SOI; the current state of SOI DRAM technology; radiation-hardened circuits for space applications; bipolar, smart power devices and sensors; and low-voltage, low-power CMOS/SOI circuit technology. The international panel of expert lecturers will be Sorin Cristoloveanu of ENSERG, France; Yasuo Inoue of Mitsubishi, Japan; Gert Burbach of the Fraunhofer Institute, Germany; James Schwank

of Sandia National Lab, USA; and Jean-Pierre Colinge of the Universite Catholique de Louvain, Belgium. Over 100 conference participants attended last year's ground-breaking first Short Course on SOI fundamentals, and were universally complimentary in their evaluations of the quality and usefulness of the presentations.

The Conference will begin with an invited session featuring papers on the status of SOI substrate material by Harold J. Hovel of IBM Corp., U.S.A.; low-voltage applications of SOI technology by Makoto Yoshimi of Toshiba Corp., Japan; and analog design issues for SOI CMOS by William Redman-White of the University of Southampton, UK. The Technical Program will cover topics of current interest ranging from the preparation and characterization of ultrathin SOI films, modelling of snap-back and other floating-body-related device phenomena, as well as descriptions of new circuit applications such as low power circuits, circuits designed for high temperature operation, or novel optoelectronic devices. A Rump Session on Wednesday evening will feature open discussions, often heated, of current issues in SOI technology development, applications, and manufacturability.

A number of scheduled social events will be held for Conference participants and their guests. These include a welcoming reception on Monday evening, the Conference banquet Tuesday evening, an outdoor cookout Wednesday evening, and a selection of local tours and activities for all participants on Wednesday afternoon. Tours will be available at the nearby Thomas Edison and Henry Ford winter estates, now open to the public. Spouses and guests are invited to take part in the planned activities while attendees are hard at work, or simply to enjoy the local attractions, shopping, and sight-seeing.

So come and join us at this year's International SOI Conference. You are assured of an opportunity to learn a great deal more about this expanding technology from the industry's leading experts, and to relax while enjoying the many attractions of Florida's sunny Gulf coast. We look forward to seeing you there.

For further information about the 1996 IEEE International SOI Conference, please contact: Sandra Grawet, TEL: (310) 316-5153; FAX: (310) 316-0713.

— Donald C. Mayer  
Aerospace Corp.  
Los Angeles, CA

### EDS/JSAP Agreement — EDS Members Can Obtain Subscriptions To The Japanese Journal of Applied Physics

Effective January 1, 1995, the Electron Devices Society (EDS) and the Japan Society of Applied Physics (JSAP) signed an agreement that allows EDS Members to subscribe to the *Japanese Journal of Applied Physics* (JJAP) and JSAP members to subscribe to *Electron Device Letters* (EDL) and *Transactions on Electron Devices* (T-ED) at low 'sister society' rates. This agreement continues to be in effect for 1996 subscriptions.

JJAP consists of two bound editions, Parts 1 and 2. Part 1 is divided into Part 1A and Part 1B and is published monthly. Part 1A is for the regular papers, short notes and review papers. Part 1B is for special issues which contain review and regular papers presented at international conferences, symposia, etc., sponsored by JSAP and accepted according to the standard review process of JJAP. Part 2 is for letters, and is published semimonthly.

The fields of the contributed papers are as follows: superconductors, metals and conductors, semiconductors, magnetic materials, dielectrics, crystals, glasses and amorphous materials, polymers, liquid crystals and biological materials, thin films, surfaces and interfaces, liquids and solutions, and plasmas and gases, including their physics, characterization, preparation, production and application to instrumentation and devices; electric, magnetic and optical properties, mechanical and acoustic properties, thermal properties, including their application to devices and instrumentation; optics and optoelectronics, X-rays and electron, neutron and ion beam including their optics, application and instrumentation; nuclear science, information science, low temperature physics, metrology and quantum phenomena including analysis and application to devices and instrumentation.

If you would like to obtain an order form for JJAP for 1996, please contact the EDS Executive Office listed on page 2.

# Society News

## EDS Officer & AdCom Election Results & Profiles

On December 10, 1995, the EDS AdCom held its annual election of officers and members-at-large. The following are the results of the election and brief biographies of the individuals elected.

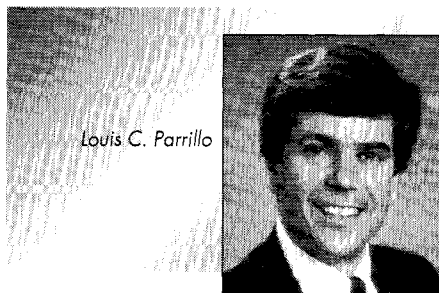
### I. OFFICERS

The following individuals were elected for a one-year term beginning 1/1/96:

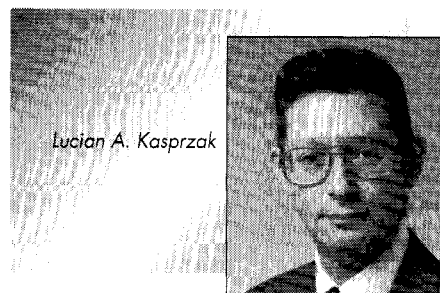
LOUIS C. PARRILLO (President) received a BSEE degree in 1964 from the University of Connecticut, and MSEE and Ph.D degrees from Princeton University in 1967 and 1972, respectively. In 1972, he joined the AT&T Bell Laboratories, Murray Hill, NJ, and worked on semiconductor technology, leading to the development of twin-tub CMOS. In 1984, he joined Motorola in Austin, TX, and in 1988, became Vice President of the Technical Staff and Director of the Advanced Products Research and Development Laboratory, managing over 400 research and support staff responsible for the development and transfer to manufacturing of new CMOS and BiCMOS technologies. In 1992, he and Richard Payne received the EDS J.J. Ebers Award for their contributions to CMOS and Bipolar IC technology. He was General Chairman of the 1990 IEDM. He has published over 40 conference and journal papers, and has 28 issued or pending patents. He is a Fellow of the IEEE.

BRUCE F. GRIFFING (Vice President) is the Manager of the Detector Technologies Lab at GE Corporate Research and Development. He received a B.S. degree in Physics from Miami University in 1972, and a Ph.D. from Purdue University in 1979. He joined the GE Research and Development Center in 1979, and has worked on MOS device physics, optical lithography, CMOS process development, and active matrix displays. He presently manages a group responsible for detectors and optoelectronic devices, primarily for medical imaging. He was Chair of IEDM, and has been the EDS Meetings Chair since 1991.

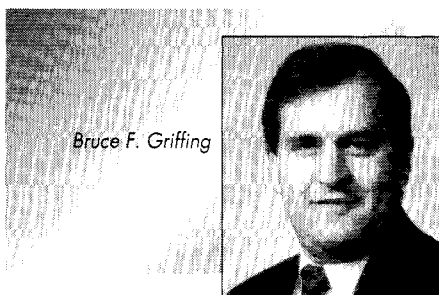
LUCIAN A. KASPRZAK (Treasurer) received a B.S. degree in Physics from the Stevens Institute of Technology in 1965, a



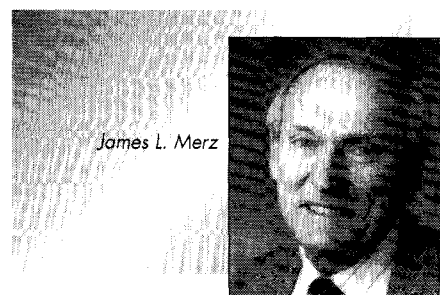
Louis C. Parrillo



Lucian A. Kasprzak



Bruce F. Griffing



James L. Merz

MS degree in Physics from Syracuse University in 1970, and a Ph.D in Materials from the Stevens Institute of Technology in 1972. He joined IBM in 1965, working on failure analysis, MOS and bipolar process development, and VLSI reliability. He has held positions as Reliability Manager, Senior Engineering Manager and Program Manager. He received IBM awards for the discovery of the hot electron effect (1974), and development of a reliable low barrier Schottky diode (1980). In 1992, he joined the faculty of Franciscan University. In 1996, he joined Sterling Diagnostic Imaging, Inc., as Reliability Manager for direct Radiography. He is Chair of the EDS Device Reliability Committee, an EDS representative and board member of the International Reliability Physics Symposium, and was on the Advisory Board for *Circuits and Devices Magazine*. He is the Treasurer of *Transactions on Semiconductor Manufacturing*. He has served as General Chairman and Technical Program Chairman for IRPS. He has 34 publications and 3 patents. He is a Fellow of the IEEE.

JAMES L. MERZ (Secretary) received a B.S. degree in Physics from Notre Dame in 1959, and M.A. and Ph.D degrees from Harvard in 1961 and 1967, respectively. He joined Bell Laboratories in 1966, and in 1978 he went to the University of Cali-

fornia, Santa Barbara, as Professor of Electrical Engineering. He was Director of the NSF Center for Quantized Electronic Structures (QUEST) from 1989 until 1994, when he moved to the University of Notre Dame as Freimann Professor of Engineering. Dr. Merz is a Fellow of the American Physical Society, a Fellow of the IEEE, and was awarded an Honorary Doctorate by Linkoping University, Sweden, in 1993. His present research interests include optical properties of semiconductors, quantum-confined structures, and photonic devices and integrated circuits (PICs).

### II. ADCOM MEMBERS-AT-LARGE

A total of seven persons were elected to three-year terms (1996-1998) as members-at-large of the EDS AdCom. Three of the seven individuals were re-elected for a second term. The backgrounds of the electees span a wide range of professional and technical interests.

#### A. SECOND TERM ELECTEES:

SHOJIRO ASAI received his Ph.D degree in Applied Physics from the University of Tokyo in 1970. He worked in the Central Research Laboratory at Hitachi, Ltd. on semiconductor devices and helped build e-beam exposure systems. He has authored or co-authored more than 50 technical papers.

Shojiro Asai



Dr. Asai is a member of the Physical Society of Japan, the Japan Society of Applied Physics, the Institute of Electronics Information and Communication Engineers of Japan and the American Association of Advancement in Science. He is an IEEE Fellow. He has received the EDS Paul Rapaport Award. Dr. Asai is currently the General Manager of the Advanced Research Laboratory at Hitachi, Ltd.

JERRY M. WOODALL, the Charles William Harrison Distinguished Professor of Microelectronics at Purdue University, received a B.S. in Metallurgy in 1960 from MIT. He was awarded a Ph.D in Electrical Engineering from Cornell in 1982. His present work involves the MBE growth of III-V materials and devices with special emphasis on metal contacts and doping studies. His efforts are recorded in over 200 publications in the open literature, 62 issued US patents, and ten patent applications filed.

Dr. Woodall's accomplishments have been recognized by the 1980 Electronics Division Award of the Electrochemical Society, the 1984 IEEE Jack A. Morton Award, his election to Fellow of the American Physical Society in 1982, his election to President of the Electrochemical Society in May 1990, and his election to the National Academy of Engineering in 1989. He has also been elected to: IEEE Fellow in 1990, Electrochemical Society Fellow in 1992, and American Vacuum Society Fellow in 1994. In addition, he received the 1990 Medard Welch (Founders) Award from the American Vacuum Society, and an IBM Corporate Award in 1992 for the invention of the GaAlAs/GaAs heterojunction.

CARY Y. YANG received his B.S., M.S., and Ph.D degrees in Electrical Engineering from the University of Pennsylvania in 1970, 1971, and 1975, respectively. From 1976 to 1979, he was a research scientist at NASA Ames Research Center and then at Stanford University. In 1979, he founded Surface Analytic Research, Inc. In 1983, he joined the Department of Elec-

Jerry M. Woodall



trical Engineering and Computer Science at Santa Clara University as AMI Associate Professor where he founded the Microelectronics Laboratory and initiated research programs on reliability physics of silicon devices, silicon-based heterostructures, thin dielectrics, and high-T<sub>c</sub> superconductor-on-silicon devices. He is currently Professor of Electrical Engineering and Director of the Microelectronics Laboratory at Santa Clara.

Dr. Yang is a Senior Member of the IEEE, and a member of the Materials Research Society. He has been serving as the Sections/Chapters Chairman, and as an elected member of the IEEE Electron Devices Society Administrative Committee. He has authored or co-authored over 100 journal conference proceedings on silicon carbide and related materials, and is a co-author of a book on hot-carrier effects in MOS devices.

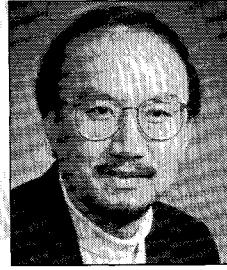
#### B. NEW ELECTEES:

APRIL S. BROWN received her B.S.E.E. from North Carolina State University in 1981, and her M.S.E.E. and Ph.D from Cornell in 1984 and 1985, respectively. She worked for one year as an Assistant Professor at the University of Michigan.

April S. Brown



Cary Y. Yang

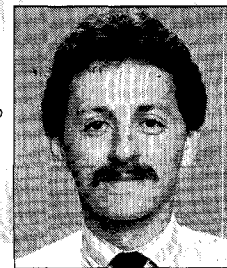


She then joined Hughes Research Laboratories, where she worked on the development of InP-based materials and devices. She subsequently spent one year at the Army Research Office in the Physics Division. In 1989, she rejoined Hughes as Section Head and Senior Scientist. In 1994, she joined Georgia Institute of Technology School of Electrical and Computer Engineering as an Associate Professor.

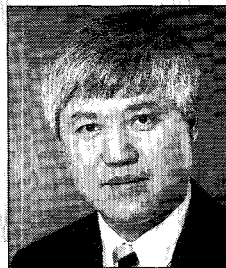
T. PAUL CHOW received his B.A. degree in Mathematics and Physics (summa laude) from Augustana College, Sioux Falls, SD. In 1975, he received his MS degree in Materials Science from Columbia University and Ph.D in Electrical Engineering from Rensselaer Polytechnic Institute (RPI), Troy, NY in 1982. He worked at General Electric Corporate Research and Development Center from 1982 to 1989. Since 1989, he has been on the faculty of the Electrical, Systems and Computer Engineering Department of RPI as an Associate Professor. His present research interests are in high-voltage power devices, VLSI metallization, and in wide bandgap compound semiconductors.

Dr. Chow has published over 50

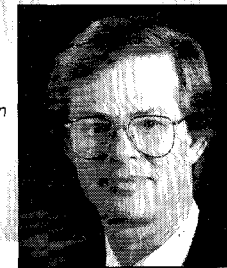
M. Ayman Shibib



T. Paul Chow



Richard D. Sivan





papers in refereed scientific journals, presented over 70 conference talks, and holds over ten patents. He is a member of the Electrochemical Society and the IEEE. He is also presently the Solid State Power Editor for the *IEEE Transactions on Electron Devices*.

M. AYMAN SHIBIB received a PhD in Electrical Engineering in 1979 from the University of Florida and was an Adjunct Assistant Professor there from 1979 to 1980. In 1980, he joined the AT&T Bell Laboratories technical staff in Reading, PA and was instrumental in the development and introduction to manufacturing of the first 600 volt IC used in AT&T's #5ESS(tm). He has authored more than 30 technical articles, holds five US patents and has several patents pending. He is the chairman of EDS Technical Committee on Power Devices and is an EDS distinguished lecturer in the power IC field. He has been on the technical committees of several IEEE conferences such as IEDM, ISPSD, and PESC.

RICHARD D. SIVAN is the Director of Motorola's Semiconductor Technologies Laboratory (STL). He is responsible for the development of state-of-the-art silicon technologies that support low power communication products and Motorola's expanding micro-controller portfolio. Embedded non-volatile memory development is a key part of STL's charter. From 1986 to 1994, Rick was responsible for the development of several generations of Motorola's Fast SRAM technologies including 1um (256Kb), 0.5um (4Mb), 0.35um, and 0.25um generations.

Rick began his career in the silicon industry in 1980 as a member of the technical staff of Bell Laboratories, Murray Hill. He is the inventor or co-inventor on 14 patents and author or co-author of more than 20 refereed publications or invited presentations. Rick is a Senior Member of the IEEE and past General Chairman of the International Electron Devices Meeting.

— Michael S. Adler  
General Electric Company  
Schenectady, NY

## EDS Members Elected to the IEEE Grade of Fellow Effective January 1, 1996

### SANJAY KUMAR BANERJEE

For contributions to physics of semiconductor devices used in three-dimensional integrated circuits, and low temperature silicon-germanium epitaxy using non-thermally-assisted chemical vapor deposition.

### IVOR BRODIE

For pioneering research in the field of physical electronics, including thermionic emission, field emission, electrographics, electron beam lithography and displays.

### MAU-CHUNG FRANK CHANG

For pioneering work in processing technology for manufacturing heterojunction bipolar integrated circuits.

### HARRY K. CHARLES, JR.

For leadership in electronics packaging technology for space, marine and biomedical electronic systems.

### E.J. CRESCENZI, JR.

For contributions to the development of microwave amplifiers, integrated circuit technology, and miniature receivers for defense applications.

### SUPRIYO DATTA

For contributions to the understanding of electronic transport in ultrasmall devices.

### JOHN M. GOLIO

For contributions to the characterization, parameter extraction, and modeling of microwave transistors.

### WEBSTER E. HOWARD

For pioneering contributions in two-dimension electron gas in silicon inversion layers, and contributions to flat panel displays.

### ROGER T. HOWE

For seminal contributions to microfabrication technologies, devices, and microelectromechanical systems.

### ALFRED C. IPRI

For leadership in the development of IC and display SOI devices and technology.

### KIYOO ITOH

For seminal and sustained contributions to high-density dynamic DRAMS.

### AKINOBU KASAMI

For contributions to, and technical leadership of, the development of red and green LED's and red visible laser diodes.

### PING K. KO

For contributions to MOS device physics, especially hot carrier effects and device modeling for circuit simulation.

### HIROYOSHI KOMIYA

For contributions to the development and operation of a fully automated semiconductor manufacturing line.

### JEAN-PIERRE LEBURTON

For contributions to nonlinear electronic transport and size quantization in semiconductor quantum wells, quantum wires, and quantum dots, and the theory of the index of refraction in superlattices.

### HAE-SEUNG LEE

For contributions to CMOS high accuracy data converters.

### ALAN GERALD LEWIS

For contributions to advanced complementary metal oxide semiconductor device physics and circuit design for large area microelectronics and very large scale integration.

### KURT E. PETERSEN

For pioneering contributions and successful commercialization of microelectromechanical systems.

### GARY Y. ROBINSON

For contributions to the field of microelectronics materials.

### NELSON SIMON SAKS

For contributions to the understanding of the basic mechanisms of radiation damage in metal-oxide-semiconductor devices.

### ASHWIN H. SHAH

For significant contributions to memory designs, architecture, and technology.

### BING J. SHEU

For contributions to signal processing and neural network systems using VLSI processors.

### CHRISTOPHER M. SNOWDEN

For pioneering work on the development and application of physical models to the design of microwave and millimeter-wave semiconductor devices and circuits.

### TORU TOYABE

For contributions to numerical device modeling and physics of metal-oxide-semiconductor devices.

### NEIL HARRY EARLE WESTE

For contributions to the methods of design of full custom integrated circuits.

### DAVID O. YEVICK

For contributions to the numerical simulation of guided-wave components and devices and to the theory of optical processes in semiconductors.

## 1994 T-SM Best Paper Award

The IEEE Transactions on Semiconductor Manufacturing Best Paper Award is presented to the authors of the paper considered by the Transactions' Editorial Staff and reviewers to be the most outstanding paper published during the year. The Award is based on the accuracy, originality, and importance of the technical concept, as well as the quality and readability of the manuscript. The Best Paper award also takes into consideration the immediate or potential impact that this work will have on the overall semiconductor manufacturing industry.

The Transactions on Semiconductor Manufacturing Best Paper Award, presented at the annual Advanced Semiconductor Manufacturing Conference and Workshop, recognizes the ongoing partnership of this conference and the IEEE.

The Editorial Staff is pleased to announce that the paper entitled "Extraction of Defect Size Distributions in an IC Layer Using Test Structure Data" by J. B. Khare, W. Maly and M. E. Thomas has been recognized as the best paper published in *Transactions* in 1994. This paper, which appeared in the August issue, has been chosen because it represents a novel and practical method to collect data that improves the accuracy of yield models. The ability to accurately model the yield of a product creates opportunities to increase bottom line profitability. The editorial staff believes this work could modify the methodology used in modern yield enhancement programs by coupling the defect density with the defect size distribution data.

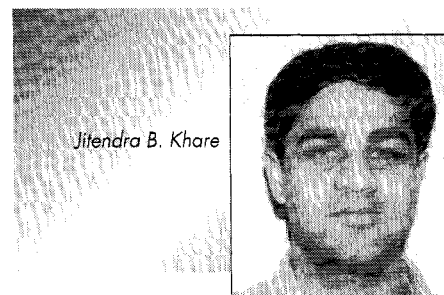
JITENDRA B. KHARE (S'92) received a B.Tech. degree from the Indian Institute of Technology, Bombay, India, in 1987, and a M.S. degree from Carnegie Mellon University, Pittsburgh, PA, in 1989.

Presently, he is pursuing a Ph.D. degree

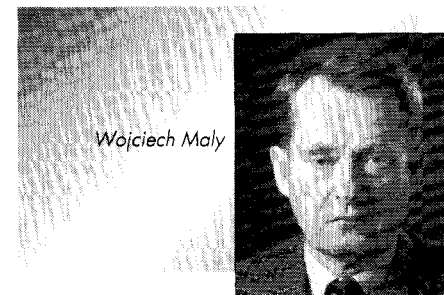
in Electrical and Computer Engineering at Carnegie Mellon University. He has spent a year working at the Fairchild Research Center of the National Semiconductor Corporation, Santa Clara, CA, and has also been a visiting scientist at the Central Research Laboratories of Siemens A.G. in Munich, Germany. His interests include defect modeling and characterization, IC yield modeling, computer-aided design for manufacturability and testing, and large area integrated circuits.

WOJCIECH MALY (M'84-F'91) received a M.Sc. degree in Electronic Engineering from the Technical University of Warsaw, Poland, in 1970, and a Ph.D. degree (with honors) from the Institute of Applied Cybernetics, Polish Academy of Sciences, Warsaw, Poland, in 1975. From 1970 to 1973, he was with the Institute of Applied Cybernetics. In 1973, he joined the Technical University of Warsaw, where he was appointed Assistant Professor in 1975. Since September 1983, he has been with Carnegie Mellon University, where he is a Professor of Electrical and Computer Engineering and Co-director of the SEMATECH Center of Excellence. He is an Associate Editor of the *IEEE Transactions on Computer-Aided Design*. His research interests are in computer-aided design, testing, and manufacturing of integrated circuits. Dr. Maly has received various awards, including the 1992 SRC Technical Excellence Award, SRC Inventor Recognition Awards, the Benjamin Richard Teare Teaching Award (from CMU), the AT&T Foundation Award for Excellence in Instructing of Engineering Students, and the Best Paper Award from the 1990 International Test Conference.

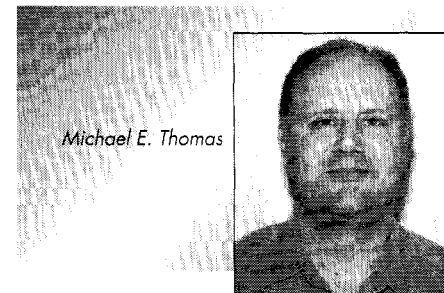
MICHAEL E. THOMAS was born in Detroit, Michigan, in 1951. He received both a B.S.E. in Metallurgical Engineering and a B.S.E. in Chemical Engineering from



Jitendra B. Khare



Wojciech Maly



Michael E. Thomas

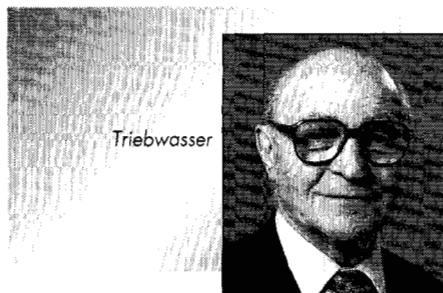
the University of Michigan, Ann Arbor, in 1973, and M.S.E. and Ph.D. degrees in Materials Science and Engineering from Stanford University, Stanford, CA, in 1975 and 1980, respectively. Since 1979, he has been involved in thin film conductor and dielectric research at the Fairchild Research Center of National Semiconductor Corporation, Santa Clara, CA. He has worked extensively in the development of multilevel interconnect systems for high performance bipolar BICMOS integrated circuits. He has also performed studies on high temperature and micro-coaxial interconnect systems. His present interests are focused on optimizing the manufacturability of high performance submicron interconnect technologies with minimum feature sizes at or below 0.5µm. At present, he is a Senior Member of the Research staff and the Engineering Project Manager for Multilevel Interconnect Research. He has approximately 30 technical publications and holds 28 patents associated with interconnect, manufacturing, and semiconductor process technology.

— Gary C. Cheek  
Analog Devices, Inc.  
Wilmington, MA

### Chapter Subsidies for 1997

Requests for subsidies from Chapters are due on August 1, 1996. Last year the EDS AdCom awarded funding for 1996 to 28 Chapters, with amounts ranging between U.S. \$250 and U.S. \$1,000. Letters to Chapter Chairs were sent in April, 1996, notifying them of the current funding cycle. A list of guidelines was enclosed with each letter. In general, activities which are considered fundable include, but are not limited to: membership promotion, travel allowances for invited speakers to Chapter events, and support for student activities at local institutions. Letters requesting subsidies should be sent to the EDS Executive Office at the address given on page 2. Final decisions on awards will be made by the EDS Sections/Chapters Committee by early October.

## Triebwasser Wins the 1996 IEEE Engineering Leadership Recognition Award



Triebwasser

Sol Triebwasser, an EDS member, will receive the 1996 IEEE Engineering Leadership Recognition Award for his pioneering leadership in the development of MOSFET technology and its application to large-scale integration.

Dr. Triebwasser received his Ph.D. in Physics from Columbia University in 1952. He joined IBM in 1952, and contributed to various areas of solid-state physics, including ferroelectricity, photoconductivity, injection lasers and MOS device physics. From 1957 to 1989, he was responsible for various applied research projects in the research division of IBM, including large-scale integration and semiconductor device research, and was the MOS Program Manager in the Advanced Silicon Technology Laboratory.

During the latter half of the sixties, Dr. Triebwasser was in charge of a major program in large-scale integration involving four of IBM's world-wide laboratories. In the course of this project, many of the foundations of today's microelectronics industry were laid, including the development of NMOS technology, logic and memory circuit designs, placement and wiring automation programs, optical and electron-beam lithography, and the invention of the one-transistor DRAM cell. Many of the contributions and the project participants have

been recognized by the industry and by IBM.

Dr. Triebwasser is a member of Sigma Xi, a Fellow of IEEE, the American Physical Society, and the American Association for the Advancement of Science. He has served as Chairman of the IEEE Awards Board and Chairman of the International Solid-State Circuits Conference. He has also served on the Advisory Board of the IEEE *Circuits and Devices Magazine*, the IEEE Publications Board, and the Solid-State Circuits Council.

— Tak H. Ning  
IBM Research Center  
Yorktown Heights, NY



Robert Egbert, Eta Kappa Nu Vice President, is presenting EDS member, Dr. Susan M. Lord, with an honorable mention certificate from Eta Kappa Nu as 1995 "Outstanding Young Electrical Engineer," while Maurice Aburdene, Chair of the Electrical Engineering Department at Bucknell University, looks on.

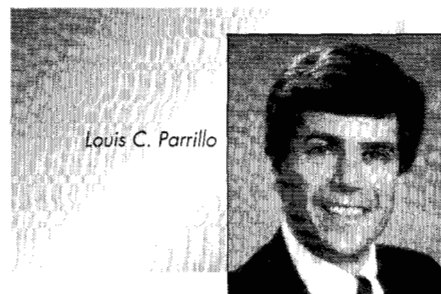
## EDS Members Elected to the U.S. National Academy of Engineering

Louis C. Parrillo and Lewis M. Terman, both members of EDS and Fellows of IEEE, were among 78 engineers elected to the U.S. National Academy of Engineering (NAE). Established in 1964, the NAE is a prestigious honorary organization for the encouragement of engineering research. It shares with the U.S. National Academy of Sciences the responsibility for advising the U.S. federal government. Election to the NAE is one of the highest professional distinctions accorded an engineer. Academy membership honors those who have made important contributions to engineering theory and practice, and those who have demonstrated unusual accomplishment in the pioneering of new and developing fields of technology. Including the newly

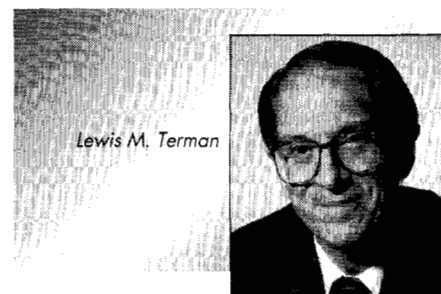
elected members, the total U.S. membership in the NAE is 1,841.

Dr. Parrillo was recognized for his contributions to device and fabrication technology for integrated circuits. He is currently Corporate Vice President of the Technical Staff and Director of the Advanced Products Research and Development Laboratory of Motorola, Inc. Dr. Parrillo is the current EDS President.

Dr. Terman was recognized for his contributions to semiconductor memory, circuits and technology. He is currently Program Manager of CMOS Design Programs at IBM's Thomas J. Watson Research Center. Terman was the EDS President in 1990 and 1991.



Louis C. Parrillo



Lewis M. Terman

## Regional and Chapter News

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

#### ED Dallas Chapter

— by Zeynep Celik-Butler

It has been a very busy year for the ED Dallas Chapter. During the period of October 1995 to April 1996, we held 5 technical meetings with very diverse topics ranging from Digital Micromirror Displays to Overview of Beijing ED Society Activities. Our first meeting speaker was Dr. Carole Graas from Texas Instruments who talked about New Direction in Test Methodology for Interconnect Reliability Optimization. The November meeting talk was given by Gary Feather of Texas Instruments who summarized the Digital Micromirror Display Activities at T.I. Dr. Gary Frasier, the January speaker, talked about the research on Nanoelectronics. Micromechanical Switches for Routing Microwave Signals was the topic of our February meeting given by Dr. John Randall of Texas Instruments Inc. Our April meeting was highlighted by Dr. Han C. Hu of the Beijing Vacuum Electronics Research Institute. He discussed the activities of the ED Beijing Society.

— Elias Towe, Editor

#### ED Lehigh Valley Chapter

— by M. Ayman Shibib

The Lehigh Valley Section's EDS Chapter continued the series of meetings based on the IEEE video courses borrowed from the EDS Library. Meetings were held on February 16 and March 15. The Feb. 16 meeting was on "Device Reliability", and was attended by 45 people from the Allentown and Reading areas, despite inclement weather. The March 15 meeting was on "Silicon-On-Insulator", and was attended by 25 people. The two meetings were held at the Lucent Technologies (formerly AT&T Microelectronics), facility in Reading, and were chaired by M. Ayman Shibib, the Chapter Chairman. A third meeting was held on May 3rd, 1996, in Reading, with the topic being "Technologies for Portable Systems".

The Lehigh Valley Chapter is supporting an initiative by the State of Pennsylvania to establish a semiconductor manufacturing center in Eastern Pennsylvania in collabo-

ration with industry and universities in the region. The main focus of the new center is the training of students and workers from other industries in the field of semiconductor manufacturing. By focusing mainly on areas that are needed by existing semiconductor manufacturers, the center will help students and workers who want to gain skills in this field. It will also address the needs of industry by redressing the shortage of skilled professionals as expressed by the President of Lucent Technologies - Microelectronics at the recent SEMI conference.

An initial meeting to discuss the proposed center was arranged by Dr. Fadel Selim, a consultant and adjunct professor at Drexel University in Philadelphia. The meeting was attended by industry representatives, university professors and EDS Chapter Chairman M. Ayman Shibib. The results of the meeting and recommendations on action plans will be submitted to the Governor of Pennsylvania's Office.

— M. Ayman Shibib, Editor

#### Report of the 1996 Workshop on CMOS Imaging Technology

— by Dan MacGrath

The 1996 Workshop on CMOS Imaging Technology was held as part of the Solid State Circuits Council's series on critical technology before the ISSCC on February 7th, at the San Francisco Marriott. It was an intensive one day workshop organized around eight 30-minute talks, with discussion periods after talks, at the sit-down lunch, during breaks and at a closing social hour. The attendance was limited to the 120 participants who had preregistered. Participants with experience in imaging mixed with those experienced in analog circuit design, and with those looking critically at CMOS imaging to meet product needs.

CMOS image technology is emerging as a challenger to CCD image sensors for use in electronic imaging products. The workshop was an attempt to stand back from the emotion of this debate and provide a forum for practitioners to discuss how they are doing imaging with CMOS, and for others to be exposed to this discussion in order to ascertain how they might make an impact on the technology, or how the technology might impact them. There were presentations regarding the CMOS image sensor architectures that have been

implemented at VLSI Vision Ltd., Jet Propulsion Laboratory, Polaroid Corporation, and AT&T Bell Laboratories, as well as the architecture pursued in computational sensors from the Centre Suisse d'Electronique et de Microtechnique SA. A color camera designed at AT&T Bell Laboratory was discussed. Two other talks examined the nature of noise and the impact of CMOS process scaling on image sensor design. Work is underway to make the slides from most of the talks available through the Web, accessible either through the Electron Devices Society or Solid State Circuits Council pages.

#### Report of 1996 Multi-Chip Module Conference (MCMC)

— by David Tuckerman

The conference was held on February 5-7 at Santa Cruz. This year's technical program consisted of 33 papers (3 invited) which were selected from approximately 50 worldwide submissions. The technical sessions covered the following topics in multichip module (MCM) technology: Infrastructure Issues, New MCM Applications, Flip-Chip MCMs, Mixed Signal MCMs, Poster Session, Electrical Design, Design Optimization, Computer-Aided Design, Advances in MCM Technology, and Modeling of Interconnect.

In addition to the technical sessions, there was a day of tutorials covering the following topics of current interest: "Known Good Die", "Chip-Size Packaging Developments", and "MCM-V (3-dimensional MCMs)".

The conference had approximately 130 attendees. Next year's conference will be held in the same location, on February 3-5, 1997. For further information on next year's conference, please contact: Prof. Paul Franzon E-mail: paulf@ncsu.edu.

— Paul K. L. Yu, Editor

### Europe, Middle East & Africa (Region 8)

#### ED/MTT France Chapter

— by Robert Adde

The Chapter's main event in 1996 is its participation in the organization of the 4th European Gallium Arsenide and related III-V Compounds Applications Symposium (GAAS 96) in Paris, France, June 5-7,

1996. The Conference Chairman, Christian Rumelhard, and the Conference Secretary, Daniel Pasquet, are Chapter Bureau members. The Chapter, along with MTTs and EDS, brings technical co-sponsorship to the Meeting which includes 7 invited papers and 69 communications. A European Workshop with 16 review contributions is associated to GAAS 96 on the CAD Microwave Aspects of Electronic and Optoelectronic Circuits using III-V compounds. Its organizer, Philippe Dueme, is also a Chapter Committee member. This workshop is organized every year in a different country. This year the meeting will be held in France, bringing together engineers working both on electron devices and microwave theory and techniques.

The Chapter starts an IEEE membership campaign in 1996 which will continue in 1997. The main goals are to increase student membership, membership in every company/university laboratory having ED or MTT related activity, and senior membership.

For further information, please contact: Chapter Chair Dr. Robert Adde, IEF Bt 220, UPS, 91405 Orsay, TEL:33-1-69-41-78-50; FAX: 33-1-60-19-25-93; E-mail: adde@ief-paris-sud.fr or r.adde@ieee.org

### ED Germany Chapter

— by Klaus Heime

The Germany ED Chapter and AP/MTT Chapters have recently decided to form a joint Germany AP/ED/MTT Chapter. The aim is to concentrate and intensify IEEE efforts in Germany. For further information, please contact: Prof. Klaus Heime, RWTH Aachen, D-052056 Aachen; TEL:+49 241 807746 FAX: 49-241 8888199; E-mail: mailbox@enterprise.rwth-aachen.de.

### ED Central and South Italy Chapter

— by Paolo Spirito

The Chapter will technically co-sponsor the IEEE International Conference on Microelectronic Test Structures (ICMTS'96) in Trento on March 1996. For further information, please contact: Chapter Chair, Dr. Paolo Spirito, Univ. Naples; FAX: 39-81- 5934448; E-mail: spirito@dispo.dis.unina.it.

### ED Spain Chapter

— by Ramon Alcubilla

The ED Spain Chapter held its first meeting on October 24, 1995. Besides the election procedure, the possibility of organizing a Spanish ED Conference was studied. For further information, please contact: Chapter

Chair, Prof. Ramon Alcubilla, FAX: (93)4016757; E-mail: alcubilla@eel.upc.es

— Robert Adde, Editor

### AP/ED/LEO/MTT UKRI Joint Chapter

— by Terry Oxley

The following principal officers have recently been (re-) elected for office as from March 1996. Chairman: Neil Williams, ERA Technology Ltd.; Vice-Chairman: Ali Rezazadeh, King's College London; Treasurer: John Thraves, Consultant; Secretary: Carson Stewart, Queen's University of Belfast; and Publicity: Steve Nightingale, Racal Radar Defense Systems Ltd. The Chapter has a very full program for 1996, with more than 20 events planned so far. In its lecture series the Chapter particularly welcomes: Peter Zory from the University of Florida, U.S.A., as LEOS Distinguished Lecturer; Ralph Levy from R. Levy Associates Microwave Engineering Consultants, U.S.A.; and John Bandler from Optimization Systems Associates Inc. Canada. At the time of submitting this report, four evening presentations had been held at various centres in the U.K., including "Microwave Superconducting Circuits" by Mike Lancaster, Birmingham University at Manchester; "Quasi-Optical Active Antennas" by Peter Hall, University of Birmingham in London; and the LEOS Distinguished Lecture on "Blue-Green Quantum Well Lasers" by Peter Zory in London and Manchester.

The remaining preliminary program of activities for the year is briefly summarized below:

- 13th September - UMIST Manchester

The "2nd High Frequency Postgraduate Student Colloquium", jointly sponsored by the Chapter and UMIST with technical co-sponsorship support from EDS and cooperative support from IEE. For further information, please contact: Rob Sloan, Dept. Electrical Engineering & Electronics, UMIST, PO Box 88, Manchester, M60 1QD; Tel: 0161-200-4640; Fax: 0161-200-4820; E-mail: sloan@UMIST.ac.uk.

- 18th September - King's College London

Lecture TBA

- 30th September to 4th October - King's College London, University College Dublin, Queen's University Belfast, UMIST Manchester, University of York Lecture "Microwave CAD with EM Optimization" by John Bandler Optimization Systems Associates Inc., Canada

- 7-9th October - Edinburgh International Conference Centre.

The EUREL International Conference on

"Abandoned Land Mines - A humanitarian imperative seeking solution", organized by the IEE with the Chapter cooperative support. Contact: "MD96" Secretariat, Conference Services, IEE Savoy Place. Tel: 0171-240-1871; Fax: 0171-240-8830.

- 7th October - ERA Technology Ltd, 14th October - University of Leeds

Lecture "Syntheses of General Filters for Modern Communication Systems" by Ralph Levy, R. Levy Associates, Microwave Engineering Consultants, U.S.A.

- 8-10th October - Wembley Conference Centre, London

Chapter Membership Stand at Microwaves and RF Conference and Exhibition 1996 (M+RF'96)

- 25-26th November - Weetwood Hall, The University of Leeds

The "4th Int. Workshop on High Performance Devices for Microwave and Optoelectronic Applications" (EDMO'96), jointly sponsored by the Chapter and The University of Leeds with technical co-sponsorship support from EDS and co-operative support from MTTs. For further information, please contact: Stavros Iezekiel, Dept. Electronic & Electrical Engineering, University of Leeds, Leeds LS2 9JT; Tel: 0113-233-2088; Fax: 0113-233-2032; E-mail: s.iezekiel@elec-eng.leeds.ac.uk.

- 27th November - IEE Savoy Place, London

"Tutorial on MMICs" - organized by the IEEE in cooperation with the Chapter.

- 28th November - IEE Savoy Place, London

Workshop on "Microwave and Millimetre-Wave Communications" (M3COM) - organised by the IEEE in cooperation with the Chapter

- Wednesday 4th December - King's College London

Lecture "EMC" by Professor Chrisopoulos, University of Nottingham For further information, please contact: Chapter Chair Dr. Neil Williams, ERA Technology Ltd, Cleeve Road, Leatherhead, Surrey KT22 7SA, UK.; TEL: +44 1372367061; FAX: +44 1372 367099; E-Mail: info@era.co.uk.

— Terry H. Oxley, Editor

### ED Romania Chapter

— by Gheorghe Brezeanu

The Romania ED Chapter organized a technical meeting on January 26, 1996 at the Electronics and Telecommunications Department of the University "Politehnica" of Bucharest. Dr. Eleonor Oprinis from Berkeley University, U.S.A. delivered a lecture on "Recent Advances in Analog Inte-



grated Circuits". More than 25 participants discussed the topic after the presentation. Starting in February this year, the majority of ED Chapter members participated in the organization of the 1996 International Semiconductor Conference (CAS'96) as Organizing Committee or Scientific Committee members. It is believed that this upcoming conference to be held on October 9-12 in Sinaia, Romania will enjoy the same large international participation as the previous ones. For further information, please contact: Chapter Chairman, Prof. Gheorghe Brezeanu, Dept. of Electronics & Telecom., University "Politehnica" of Bucharest, Str. Armata Poporului 1, Romania; TEL: 40-1-410-54-00/152; FAX: 40-1-410-47-40; E-mail: rusu@gef.pub.ro.11.

### **MTT/ED Saratov-Penza, Russia Chapter**

— by Michael V. Davidovich

The MTT/ED Saratov-Penza Chapter was formed on July 11, 1995 under the auspices of the Joint Electron Devices Society (EDS) and Microwave Theory and Techniques Society (MTTS) initiative for the support of new chapters in Eastern Europe and former Soviet Union area. Now the Chapter has 13 members from Saratov State University (SSU), Saratov State Technical University (SSTU), R&D Institute of Measuring Equipments, and the Institute of Radio Engineering & Electronics of the Russian Academy of Science. The Chapter faces difficulties in extending membership due to the high cost of membership fees relative to the local income of scientists. It is hoped that EDS and MTTS will continue to financially support the new members, because more people would like to join the Chapter. Chapter elections were held on February 15, 1996 and the following officers were elected: Chair: Dr. Michael V. Davidovich; Vice-Chair: Dr. Sergey G. Souchkov; Secretary: Dr. Natalya F. Popova; Treasurer: Dr. Boris M. Kats.

Specific Chapter activities started at the beginning of this year. On January 20, 1996, the MTTS and EDS members participated in the "Tenth International Winter School on Microwave Electronics & Radiophysics" in Saratov. Also on July 7, 1996, SSU, in cooperation with the Russian Academy of Science, organized "The International Conference on Nonlinear Dynamics and Chaos" held in Saratov. The Chapter members are technically sustaining the conference "Actual Problems of Electron Device Engineering" (APEDE-96)

to be held on September 10-12 in Saratov. This conference is sponsored by SSU in cooperation with the Russian Committee of Higher School, Popov Russian Scientific Radio Engineering Society and Novosibirsk State Technical University. During this conference, the MTT/ED Chapter will organize the workshop "Electrodynamics, Microwave Heating and Processing of Materials".

Saratov is one of the major industrial, scientific and cultural centers in Russia. It has 13 universities, several R&D institutes and a large scientific and technical community. On this sound basis, it is hoped that the MTT/ED Chapter will gradually grow and develop specific activities to facilitate integration in the IEEE. For further information, please contact: Chapter Chairman, Dr. Michael V. Davidovich, Kirov Square 8, Apart. 169, 410600, Saratov, Russia; TEL: 7-845-2-257750; FAX: 7-845-2-253747; E-mail: m.david@ssu.saratov.su.

### **MTT/ED/AP Bulgaria Chapter**

— by Hristo D. Hristov

MTT/ED/AP Bulgaria Chapter is the first and only chapter to date within IEEE's Bulgaria Section. The first attempts and activities to speed up membership development and to make closer contacts with IEEE officers in order to establish IEEE structures in Bulgaria go back to 1990/91, right after the drastic political and economic changes in Eastern Europe. In 1993, the Bulgarian Open Society (Soros) Foundation sponsored 18 electrical engineers from Varna and Sofia, paying their fees to become IEEE members. As a result, the number of IEEE members residing in Bulgaria exceeded 60, and a national movement for a Bulgaria IEEE Section began.

Meanwhile, the MTT and ED Societies started their co-ordinated programs to help the EE/FSU IEEE member and non-member electrical and electronic engineers. Thanks mainly to the organizational and financial support of the above mentioned transnational programs and the patient work done by many IEEE officers and Bulgarian members-volunteers, the IEEE Bulgaria Section and MTT/ED Bulgaria Chapter were formed on June 24, 1995 and June 26, 1995, respectively. Our chapter expanded on December 7, 1996 into a Joint MTT/ED/AP Bulgaria Chapter. The chapter now numbers 18 members, and it is expected that at least 5-6 new members will be recruited by the end of 1996. The election of chapter officers took place on

November 15, 1996. The officers elected are: Chair: Prof. Hristo D. Hristov, SMIEEE, Dept. of Radiotechnics, Technical University of Varna; Vice-Chair: Prof. Philip I. Philipov, Dept. of Microelectronic Technologies, Technical University of Sofia; Secretary: Dr. Grigori N. Shestak; Treasurer: Mr. Nikolai R. Nikolov.

One of the first activities of the new Chapter was the organization of the 1995 International School on Microelectronics and Microwaves, held on September 26-28, 1995, in the small town Sozopol on the Black Sea coast. This traditional School has gained international popularity in Eastern Europe, and has been held for the past 15 years. Forty-two papers were presented, covering a broad range of topics in microelectronics and microwaves. The School was chaired by Philip I. Philipov, Chapter Vice-Chair.

The Chapter's activities planned for 1996 include lectures and discussions on the latest advances in millimeter wave hybrid IC technologies at Varna Radar Company "Electron", Inc. and TU-Sofia in September 1996 (Distinguished lecturers from ED or MTT are to be invited and specific ED Videotapes Courses will be presented). A technical meeting on CAE in Microelectronics, Microwaves and Antennas at TU-Varna and TU-Sofia was held in June, 1996.

In September, 1996, the International School on Microelectronics, Microwaves and Active Antennas will be organized and sponsored by the Bulgaria MTT/ED/AP Chapter. In addition, the International Conference "ELECTRONICS'96" will be held on October 10-11, 1996, at the Science and Technics Convention Center, Botevgrad, near Sofia. This conference will be organized and sponsored by the IEEE Bulgaria Section. The last event planned is a Microwave and Antenna CAD Workshop to be organized at TU-Varna in November 1996. For further information, please contact: Chapter Chairman, Prof. Hristo D. Hristov, SMIEEE, Department of Radiotechnics, Technical University of Varna; TEL: +359-52-886308; FAX: +359-52-871910; E-mail: ieeechp1@radio.tu-varna.bg.

### **MTT/ED/AP West Ukraine Chapter**

— by Nikolay N. Voitovich

The MTT/ED/AP West Ukraine Chapter was organized in January 1995. Four technical meetings with 7 reports and one 3-day Seminar/Workshop on "Direct and Inverse problems of Electromagnetic and

Acoustic Wave Theory" were held last year. Currently, our Chapter is participating in the preparation of the 5th International Conference "Mathematical Methods in Electromagnetic Theory" which will take place in September, 1996 in Lviv. One meeting was held in March, 1996 with a report from Prof. Dr. H. Posch (University of Vienna, Austria) entitled "Computer Simulation and 2nd Law of Thermodynamics".

At present, a new Chapter is being organized in the Ukraine, having Kiev as its centre. This Chapter will be created within the framework of the MTT/ED Initiative for Aiding Eastern Europe and the FSU. The new Chapter Organizer is Prof. Yuri Poplavko, a famous Ukrainian researcher in the areas of electronics and semiconductors. Most of the members of the new Chapter will have electron devices as their main sphere of interest. The West Ukraine Chapter will support the organizers of the new Chapter in their initial activity. For further information, please contact: Chapter Chairman, Nikolai N. Voitovich, Institute of Applied Problems of Mechanics and Mathematics, National Academy of Sciences, Lviv; Ukraine; FAX: 0038-0322-271216; E-mail: voi@ippmm.lviv.ua.

— Adrian Veron, Editor

## Asia & Pacific (Region 10)

### ED Malaysia Chapter

— by Burhanuddin Yeop Majlis

In July 1996, we will host a short course on "Advanced Microelectronics Packaging and Interconnection-TAB, BGA, Flip-Chip, and Multichip Module Technologies," in Kuala Lumpur. The course will cover fundamental and updated information on microelectronics packaging and interconnect-related technologies, especially in the area of tape-automated bonding (TAB), ball-grid array (BGA), and flip-chip bonding. It will also provide participants with an in-depth review of Multichip Module (MCM) related approaches and status, MCM assembly and test, thermal management, interconnect, case studies, MCM trends, etc. The course instructor is Dr. Tom C. Chung, a Tandem Computer Representative at Microelectronics and Computer Technology Corporation (MCC), Texas, U.S.A.

### ED Hong Kong Chapter

— by Charles Surya

A new EDS executive committee for 1996 was elected in the Annual General Meet-

ing held in December 1995. The new office holders are as follows:

Chairman: Charles Surya (HKPU)  
Tel: (852) 2766 6220  
E-mail: ensurya@polyu.edu.hk  
Vice Chairman: Vincent Poon (HKUST)  
Tel: (852) 2358 7047  
E-mail: eepoon@ee.ust.hk  
Secretary: Peter Lai (HKU)  
Tel: (852) 2859 2691  
E-mail: laip@hkueee.hku.hk  
Treasurer: Kam Tai Chan (CUHK)  
Tel: (852) 2609 8259  
E-mail: ktchan@ee.cuhk.hk  
Technical Program: Hei Wong  
Tel: (852) 2788 7722  
E-mail: eehwong@cityu.edu.hk

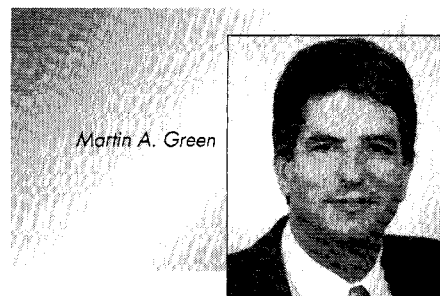
The executive committee is represented by all five universities with an Electronic Engineering Department in Hong Kong. Our hope is to pull the strengths of the different universities together to furnish a better atmosphere for collaboration and to foster interaction among researchers in Hong Kong.

The major projects for this year are the Hong Kong Electron Devices Meeting 1996 (HKEDM'96) and a short course on IC manufacturing technology. HKEDM'96 will be held on June 29, 1996 at the Hong Kong Polytechnic University. Our plenary speaker is Professor Leroy Chang of the Hong Kong University of Science and Technology. He will give a talk on the materials and physics of quantum devices and future trends of the technology. Our invited speaker for the conference is Professor Frank Schwier of Technische Universität Ilmenau, Germany. He will be presenting a paper on "Recent Advances in Si/SiGe HBT Research". A short course on Electronic Packing technology will be held on July 8, 1996 at the City University of Hong Kong. Our speakers are Professor C.P. Wong of the Georgia Institute of Technology and Dr. Anthony Chan of AT&T Bell Laboratories. They will discuss "Polymers for Electronic Packaging" and "Reliability and Stress Testing for Electronic Products".

### ED/LEO Australia Chapter

— by Jagadish Chennupati

Prof. Martin Green, Director of the Centre for Photovoltaic Devices and Systems, University of New South Wales, Sydney, Australia has been awarded the 1995 IEEE Electron Devices Society's J.J. Ebers Award for "Sustained Technical Leadership for the development of Silicon Photovoltaic Device



Martin A. Green

Technology". Prof. Green is a Fellow of the IEEE.

We are organizing the 1996 Conference on Optoelectronic and Microelectronic Materials And Devices (COMMAD) in the Research School of Physical Sciences & Engineering, Australian National University, Canberra. During December 9-11, 1996, COMMAD will provide a forum to present and discuss recent developments in materials growth, processing, and characterisation, as well as device design, fabrication, testing and applications. COMMAD will cover optoelectronic materials such as GaAs, InP, GaN, HgCdTe, LiNbO3 etc. and optoelectronic devices such as lasers, modulators, photodetectors, optical switches, waveguides, SEEDs etc. Microelectronic materials such as Si, SiGe, SiC and devices such as MOSFETs, HEMTs, HBTs etc will also be featured at COMMAD. For further information, please contact: COMMAD 96 Attn: Dr. C. Jagadish, Department of Electronic Materials, Engineering Research School of Physical Sciences and Engineering, Australian National University, Canberra, ACT 0200, Australia; TEL: 61-6-249-0363; FAX: 61-6-249-0511; E-mail: cxj109@phys.anu.edu.au.

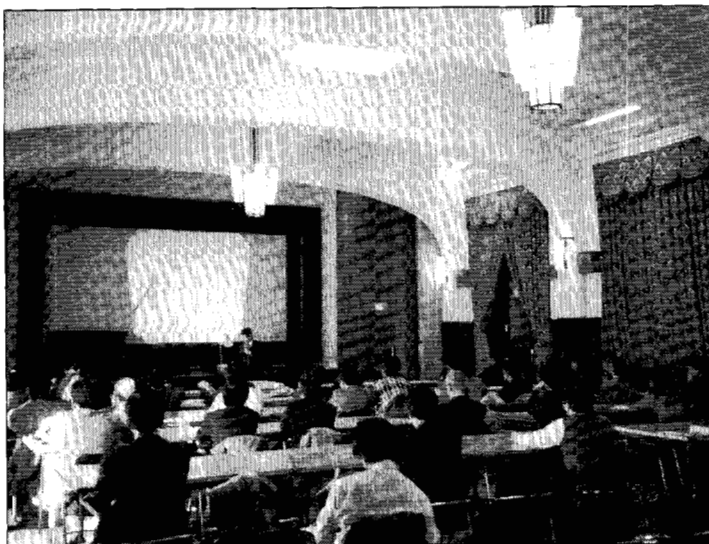
— Cuong Nguyen, Editor

### Message from outgoing Chair and Secretary of Tokyo ED Chapter

— by Hisakazu Mukai and Jun Ueda

In the past two years, as technical field activities, we have twice held technical meetings to review the IEDM. In addition, we have cooperated on many occasions in research meetings held by two groups (ICD, SDM) at the Institute of Electronics, Information and Communication Engineers of Japan, and also on the three International Conferences held in Japan. The last technical meeting to review the IEDM was held on Jan. 12, 1996, just before the Tokyo Chapter general meeting, for those who could not attend the IEDM.

As non-technical meetings, we have exchanged information and opinions with EDS executives and other chapter chair-



Technical meeting to review IEDM

men in Region 10 and have appreciated these chapters' strong intentions to vitalize academic circles. I think it is important for the Tokyo chapter to maintain good relationships with them. In the coming global age, the role of the IEEE will become much more important and the expansion of the IEEE will be required. Happily the number of EDS Tokyo Chapter members began to increase in 1995, after two years of stagnation, and now exceeds 1,000. We would like to express our thanks for the efforts by members to invite new people to join us. I also feel happy to have been able to support as Chapter Chair the nominations and endorsement of chapter members for IEEE technical awards and Fellowships. We hope the IEEE EDS and the Tokyo Chapter will expand in future.

### New Tokyo Chapter Committee for 1996 and '97

— by Hiroshi Iwai

At the Tokyo ED Chapter members' general meeting held in Tokyo on January 12, new committee members for 1996 and '97 were elected as follows: Chair: Prof. C. Hamaguchi of Osaka Univ. (Former Vice Chair); Vice Chair: Dr. H. Watanabe of NEC; Secretary: Prof. K. Taniguchi of Osaka Univ. (Former Treasurer); Treasurer: Dr. M. Fukuma of NEC. Dr. H. Mukai (Former Chair) and Dr. J. Ueda (Former Secretary) retired from the committee. On behalf of the Tokyo Chapter members, I would like to thank them for their outstanding contribution to the chapter. Contact information for the new secretary is: Prof. Kenji Taniguchi, Electronic Eng. Osaka Univ., Suita, 565, Japan, TEL: +81-6-879-7766; FAX: +81-6-875-0506; E-mail: taniguti@ele.eng.osaka-u.ac.jp.

### Tokyo Chapter Joint Technical Meeting with IEICE

— by Kenji Taniguchi

The schedule of the Chapter's joint technical meetings with two groups (SDM and ICD) of IEICE (Institute of Electronics, Information, and Communication Engineers) of Japan is as follows:

Joint SDM & ICD: August 22-23, 1996, Sapporo, "MPU and Memory LSI"

SDM: September 26-27, 1996, Atsugi, "Process, Device and Circuit Simulation"

October 24-25, 1996, Shizuoka, "Lithography and Plasma Processes"

November 14-15, 1996, Sendai "Semiconductor Fabrication and Wafer Cleaning Technologies"

December 5-6, 1996, Kyoto, "Synthesis of Silicon and its Related Materials"

January 24, 1997, Tokyo, "Metallization"



Row 1 (left to right) C. Hamaguchi, H. Mukai, H. Watanabe, Row 2 (left to right) J. Ueda, K. Taniguchi, M. Fukuma, H. Iwai

March 13-14, 1997, Tokyo, "SOI Substrate/ Devices"

ICD: September 26-27, 1996, Fukuoka, "Analog and Analog-Digital LSIs"

October 17-18, 1996, Sendai, "DSP for Multimedia and Communication"

December 12-13, 1996, Kanazawa, "Packing Technology for System LSIs"

January 22-24, 1997, Tokyo, "Compound Semiconductor LSIs and Ultra High Speed ICs"

March 6-7, 1997, Matsuyama, "ECAD for System-on-Silicon"

For further information, please contact: Prof. F. Masuoka (SDM), Tohoku Univ., TEL: +81-22-217-5478; FAX: +81-22-217-5480; E-mail: fujio@masuoka.riec.tohoku.ac.jp; and Prof. A. Iwata (ICD), Hiroshima Univ.; TEL: +81-824-247856; FAX: +81-824-22-7195; E-mail: iwa@ue.ipc.hiroshima-u.ac.jp

— Hiroshi Iwai, Editor

### ED Taipei Chapter

— by S.C. Sun

The Taipei Chapter held an election in December, 1995. The new Committee members for 1996 and 1997 who were elected are: Chair: S.C. Sun (National Nano Device Lab), Vice Chair: C.P. Lee (National Chiao Tung University), Secretary: J.B. Chen (TSMC). On behalf of the Taipei Chapter members, I would like to thank Dr. C.Y. Lu (Former Chair) for his outstanding contribution to the chapter.

The ED Taipei Chapter will cooperate with the TSMC to hold the 4th Semiconductor Manufacturing Technology Workshop on October 22-23, 1996 in Hsinchu, Taiwan, R.O.C. This workshop is technically sponsored by the IEEE Electron Devices Society. Some of the Session topics are: a). Fab design, construction and ramp-up., b). Yield and cycle time improvement, c). Quality system and CIM system, d). Resource saving and cost reduction, e). Technology transfer and university/industry cooperation. For registration information and general inquiries, please contact the workshop chairman, F.C. Tseng, TEL: 886-35-780221; FAX: 886-35-790879.

The IEEE ED Society will technically co-sponsor the 1996 International Electron (continued on page 19)

# EDS Meetings Calendar

(As of June 5, 1996)

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

July 28 - Aug. 2, 1996, # **INTERNATIONAL CONFERENCE ON SCIENCE AND TECHNOLOGY OF SYNTHETIC METALS**, Location: Cliff Lodge Hotel, Snowbird, UT, Contact: Z. Vally Vardeny, Tel: (801) 581-8372, Fax: (801) 581-4801, E-Mail: val@mail.physics.utah.edu, Deadline: Past Due

Aug. 5 - 9, 1996, ✓ **INTERNATIONAL CONFERENCE ON MOLECULAR BEAM EPITAXY**, Location: Pepperdine University, Malibu, CA, Contact: David E. Grider, Tel: (310) 317-5007, Fax: (310) 317-5450, E-Mail: dgrider@msmail4.had.com, Deadline: Past Due

Aug. 11 - 16, 1996, @ **IEEE INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE**, Location: Omni Shoreham Hotel, Washington, DC, Contact: Eleanor B. Dicks, Tel: (301) 946-1586, Fax: (301) 946-4374, E-Mail: hmijutland@aol.com, Deadline: Past Due

Sept. 10 - 12, 1996, ✓ **ELECTRICAL OVERSTRESS/ELECTROSTATIC DISCHARGE SYMPOSIUM**, Location: Buena Vista Palace Hotel, Lake Buena Vista, FL, Contact: ESD Association Inc, Tel: (315) 339-6937, Fax: (315) 339-6793, E-Mail: bobparr@indirect.com, Deadline: Past Due

Sept. 29 - Oct. 2, 1996, \* **IEEE BIPOLAR/BICMOS CIRCUITS AND TECHNOLOGY MEETING**, Location: Marriott City Center Hotel, Minneapolis, MN, Contact: Janice V. Jopke, Tel: (612) 934-5082, Fax: (612) 934-6741, E-Mail: jjopke@aol.com, Deadline: Past Due

Sept. 29 - Oct. 4, 1996, \* **IEEE INTERNATIONAL SOI CONFERENCE**, Location: Sanibel Harbour Resort & Spa, Ft. Myers, FL, Contact: Sandra Grawet, Tel: (310) 316-5153, Fax: (310) 316-0713, E-Mail: 70541.1225@compuserve.com, Deadline: Past Due

Oct. 7 - 9, 1996, # **IEEE INTERNATIONAL CONFERENCE ON COMPUTER DESIGN: VLSI IN COMPUTERS AND PROCESSORS**, Location: Omni Hotel, Austin, TX, Contact: Jacob Abraham, Tel: (512) 471-8983, Fax: (512) 471-8967, E-Mail: jaa@cerc.utexas.edu, Deadline: Past Due

Oct. 14 - 18, 1996, ✓ **MANUFACTURING SCIENCE AND TECHNOLOGY GROUP PROGRAM**, Location: Pennsylvania Convention Center, Philadelphia, PA, Contact: Fredrick H. Dill, Tel: (914) 945-3332, Fax: (914) 945-4201, E-Mail: f.dill@ieee.org, Deadline: Not Available

Oct. 20 - 23, 1996, \* **IEEE INTERNATIONAL INTEGRATED RELIABILITY WORKSHOP**, Location: Stanford Sierra Camp, South Lake Tahoe, CA, Contact: Cleston Messick, Tel: (801) 562-7546, Fax: (801) 562-7500, E-Mail: ccrrmsl@teum2.nsc.com, Deadline: 7/15/96

Nov. 3, 1996, # **GALLIUM ARSENIDE RELIABILITY WORKSHOP**, Location: Peabody Orlando Hotel, Orlando, FL, Contact: Anthony A. Immorlica, Tel: (315) 456-3514, Fax: (315) 456-0695, E-Mail: None, Deadline: 8/1/96

Nov. 3 - 6, 1996, \* **IEEE GALLIUM ARSENIDE INTEGRATED CIRCUITS SYMPOSIUM**, Location: Peabody Orlando Hotel, Orlando, FL, Contact: Elissa I. Sobolewski, Tel: (703) 696-2254, Fax: (703) 696-2203, E-Mail: Isobolewski@arpa.mil, Deadline: Past Due

Nov. 6, 1996, ✓ **IEEE ELECTRON DEVICES ACTIVITIES IN WESTERN NEW YORK CONFERENCE**, Location: Rochester Institute of Technology, Rochester, NY, Contact: Yawcheng Lo, Tel: (716) 477-2023, Fax: (716) 477-4947, E-Mail: yclo@mtds00.kodak.com, Deadline: 10/1/96

Nov. 10 - 14, 1996, # **IEEE INTERNATIONAL CONFERENCE ON COMPUTER-AIDED DESIGN**, Location: Red Lion Hotel, San Jose, CA, Contact: Robert A. Rutenbar, Tel: (412) 268-3334, Fax: (412) 268-2859, E-Mail: rutenbar@ece.cmu.edu, Deadline: Not Available

Nov. 12 - 14, 1996, \* **IEEE/SEMI ADVANCED SEMICONDUCTOR MANUFACTURING CONFERENCE AND WORKSHOP**, Location: Hyatt Regency Hotel, Cambridge, MA, Contact: Margaret M. Kindling, Tel: (202) 289-0440, Fax: (202) 289-0441, E-Mail: mkindling@semi.org, Deadline: Past Due

Dec. 5 - 7, 1996, \* **IEEE SEMICONDUCTOR INTERFACE SPECIALISTS CONFERENCE**, Location: Catamaran Resort Hotel, San Diego, CA, Contact: Douglas A. Buchanan, Tel: (914) 945-3175, Fax: (914) 945-2141, E-Mail: buchan@watson.ibm.com, Deadline: 8/9/96

Dec. 8 - 11, 1996, \* **IEEE INTERNATIONAL ELECTRON DEVICES MEETING**, Location: San Francisco Hilton & Towers Hotel, San Francisco, CA, Contact: Phyllis Mahoney, Tel: (301) 527-0900, Fax: (301) 527-0994, E-Mail: pwmahoney@aol.com, Deadline: 7/1/96

Feb. 3 - 5, 1997, \* **IEEE MULTI-CHIP MODULE CONFERENCE**, Location: The Coconut Grove Hotel, Santa Cruz, CA, Contact: Paul Franzon, Tel: (919) 515-7351, Fax: (919) 515-7382, E-Mail: paulf@ncsu.edu, Deadline: Not Available

Feb. 6 - 8, 1997, **IEEE INTERNATIONAL SOLID-STATE CIRCUITS CONFERENCE**, Location: San Francisco Marriott, San Francisco, CA, Contact: Diane S. Suiter, Tel: (202) 639-4255, Fax: (202) 347-6109, E-Mail: isscc@mcimail.com, Deadline: 9/1/96

Feb. 9 - 13, 1997, \* **IEEE NON-VOLATILE SEMICONDUCTOR MEMORY WORKSHOP**, Location: Hyatt Regency Hotel, Monterey, CA, Contact: Sanjay Mehrotra, Tel: (408) 562-0510, Fax:

(408) 562-0503, E-Mail: smehrotra@sandisk.com, Deadline: 10/18/96

March 18 - 20, 1997, \* **IEEE INTERNATIONAL CONFERENCE ON MICROELECTRONIC TEST STRUCTURES**, Location: Doubletree Inn, Monterey, CA, Contact: Sandra Grawet, Tel: (310) 316-5153, Fax: (310) 316-0713, E-Mail: 70541.1225@compuserve.com, Deadline: 8/16/96

April 7 - 10, 1997, \* **IEEE INTERNATIONAL RELIABILITY PHYSICS SYMPOSIUM**, Location: Radisson Hotel, Denver, CO, Contact: Ajit K. Goel, Tel: (408) 734-2987, Fax: (408) 734-2984, E-Mail: ajitg@aol.com, Deadline: Not Available

May, 1997, ✓ **INTERNATIONAL SYMPOSIUM ON PLASMA PROCESS INDUCED DAMAGE**, Location: Bay Area of California, Contact: Charles Kin P. Cheung, Tel: (908) 582-6483, Fax: (908) 582-5980, E-Mail: kpckpc@lucent.com, Deadline: Not Available

May 5 - 8, 1997, \* **IEEE CUSTOM INTEGRATED CIRCUITS CONFERENCE**, Location: Santa Clara, CA, Contact: Melissa Widerkehr, Tel: (301) 527-0902, Fax: (301) 527-0994, E-Mail: widerkehr@aol.com, Deadline: Not Available

May 11 - 15, 1997, @ **IEEE INTERNATIONAL CONFERENCE ON INDIUM PHOSPHIDE AND RELATED MATERIALS**, Location: Tara Resort, Hyannis (On Cape Cod), MA, Contact: Samantha Padilla, Tel: (908) 562-3894, Fax: (908) 562-8434, E-Mail: s.padilla@ieee.org, Deadline: 11/11/96

May 28 - 30, 1997, ✓ **INTERNATIONAL WORKSHOP ON COMPUTATIONAL ELECTRONICS**, Location: University of Notre Dame, Notre Dame, IN, Contact: Wolfgang Porod, Tel: (219) 631-6376, Fax: (219) 631-4393, E-Mail: wolfgang.porod@nd.edu, Deadline: 2/14/97

June 8 - 10, 1997, \* **IEEE RADIO FREQUENCY INTEGRATED CIRCUITS SYMPOSIUM**, Location: Colorado Convention Center, Denver Colorado, Contact: Louis Liu, Tel: (310) 812-8372, Fax: (310) 813-9623, E-Mail: louis\_liu@qmail4.sp.trw.co, Deadline: 12/2/96

June 15 - 19, 1997, @ **IEEE TRANSDUCERS - INTERNATIONAL SOLID-STATE SENSORS AND ACTUATORS CONFERENCE**, Location: Hyatt Regency Chicago, Chicago, IL, Contact: Kenneth D. Wise, Tel: (313) 764-3346, Fax: (313) 747-1781, E-Mail: wise@engin.umich.edu, Deadline: Not Available

June/July, 1997, \* **IEEE UNIVERSITY/ GOVERNMENT/INDUSTRY MICROELECTRONICS SYMPOSIUM**, Location: Rochester Institute of Technology, Rochester, NY, Contact: Lynn Fuller, Tel: (716) 475-2035, Fax: (716) 475-5041, E-Mail: ifeet@ritux.edu, Deadline: Not Available

July 27 - Aug. 2, 1997, @ **INTER-SOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE**, Location: Hilton Hawaiian Village Hotel, Honolulu, Hawaii, Contact: William D. Jackson, Tel: (301) 946-1586, Fax: (301) 946-4374, E-Mail: hmijutland@aol.com, Deadline: Not Available

Sept. 7 - 11, 1997, @ **INTERNATIONAL SYMPOSIUM ON COMPOUND SEMICONDUCTORS**, Location: Hotel Del Coronado, San Diego, CA, Contact: Samantha Padilla, Tel: (908) 562-3894, Fax: (908) 562-8434, E-Mail: s.padilla@ieee.org, Deadline: Not Available

Sept. 28 - 30, 1997, \* **IEEE BIPOLAR/BiCMOS CIRCUITS AND TECHNOLOGY MEETING**, Location: Minneapolis Marriott City Center, Minneapolis, MN, Contact: Janice V. Jopke, Tel: (612) 934-5082, Fax: (612) 934-6741, E-Mail: jjopke@aol.com, Deadline: Not Available

Oct. 6 - 9, 1997, \* **IEEE INTERNATIONAL SOI CONFERENCE**, Location: Tenaya Lodge at Yosemite, Fish Camp, CA, Contact: Sandra Grawet, Tel: (310) 316-5153, Fax: (310) 316-0713, E-Mail: 70541.1225@compuserve.com, Deadline: Not Available

Oct. 11 - 16, 1997, \* **IEEE GALLIUM ARSENIDE INTEGRATED CIRCUITS SYMPOSIUM**, Location: Anaheim Marriott Hotel, Anaheim, CA, Contact: Phillip Wallace, Tel: (908) 412-5987, Fax: (908) 412-5985, E-Mail: wallacepw@aol.com, Deadline: Not Available

Oct. 12 - 15, 1997, \* **IEEE INTERNATIONAL INTEGRATED RELIABILITY WORKSHOP**, Location: Stanford Sierra Camp, Lake Tahoe, CA, Contact: James W. Miller, Tel: (512) 933-7297, Fax: (512) 933-7662, E-Mail: rvkg60@email.sps.mot.com, Deadline: 7/7/97

Nov. 9 - 12, 1997, \* **IEEE INTELLIGENT TRANSPORTATION SYSTEMS CONFERENCE**, Location: Boston Park Plaza Hotel, Boston, MA, Contact: IEEE Boston Section, Tel: (617) 890-5290, Fax: (617) 890-5294, E-Mail: sec.boston@ieee.org, Deadline: 11/15/96

Dec. 4 - 6, 1997, \* **IEEE SEMICONDUCTOR INTERFACE SPECIALISTS CONFERENCE**, Location: Mills House Hotel, Charleston, SC, Contact: Len Trombetta, Tel: (713) 743-4424, Fax: (713) 743-4444, E-Mail: ltrombetta@uh.edu, Deadline: Not Available

Dec. 7 - 10, 1997, \* **IEEE INTERNATIONAL ELECTRON DEVICES MEETING**, Location: Washington Hilton & Towers Hotel, Washington, DC, Contact: Phyllis Mahoney, Tel: (301) 527-0900, Fax: (301) 527-0994, E-Mail: pwmahoney@aol.com, Deadline: Not Available

Dec., 1997, ✓ **HIGH TEMPERATURE ELECTRONIC MATERIALS AND DEVICES CONFERENCE**, Location: Not Available, Contact: Ilan Golecki, Tel: (201) 455-4938, Fax: (201) 455-3008 or 3942, E-Mail: golecki@research.allied.com, Deadline: Not Available

## Europe, Middle East & Africa (Region 8)

July 7 - 12, 1996, @ **IEEE INTERNATIONAL VACUUM MICROELECTRONICS CONFERENCE**, Location: St. Petersburg Bonch-Bruевич State University of Telecommunications, St. Petersburg, Russia, Contact: Henry F. Gray, Tel: (202) 767-2812, Fax: (202) 767-0546, E-Mail: henry.gray@nrl.navy.mil, Deadline: Past Due

July 23 - 30, 1996, ✓ **INTERNATIONAL WORKSHOP ON ELECTROMAGNETICS OF CHIRAL, BI-ISOTROPIC, AND BI-ANISOTROPIC MEDIA**, Location: River Boat from Moscow to St. Petersburg, Russia, Contact: Sergei Tretyakov, Tel: 7-812-552-76-85, Fax: 7-812-552-60-86, E-Mail: tretyakov@rphd.hop.stu.neva.ru, Deadline: Past Due

July 29 - 31, 1996, # **INTERNATIONAL SYMPOSIUM ON ATOMIC LAYER EPITAXY AND RELATED SURFACE PROCESSES**, Location: Johannes Kepler University, Linz, Austria, Contact: Helmut Sitter, Tel: 43-732-2468-9623, Fax: 43-732-2468-650, E-Mail: helmut.sitter@jk.uu-linz.ac.at, Deadline: Past Due

Aug. 29 - 31, 1996, ✓ **IEEE INTERNATIONAL SYMPOSIUM/WORKSHOP ON ADVANCED TECHNOLOGIES - NEURO-FUZZY SYSTEMS**, Location: Swiss Federal Institute of Technology, Lausanne, Switzerland, Contact: Jacques Kowalczyk, Tel: 41-21-693-6981, Fax: 41-21-693-4663, E-Mail: jacques.kowalczyk@leg.de.epfl.ch, Deadline: Past Due

Sept. 3 - 7, 1996, ✓ **INTERNATIONAL CONFERENCE ON UNSOLVED PROBLEMS OF NOISE**, Location: Szeged, Hungary, Contact: Laszlo B. Kiss, Tel: 36-62-311154, Fax: 36-62-454068, E-Mail: laszlo@sol.cc.u-szeged.hu, Deadline: Past Due

Sept. 9 - 11, 1996, ✓ **EUROPEAN SOLID-STATE DEVICE RESEARCH CONFERENCE**, Location: Bologna Congress Center, Bologna, Italy, Contact: Giorgio Baccarani, Tel: 39-51-644-3012, Fax: 39-51-644-3007, E-Mail: essderc@deis.unibo.it, Deadline: Past Due

Sept. 10 - 13, 1996, ✓ **INTERNATIONAL CONFERENCE ON MATHEMATICAL METHODS IN ELECTROMAGNETIC THEORY**, Location: University Lviv Polytechnic, Lviv, Ukraine, Contact: Oleg Ovsyannikov, Tel: 380 (0322) 654412, Fax: 380 (0322) 649427, E-Mail: mmet@vision.lpm.lviv.ua, Deadline: Past Due

Sept. 13, 1996, ✓ **HIGH FREQUENCY POST-GRADUATE STUDENT COLLOQUIUM**, Location: University of Manchester, Institute of Science & Technology, UMIST Manchester, UK, Contact: Robin Sloan, Tel: 44-161-200-4640, Fax: 44-161-200-4820, E-Mail: sloan@fs5.ee.umist.ac.uk, Deadline: 7/5/96

Sept. 23 - 25, 1996, # **INTERNATIONAL SYMPOSIUM ON ULTRA CLEAN PROCESSING OF SILICON SURFACES**, Location: Sofitel Hotel, Antwerp, Belgium, Contact: Marc Heyns, Tel: 32-

16-28-13-48, Fax: 32-16-28-12-14, E-Mail: heyns@imec.be, Deadline: Past Due

Sept. 23 - 27, 1996, @ **IEEE INTERNATIONAL SYMPOSIUM ON COMPOUND SEMICONDUCTORS**, Location: Astoria Hotel, St. Petersburg, Russia, Contact: R.A. Suris, Tel: 7-812-247-9367, Fax: 7-812-247-1017, E-Mail: suris@theory.ioffe.rssi.ru, Deadline: Past Due

Oct. 8 - 11, 1996, ✓ **EUROPEAN SYMPOSIUM ON RELIABILITY OF ELECTRON DEVICES, FAILURE PHYSICS AND ANALYSIS**, Location: Best Western Dish Hotel, The Netherlands, Contact: Herman E. Maes, Tel: 32-16-281-283, Fax: 32-16-281-501, E-Mail: maesh@imec.be, Deadline: Past Due

Oct. 9 - 12, 1996, \* **INTERNATIONAL SEMICONDUCTOR CONFERENCE**, Location: Sinaia Hotel, Sinaia, Romania, Contact: Doina Vancu, Tel: 401-633-30-40, Fax: 401-312-75-19, E-Mail: None, Deadline: Past Due

Nov. 25 - 26, 1996, ✓ **WORKSHOP ON HIGH PERFORMANCE ELECTRON DEVICES FOR MICROWAVE AND OPTOELECTRONIC APPLICATIONS**, Location: The University of Leeds, Weetwood Hall, Leeds, UK, Contact: Stavros Iezekiel, Tel: 44-113-233-2088, Fax: 44-113-233-2032, E-Mail: s.iezekiel@elec-eng.leeds.ac.uk, Deadline: 9/2/96

Dec. 16 - 18, 1996, # **INTERNATIONAL CONFERENCE ON MICROELECTRONICS**, Location: Nile Hilton Hotel, Cairo, Egypt, Contact: M.I. Elmasry, Tel: (519) 888-4567, Fax: (519) 746-5195, E-Mail: elmasry@visi.uwaterloo.ca, Deadline: Past Due

March 23 - 25, 1997, ✓ **NATIONAL RADIO SCIENCE CONFERENCE**, Location: Cairo, Egypt, Contact: Ibrahim A. Salem, Tel: 20-2-258-0256, Fax: 20-2-349-8217, E-Mail: None, Deadline: 10/10/96

May 26 - 29, 1997, @ **IEEE INTERNATIONAL SYMPOSIUM ON POWER SEMICONDUCTOR DEVICES AND INTEGRATED CIRCUITS**, Location: Hilton Hotel, Weimar, Germany, Contact: IPSD'97 Office, Tel: 49-69-63-08-202, Fax: 49-69-96-31-52-13, E-Mail: 100145.67@compuserve.com, Deadline: 10/14/96

June 5 - 7, 1997, \* **IEEE INTERNATIONAL WORKSHOP ON CHARGE-COUPLED DEVICES AND ADVANCED IMAGE SENSORS**, Location: Hotel Burg, Bruges, Belgium, Contact: Albert J.P. Theuwissen, Tel: 31-40-742734, Fax: 31-40-743390, E-Mail: theuwiss@prl.philips.nl, Deadline: Not Available

Oct. 8 - 11, 1997, \* **INTERNATIONAL SEMICONDUCTOR CONFERENCE**, Location: Mountain Resort, Sinaia, Romania, Contact: Doina Vancu, Tel: 40-1-2121553, Fax: 40-1-3127519, E-Mail: None, Deadline: 4/15/97



## Asia & Pacific (Region 10)

July 8 - 11, 1996, # **INTERNATIONAL MICRO-PROCESS CONFERENCE**, Location: Kitakyushu, International Conference Center, Kitakyushu, Japan, Contact: Secretariat, MicroProcess 96, Tel: 81-3-5814-5800, Fax: 81-3-5814-5823, E-Mail: conf@bcasj.or.jp, Deadline: Past Due

Aug. 12 - 15, 1996, ✓ **INTERNATIONAL CONFERENCE ON MILLIMETER-WAVE AND FAR-INFRARED SCIENCE AND TECHNOLOGY**, Location: Xiang Shan Hotel, Beijing, China, Contact: Kai Chang, Tel: (409) 845-5285, Fax: (409) 845-6259, E-Mail: chang@eesun1.tamu.edu, Deadline: Past Due

Aug. 19 - 21, 1996, ✓ **TOPICAL WORKSHOP ON HETEROSTRUCTURE MICROELECTRONICS**, Location: Sapporo Theme International Hotel, Sapporo, Japan, Contact: David E. Grider, Tel: (310) 317-5007, Fax: (310) 317-5450, E-Mail: dgrider@msmail4.hac.com, Deadline: Past Due

Aug. 26 - 29, 1996, ✓ **INTERNATIONAL CONFERENCE ON SOLID-STATE DEVICES AND MATERIALS**, Location: Pacifico Yokohama, Yokohama, Kanagawa, Japan, Contact: Secretariat of SSDM'96, Tel: 81-3-5814-5800, Fax: 81-3-5814-5823, E-Mail: None, Deadline: Past Due

Sept. 2 - 4, 1996, @ **IEEE INTERNATIONAL CONFERENCE ON SIMULATION OF SEMICONDUCTOR PROCESSES AND DEVICES**, Location: Toyo University, Bunkyo-ku, Tokyo, Japan, Contact: Akira Yoshii, Tel: 81-462-40-2140, Fax: 81-462-40-4306, E-Mail: yoshi@aecl.ntt.jp, Deadline: Past Due

\* = Sponsorship or Co-Sponsorship Support  
✓ = Technical Co-Sponsorship Support

Oct. 2 - 4, 1996, @ **IEEE INTERNATIONAL SYMPOSIUM ON SEMICONDUCTOR MANUFACTURING**, Location: Hotel East, Tokyo, Japan, Contact: Secretariat of ISSM'96, Tel: 81-3-3815-8775, Fax: 81-3-3815-8529, E-Mail: riz@ppp.bekkoame.or.jp, Deadline: 7/31/96

Oct. 22 - 23, 1996, ✓ **SEMICONDUCTOR MANUFACTURING TECHNOLOGY WORKSHOP**, Location: Taiwan Semiconductor Manufacturing Company Limited, (TSMC), Hsinchu, Taiwan, Contact: J.H. Tzeng, Tel: 886-35-780221 ext. 2095, Fax: 886-35-781546, E-Mail: jhtzeng@tsmc.com.tw, Deadline: Not Available

Nov. 11 - 15, 1996, # **INTERNATIONAL PHOTOVOLTAIC SCIENCE & ENGINEERING CONFERENCE**, Location: SEAGAIA Convention Complex, Miyazaki, Japan, Contact: Akira Yamada, Tel: 81-3-5734-2698, Fax: 81-3-5734-2897, E-Mail: yamada@pe.titech.ac.jp, Deadline: 6/1/96

Nov. 26 - 28, 1996, ✓ **IEEE INTERNATIONAL CONFERENCE ON SEMICONDUCTOR ELECTRONICS**, Location: Shangri-La's Rasa Sayang Resort, Penang, Malaysia, Contact: Burhanuddin Yeop Majlis, Tel: 603-825-1292, Fax: 603-825-9080, E-Mail: burhan@eng.ukm.my, Deadline: Past Due

Dec. 9 - 11, 1996, ✓ **CONFERENCE ON OPTOELECTRONIC MATERIALS AND DEVICES**, Location: Australian National University, Canberra, Australia, Contact: Chennupati Jagadish, Tel: 61-6-249-0363, Fax: 61-6-249-0511, E-Mail: cxj109@phys.anu.edu.au, Deadline: 9/2/96

Dec. 9 - 13, 1996, # **INTERNATIONAL CONFERENCE ON FIBER OPTICS AND PHOTONICS**, Location: Hotel Park Sheraton, Madras, India,

@ = Alternates support between 'Sponsorship/Co-Sponsorship' and 'Technical Co-Sponsorship'  
# = Cooperation Support

Contact: Mallikarjun Tatipamula, Tel: (613) 763-0904, Fax: (613) 763-0511, E-Mail: mallikt@bnr.ca, Deadline: Past Due

Dec. 16 - 20, 1996, # **INTERNATIONAL ELECTRON DEVICES AND MATERIALS SYMPOSIUM**, Location: National Tsing Hua University, Hsinchu, Taiwan, R.O.C., Contact: Charles C.H. Hsu, Tel: 886-35-718300, Fax: 886-35-715971, E-Mail: chhsu@ee.nthu.edu.tw, Deadline: 6/15/96

June 3 - 5, 1997 # **INTERNATIONAL SYMPOSIUM ON VLSI TECHNOLOGY, SYSTEMS AND APPLICATIONS**, Location: Grand Hyatt Hotel, Taiwan, R.O.C., Contact: T.P. Ma, Tel: (203) 432-4211, Fax: (203) 432-7769, E-Mail: Not Available, Deadline: 12/16/96

June 9, 1997, @ **WORKSHOP ON STATISTICAL METROLOGY**, Location: Kyoto Grand Hotel, Kyoto, Japan, Contact: Yutaka Hayashi, Tel: Not Available, Fax: 81-462-30-5730, E-Mail: Not Available, Deadline: Not Available

June 10 - 12, 1997, @ **SYMPOSIUM ON VLSI TECHNOLOGY**, Location: Kyoto Grand Hotel, Kyoto, Japan, Contact: Yutaka Hayashi, Tel: Not Available, Fax: 81-462-30-5730, E-Mail: Not Available, Deadline: Not Available

June 12 - 14, 1997, # **SYMPOSIUM ON VLSI CIRCUITS**, Location: Kyoto Grand Hotel, Kyoto, Japan, Contact: Ian Young, Tel: (503) 642-6403, Fax: (503) 591-3597, E-Mail: Not Available, Deadline: Not Available

Oct. 27 - 31, 1997, ✓ **INTERNATIONAL CONFERENCE ON NITRIDE SEMICONDUCTORS**, Location: Kyodo-bunka-kaikan, Tokushima, Japan, Contact: Hadis Morkoc, Tel: (513) 255-2923, Fax: (513) 476-4095, E-Mail: morkoc@uiuc.edu, Deadline: Not Available

## Regional and Chapter News

(continued from page 16)

Devices and Materials Symposia to be held on Dec. 16-20, 1996 at the National Tsing Hua University, Hsinchu, Taiwan, R.O.C. Six Symposia and their respective organizers are: A. Silicon IC Technology (S.C. Sun), B. Compound Semiconductor Devices and Physics (C.P. Lee), C. Processes and Characterization of Electronic Materials (C.M. Wang), D. Simulation and modeling of VLSI Processes and Devices (S.S. Chung), E. Display and Sensor Technology (H.C. Cheng), and F. Electronic Packaging Technology (J.H. Jean). The deadline for submission of abstracts is June 15, 1996. For further information, please contact Prof. Charles C.H. Hsu, Dept. of Electrical Engineering, National Tsing Hua

University, Hsinchu, Taiwan, R.O.C.; TEL: 886-35-718300; FAX: 886-35-715971; E-Mail: chhsu@ee.nthu.edu.tw

### ED Beijing Chapter

— by Fu J. Liao

The ED Beijing Chapter received a complimentary copy of the 1995 IEDM Technical Digest on Jan. 30, 1996. In order to provide the frontier technology information for members and non-members, the ED Beijing Chapter organized four seminars to introduce some 1995 IEDM technical digest papers. The first and second seminars were held in March and April at the Beijing Vacuum Electronics Research Institute, Beijing, to introduce Session 9 (Microwave Tubes) papers and Session 16 (Field emitter arrays and photocathodes) papers. The third and fourth seminars were organized in May and June respectively, by Prof. Yi Men Zhang of

Xidian University in Xian to introduce Session 12 (Hot carrier effects and Monte Carlo simulation), Session 19 (Backend Process modeling), and Session 37 (Compact MOS modeling).

The ED Beijing Chapter will cooperate with the Chinese Institute of Electronics (CIE) and other organizations to hold an International Conference on Millimeter Wave and Far-Infrared Science and Technology (ICMWFST'96) on August 12 to 15, 1996 in Beijing. Dr. Han C. Hu, Chairman of the ED Beijing Chapter, acts as the chairman of program committee, Prof. Fu J. Liao, Treasurer of the Beijing Chapter, will serve as the vice chairman. For further information, please contact Prof. Fu. J. Liao, BVERI, P.O. Box 749, Beijing 100016, P.R. China; TEL: 86-10-4362878 or 86-10-4361731 ext. 2219; FAX: 86-10-4363521.

— S. C. Sun, Editor



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