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DECEMBER

SEPTEMBER

JUNE



IEEE Circuits and Systems Society Newsletter

Editor

Michael K. Sain
Electrical Engineering Department
University of Notre Dame
Notre Dame, IN, USA 46556-5637
Phone: (219) 631-6538
Fax: (219) 631-4393
E-mail: jordan@medugorje.ee.nd.edu

IEEE Publishing Services

Robert Smrek
Production Manager
IEEE Service Center
445 Hoes Lane
P.O. Box 1331
Piscataway, NJ 08855-1331, USA
Phone: (908) 562-3944

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T.W. Rhee, 1996 APCCAS General Chairman
M.M. Hassoun, 1996 MWSCAS General Chairman

CAS: A 'BRIGHT' FUTURE

From the New President

Michael Lightner
Electrical & Computer Engineering
University of Colorado
Boulder, CO 80309

It is my honor and pleasure to be the President of the Circuits and Systems Society in 1996. My first act is to offer my sincerest thanks to our outgoing officers: Wai-Kai Chen, outgoing Past-President; Ruey-wen Liu, outgoing President; Michael Sain, past Vice President of Technical Activities; John Choma, past Vice President for Administration; Phillip Allen, past Vice President for Conferences; Edgar Sanchez-Sinencio, past Vice President for Publications; and the outgoing Board of Governors (BoG) members Satoshi Goto, David Haigh, Hari Reddy, G. W. Roberts, and Isao Shirakawa. These tremendously talented and generous people have given their time and talents to the CAS and we have all benefited tremendously—Thank you all!!

I am happy to welcome the new officers and Board of Governors members: Ruey-wen Liu, Past President; John Choma, President-Elect; Clifford Lau, Vice President for Administration; Rui deFigueiredo, Vice President for Publications; Hari Reddy, Vice President for Conferences; Chris Toumazou, Vice President for Technical Activities; continuing vice presidents for Region 8, Franco Maloberti, Region 9, Paul Diniz, and Region 10, Isao Shirakawa; and BoG members Geert Veirman, Al Dunlop, Bing Sheu, Mani Soma, and Mona Zaghoul. We have two new BoG members who are serving one year terms as replacements for BoG members Rui deFigueiredo and Clifford Lau who were elected to positions as officers: Magdy Bayoumi and Jose Franca.

Finally, I wish to welcome Barbara Wehner as the new Administrative Assistant to the CAS. Barbara is also secretary for Wai-Kai Chen and has long experience in the CAS. Her primary duties will be to help in the publication of the Regional Newsletter and in maintaining the files of the society so that we have continuity in our records.

With a new year we have new challenges and opportunities. The first news that I would like to report is that at the February IEEE Technical Activities Board (TAB) meeting approval was given for the Solid-State Circuit Council (SSCC) to become a society called the Solid-State Circuits Society (SSCS).

I wish to congratulate the council on its history of outstanding accomplishments and wish them every success as a society. However, even though SSCC is now (subject to IEEE Board of Directors approval) a society there is still a close connection with CAS. In the constitution of the SSCS there is a position on their Administrative Committee for an elected CAS representative and CAS will reciprocate. Our two soci-

eties have a long history of cooperation and we plan to continue that successful interaction in the future. Much more on this will appear in later columns.

An initiative within CAS that is very exciting is one of emphasizing design and developing more programs of direct relevance to industry. In *TCAS II* a new feature called the "Designers Notebook" has been started by John Choma and many exciting papers are now in the pipeline. We have begun a cooperation with the Computer Society, at their request, on the *Design & Test Magazine*. We are exploring the possibility of sponsoring a design contest for senior design projects from universities.

In addition to the concerns on design we are looking very carefully at our tutorials during conferences. There is a strong emphasis in IEEE for supporting continuing education for all members. Finding mechanisms to bring tutorials to members who cannot attend conferences is one area where we can serve our members. One suggestion is to add these tutorials to our Distinguished Lecturer Program in some form.

One of the main connections that our members have with the CAS, outside of journals and conferences, is through regional activities. Excellent work has been done in all regions in forming new chapters. More will come from John Choma's column in the near future. However, there are many exciting possibilities for new members and new activities throughout the world based on our chapters.

For example, programs that help the many engineers in the U.S.A. and throughout the world who are in job transition due to down/right-sizing of industries is something that could be sponsored by CAS and organized through the chapters.

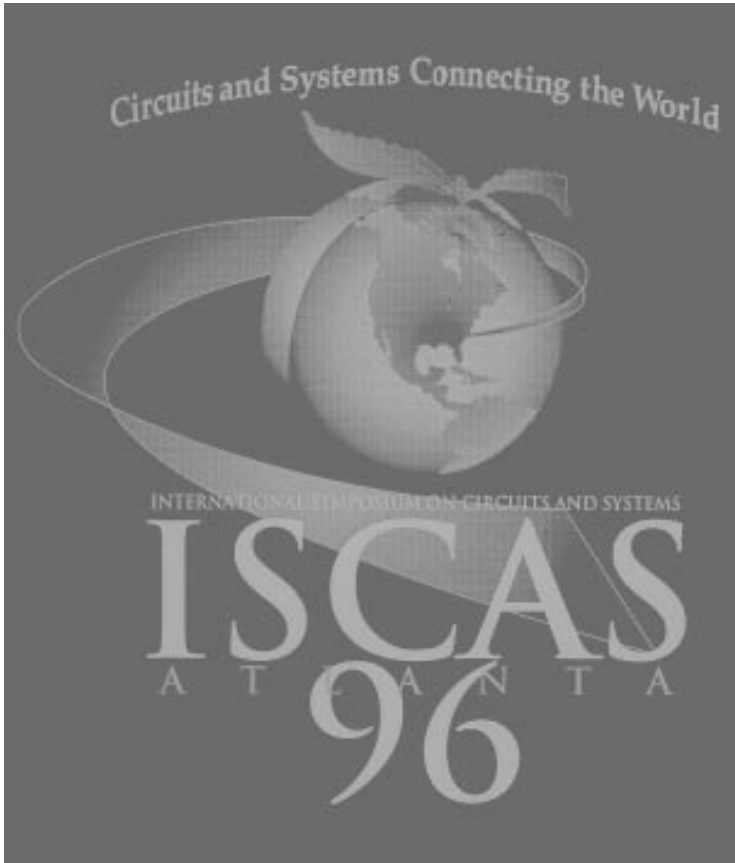
This is an exciting year for CAS. There is not enough time to tell you the many things that are happening in IEEE in the way of electronic publishing, reorganization throughout the Institute, new member services and more. Many of these I just learned at the TAB meeting. I will try and keep you informed in future columns. I would like to end by inviting all of you to send any ideas or concerns to me or any other officer or BoG member. We are anxious to hear your concerns and suggestions and will do our best to serve you this year. My email is lightner@boulder.colorado.edu.

Michael Lightner, Professor
Department of Electrical and Computer Engineering
University of Colorado, Campus Box 425
Boulder, CO 80309
Ph: (303) 492-5180; Fax: (303) 492-2758



Michael Lightner

FROM HERE — ISCAS'96



IEEE INTERNATIONAL SYMPOSIUM ON CIRCUITS AND SYSTEMS

MAY 12–15, 1996

MARRIOTT MARQUIS HOTEL
ATLANTA, GEORGIA

The 1996 International Symposium on Circuits and Systems will include plenary sessions on specific advanced aspects of the theory, design, and applications of circuits and systems and short courses to present the state-of-the-art in selected subjects. There will be parallel lecture sessions and also poster sessions.

Conference Secretariat:

Meeting Management

2603 Main Street, #690, Irvine, CA 92714
Phone: (714) 752-8205, Fax: (714) 752-7444
E-mail: 74710.2266@compuserve.com

For up-to-date information on ISCAS'96
send blank e-mail to iscas96@ee.gatech.edu
or view Mosaic at

<http://www.ee.gatech.edu/conferences/iscas96/>

« « **ISCAS'96 TUTORIAL ANNOUNCED** » »

The title of the ISCAS'96 Tutorial is *The Design of Low Power Digital Systems* with the main theme as *Emerging Technologies*. The tutorial will be held on **Sunday, May 12, 1996** and consists of the following ten sessions:

Sunday Morning Session (8:30 a.m. – Noon)

1. *Analog VLSI: LV/LP Cell Design*
M. Ismail, J. Huijsing, F. Larsen, and A. Andreou
2. *Design of Low Power Digital Systems*
K. Roy and R. Roy
3. *Design of Integrated MEMS*
B. Boser and K. Markus
4. *Design of RF Circuits for Cellular Radio and
Personal Communication Services*
M. Steer and J. Choma
5. *Design of High-Performance DSP Systems*
K. Parhi and F. Catthoor

Sunday Afternoon Session (1:30 – 5:00 p.m.)

6. *Optoelectronics Integrated Onto Silicon VLSI:
Devices, Circuits, Systems*
N. Jokerst, M. Brooke, and S. Wills
7. *CMOS Low-Power Analog Design*
E. Vittoz and C. Enz
8. *Microsensor Design*
C. Osborne
9. *Low Power VLSI Circuits for Mobile Communication*
B. Leung, B. Song, and F. Carr
10. *Design of Hardware/Software Systems*
R. Gupta

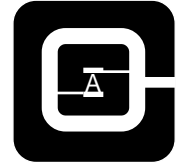
ISCAS'97 — TO THERE



1997 IEEE International Symposium on Circuits and Systems

Circuits and Systems in the Information Age

June 9–12, 1997, Hong Kong Convention & Exhibition Centre
Hong Kong



CALL FOR PAPERS

The 1997 IEEE International Symposium on Circuits and Systems will be held in Hong Kong at the Hong Kong Convention and Exhibition Centre, June 9–12, 1997. The Symposium will be the 30th in the series of annual international conferences sponsored by the IEEE Circuits and Systems Society. It will include regular sessions on all aspects as well as special sessions on specific advanced topics of circuits and systems. About one third of the papers will be presented in poster sessions, which give the audience greater interaction with the presenters.

Papers presenting original work in all areas of circuits and systems are invited.
Topics for regular sessions include, but are not limited, to the following:

1. *Analog Circuit & Signal Processing*
 - 1.1 A/D & D/A Conversions
 - 1.2 High-frequency Circuits
 - 1.3 Analog Circuits & Techniques
 - 1.4 Wavelets
2. *Circuit Theory & Power Systems*
 - 2.1 Linear & Nonlinear Circuit, System & Theory
 - 2.2 Distributed Networks
 - 2.3 Power Electronics & Systems
3. *Communication & Multimedia*
 - 3.1 High Definition TV
 - 3.2 Image Processing
 - 3.3 Video & Multimedia Technology
 - 3.4. Visual Communication
 - 3.5 Wireless Communication Circuits
 - 3.6 Opto-electronic Circuits
4. *Computer-Aided Design*
 - 4.1 Modeling and Simulation
 - 4.2 Large-Scale Networks
 - 4.3 Optimization Methods
5. *Digital Signal Processing*
 - 5.1 DSP & Applications
 - 5.2 Digital Filters
 - 5.3 Speech & Audio Processing
 - 5.4 High Speed Modems
 - 5.5 Adaptive Signal Processing
6. *Neural Systems*
 - 6.1 Neural Networks
 - 6.2 Fuzzy Logic and Circuits
7. *VLSI*
 - 7.1 Analog and Digital ICs
 - 7.2 Parallel Architectures
 - 7.3 Low Voltage / Low Power ICs
8. *Industrial Applications*
 - 8.1 Testing
 - 8.2 Fault Analysis & Fault Tolerant Systems
 - 8.3 Sensors
 - 8.4 ATM Switch Design
 - 8.5 Realization of Speech & Video Compression

Prospective authors are invited to submit one photo-ready and five copies of their manuscripts to the Technical Program Co-Chairman, **Prof. Wan-Chi Siu**. Authors should enclose a cover sheet indicating one or more of the above areas that best describe the topics of their papers, and their preferences on poster or lecture presentations. It should also include name(s) of author(s), address, affiliation, telephone/fax numbers and e-mail address, where possible.

Submission of a paper implies a commitment to present the paper, if accepted. Each paper should be of four-page length and conform to the IEEE two-column format. Papers must be camera ready on 8 1/2 x 11 white paper, two-column format in Times or similar font style, using 10 points or larger font with one inch margins on all four sides.

Proposals for special sessions and workshop/short courses may be submitted to Dr. W. K. Cham, and Prof. Y. F. Huang, respectively, on or before September 1, 1996.

Author's Schedule:

Deadline for submission of photo-ready manuscripts: **October 1, 1996**
Notification of acceptance: **January 20, 1997**

Technical Program Co-Chairman

Prof. Wan-Chi Siu
Dept. of Electronic Engineering
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong
Tel: (852) 27666229
Fax: (852) 23628439
e-mail: enwcsiu@hkpucc.polyu.edu.hk

Special Session Chairman

Dr. W. K. Cham
Dept. of Electronic Engineering
The Chinese University of Hong Kong
Shatin, N.T. Hong Kong
Tel: (852) 26098281
Fax: (852) 26035558
e-mail: wkcham@ee.cuhk.hk

Workshop/Short Course Co-Chairman

Prof. Y. F. Huang
Dept. of Electrical Engineering
University of Notre Dame
Notre Dame, IN 46556, USA
Tel: (219) 631-5350
Fax: (219) 631-4393
e-mail: huang.2@nd.edu

Any additional information or inquiries can be directed to the **ISCAS'97 Conference Secretariat**:
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Tel: (852) 28592710; Fax: (852) 25598738; e-mail: iscas97@hkueee.hku.hk
Visit our Web site: <http://www.eee.hku.hk/~iscas97/>

CAS TRANSACTIONS NEWS

Leonard A. Ferrari

technic University, Brooklyn, New York, as an assistant professor of electrical engineering. Since 1992, she has also been a consultant for the Department of Visual Communications Research, AT&T Bell Laboratories, Holmdel, New Jersey. Her current research interests include image and video compression, medical image processing, image reconstruction from limited data, and pattern recognition.

Kiyoharu Aizawa was a guest editor of the special issue of the *T-CAS for Video Technology* on very-low-bit-rate video coding in June 1994. He received the B.E., M.E. and Ph.D. degrees in electrical engineering from the University of Tokyo in 1983, 1985, and 1988 respectively, where he is currently an associate professor. He received the 1987 Young Engineer Award, the 1990 Best Paper Award and the 1992 Achievement Award from the IEICE Japan. His research interests include image processing, video coding, computational image sensors, and human-computer interaction.

Having received the B.S.E.E. degree from the University of Michigan in 1985, **James C.**

Brailean became a member of the technical staff in the Space and Communications Group

Yao Wang

Rosa Lancini

C.-C. Jay Kuo

Murat Kunt

Kiyoharu Aizawa

James C. Brailean

Hamid Gharavi

Cheng-Tie Chen

Dr. Ming-Ting Sun, editor for the *IEEE Transactions on Circuits and Systems for Video Technology*, has announced 17 new associate editors for the journal.

Leonard A. Ferrari's specialty is in image processing. He earned the M.S.E.E. degree from Northeastern University in 1967, and the B.S.E.E. degree from the Massachusetts Institute of Technology (MIT) in 1963. Early in his career he worked as a researcher for Polaroid Corporation. His work with Dr. E. G. Land, the founder of Polaroid, led to a human vision model and a joint patent. In 1974 he returned to school and received a Ph.D. degree from the University of California, Irvine in 1980. He joined the faculty of the University of California in 1980, then joined the Department of Electrical and Computer Engineering in 1985 as a full-time member. Last year he was selected to serve as the department head of the Bradley Department of Electrical Engineering at Virginia Polytechnic Institute and State University in Blacksburg, Virginia.

Yao Wang received the B.S. and M.S. degrees in electrical engineering from Tsinghua University, Beijing, China, in 1983 and 1985, respectively, and the Ph.D. degree in electrical engineering from the University of California at Santa Barbara, in 1990. Since 1990, she has been on the faculty of Poly-

visual communication networking and multi-media applications.

After earning the M.Sc. and Ph.D. degrees from Loughborough University of Technology, Loughborough, U.K. in 1975 and 1979,

for Hughes Aircraft Co., Los Angeles, California. Working on advanced communications systems during his time there, until September 1989, he also earned the M.S.E.E. from the University of Southern California. In 1993 he earned the Ph.D. in electrical engineering from Northwestern University. He is currently a staff engineer at Motorola Corporate Research, Schaumburg, Illinois, where he is working on video compression. His current research interests are in video compression, motion estimation and image sequence restoration.

Cheng-Tie Chen received the B.S.E.E. degree from the National Taiwan University in 1977, and the M.S.E. and Ph.D. degrees from the University of Pennsylvania in 1981 and 1983, respectively. From 1984 to 1987, he worked for the Research Laboratories of the Eastman Kodak Company as a senior research scientist. His research activities there were in the areas of image restoration and image coding/transmission. Since 1987, he has been with the Bell Communications Research in New Jersey, as a member of the technical staff. His current research interests are in the areas of

CSVT 'DISPLAYS' ASSOC. EDITORS

S. Panchanathan	Thomas Sikora	Ali Tabatabai	Bing Zeng	Che-Ho Wei
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respectively, **Hamid Gharavi** joined AT&T Bell Laboratories in 1982. In 1984 he was transferred to Bellcore where he became a distinguished member of the research staff. In August 1993, he returned to Loughborough University of Technology to become a professor of communications engineering in the Department of Electronic and Electrical Engineering. He received the 1986 Charles Babbage Best Paper Award of the Institution of Electronics and Radio Engineers and the 1989 Darlington Best Paper Award of the IEEE Circuits and Systems Society.

Murat Kunt received the M.S. in physics and the Ph.D. in electrical engineering from the Swiss Federal Institute of Technology, Lausanne, Switzerland, in 1969 and 1974, respectively. In 1976, he returned to the Swiss Federal Institute of Technology (EPFL) where, presently, he is a professor of electrical engineering and director of the signal processing laboratory. He is a founding member of EURASIP, the European Association for Signal Processing. In 1983, he received the gold medal of EURASIP for meritorious service.

Since January 1989, **Dr. C.-C. Jay Kuo** has been with the Department of Electrical Engineering-Systems and the Signal and Image Processing Institute at the University of Southern California, where he is currently an associate professor. He earned the B.S. degree from the National Taiwan University, Taipei, in 1980 and the M.S. and Ph.D. degrees from the Massachusetts Institute of Technology in 1985 and 1987, respectively, all in electrical engineering. His research interests are in the areas of digital signal and image processing, wavelet theory and applications, video image compression, multimedia and large-scale scientific computing.

Born in Bergamo, Italy, **Rosa Lancini** received the M.S. in electronic engineering from the Politecnico di Milano in 1987. From 1987 to 1989 she was at Politecnico di Milano as a research associate working on stochastic and statistics applied to forecasting models. In 1990 she joined Centro per la Ricerca e la Formazione in Ingegneria dell'Informazione (CEFRIEL) where she is director of the digital signal processing laboratory. Her research interests include image and video coding, motion estimation, segmentation, vector quantization and neural networks. She serves in the program committee of a number of international conferences and the edito-

Byeong Gi Lee

Janne Juhola

N. Demassieux

Arding Hsu

rial board of the Signal Processing Journal.

Sethuraman Panchanathan received the B.S. degree in physics from the University of Madras, India, in 1981; the B.E. degree in electronics and communication engineering from the Indian Institute of Science, India, in 1984; the M. Tech. degree in electrical engineering from the Indian Institute of Technology, Madras, India, in 1986; and the Ph.D. degree in electrical engineering from the University of Ottawa in 1989. Dr. Panchanathan is presently an associate professor in the Department of Electrical Engineering, University of Ottawa and is the director of the visual computing and communications laboratory at the University of Ottawa. His lab team works in the areas of compression, indexing, storage, retrieval and browsing of images and video, VLSI architectures for multimedia processing, parallel processing, and multimedia communications.

Thomas Sikora received the Dipl.-Ing. degree and the Dr.-Ing. degree in electrical engineering from Bremen University, Germany, in 1985 and 1989, respectively. From 1985–1989 he was employed with the Free University Berlin conducting research on digital signal processing algorithms. In 1990 he joined Siemens Ltd. and Monash University, Melbourne, Australia, as a project leader responsible for video compression research activities in the Australian Broadband Universal Video Codec consortium. Since 1994 he has been employed with Geinrich-Hertz-Institute (HHI), Berlin. He is currently appointed as the video chairman of the Moving Picture Experts Group (MPEG) and as the chairman of the European COST²¹¹ video simulation research group.

After receiving the Ph.D. degree from Purdue University, West Lafayette, Indiana, in 1981, **Ali Tabatabai** worked at Bell Laboratories, Holmdel, New Jersey, until transferring to Bellcore in 1984. Since October 1992, he has been manager of the Digital Video Compression Group at Tektronix, Inc., Beaverton, Oregon. Dr. Tabatabai is co-recipient (with Dr. H. Gharavi) of the IEEE-CAS 1988 Darlington Best Paper Award in subband coding of still images. He was a core member, from the United

States, in the ITU-T SGXV/WP1 on coding for visual telephony, responsible for the development of H.261 Standard for low-bit-rate video applications.

Born in Sichuan, China, **Bing Zeng** earned the B.S. and M.S.

CAS SOCIETY NEWS—ELECTION RESULTS

The ballots of the IEEE Circuits and Systems Society's yearly voting have once again been tallied and the results have officially been declared by Robert Wangemann, managing director of IEEE Technical Activities. Elected as Officers of the CAS Society to one-year terms beginning January 1, 1996, are:

John Choma, Jr.	President-Elect
Clifford G. Y. Lau	Administrative Vice President
Hari C. Reddy	Vice President of Conferences
Rui J. P. de Figueiredo	Vice President of Publications
Chris Toumazou	Vice President of Technical Activities
Franco Maloberti	Vice President of Region 8
Paulo S. R. Diniz	Vice President of Region 9
Isao Shirakawa	Vice President of Region 10

The following candidates have been elected to serve on the Circuits and Systems Society Board of Governors for a three-year term ending December 31, 1998:

Geert A. De Veirman
Alfred E. Dunlop
Bing Sheu
Mani Soma
Mona E. Zaghloul

On behalf of Mr. Wangemann, and for the entire Society, we wish the newly elected officers and members of the Board of Governors success and thank all candidates for their willingness to serve and for permitting their names to be included on the ballot. Please note that on the back cover of the Newsletter is the form to nominate candidates for next year's elections.

New Associate Editors. . .continued from Page 7

degrees in electrical engineering from the University of Electronic Science and Technology of China, Chengdu, China, in 1983 and 1986, respectively. After receiving the Dr. of Tech. degree in electrical engineering from Tampere University of Technology, Tampere, Finland, in 1991, he joined the Department of Electrical and Electronic Engineering at The Hong Kong University of Science and Technology in January 1993, as an assistant professor. Dr. Zeng's research interests include digital signal and image processing, linear and nonlinear digital filter design, neural networks, and image/video coding and transmission.

Che-Ho Wei was the founding chairman of both the IEEE Circuits and Systems Chapter and the IEEE Communication Chapter in Taipei. He received the B.S. and M.S. degrees in electronic engineering from the National Chiao Tung University, Hsin Chu, Taiwan, in 1968 and 1970, respectively, and the Ph.D. degree in electrical engineering from the University of Washington in 1976. From 1976 to 1979 he was an associate professor at the National Chiao Tung University, where he is now a professor in the Department of Electronics Engineering and the Institute of Electronics. Dr. Wei's research interests include digital communications and signal processing, and related VLSI circuits design.

Byeong Gi Lee earned the B.S. and M.E. degrees in 1974 and 1978, respectively, from Seoul National University, Seoul, Korea, and Kyungpook National University, Taegu, Korea, both in electronics engineering, and the Ph.D. degree in 1982 from the University of California, Los Angeles in electrical engineering. Since September 1986 he has been with the Department of Electronics Engineering, Seoul National University. He is a co-author of *Introduction to ISDN, Broadband Telecommunication Systems*, and the *Electronics Engineering Experiment Series* (4 volumes), and the editor of *HDTV Dictionary*, all in Korean; and a co-author of *Broadband Telecommunication Transmission* and *Scrambling Techniques for Digi-*

tal Transmission in English.

Born in Nakkila, Finland, **Janne Juhola** received the M.Sc. degree in electrical engineering in 1989 and the Licentiate of Technology degree in 1992, both from Tampere University of Technology, Finland. He has been working in the area of video signal processing for eight years. First he was with the signal processing laboratory in Tampere University of Technology. Since 1990 he has been with Nokia Research Center in Tampere, Finland, and now he is the manager of the video signal processing group. His current research interests are video coding and video signal processing in TV receivers.

Earning an engineering degree in telecommunications in 1983 from Ecole Nationale Supérieure des Telecommunications, Paris, **Nicolas Demassieux** joined the staff of that institution where he started to develop research and teaching in the emerging field of VLSI design. He became a professor in 1988 and is currently the head of the Department of Electronics which has activities in systems and integrated circuits, digital and analog, CAD tools and device modeling. His research covers VLSI and system architecture modeling, optimization and synthesis, with applications for real-time signal processing, image processing, image compression and digital communications.

Arding Hsu received the Ph.D. in computer science from Rutgers University. In 1983 he joined Siemens Corporate Research Inc., Princeton, New Jersey, where he is currently the head of the multimedia/video technology department. Dr. Hsu has performed original research on database integrity control, engineering information management, semantic data modeling, and logic database systems. His current research focus is on multimedia information management. His articles on video feature extraction, image/video indexing structures, hypermedia information management and multimedia messaging have been published in various journals and conference proceedings.

CHAPTER NEWS—IC WORKSHOPS

Region 8 to Sponsor Workshop on Analog and Mixed IC Design

The 1st IEEE-CAS Region 8 Workshop on Analog and Mixed IC Design will be held in Pavia, Italy, on September 13–14, 1996. The aim of this Workshop is to open a critical and creative discussion on the state-of-the-art in a few specific topics. Fundamental aspects, recent advances, and future directions of different approaches will be presented and compared. The Workshop is intended both for experts in the field interested in recent developments and trends, and for other interested people desiring to ‘take a look’ at fundamental aspects and technological capabilities. The discussion will be open to all aspects of IC design, from theoretical background and high-level design, to practical implementations related to physical layout, prototype characterization and testing.

To achieve the proposed goal, each session of the Workshop will include: an invited presentation, to open the session illustrating fundamental aspects related to specific topics, the state-of-the-art, present key problems and future directions; four lectures, selected among submitted contributions, to present different experiences with practical design development; and a panel discussion, introduced by several other experts, and open to all attendants, to compare different views and solutions.

The Workshop is organized in order to encourage informal discussion and brainstorming on selected topics and to get contributions from all attendants (invited speakers, speakers, panelists, general attendance).

The topics chosen for the 1st IEEE-CAS Region 8 Workshop on Analog and Mixed IC Design are—high resolution data converters, mobile telephony and radio-frequency, and design of high performance integrated systems

Perspective participants are invited to contact the Workshop Secretariat: Andrea Baschiroto, Dept. of Electronics, Univ. of Pavia, Via Ferrata 1 – 27100 Pavia – Italy. Tel: +39–382–505.227, Fax: +39–382–422.583, e-mail: andrea@ipvsm6.unipv.it

The deadline for paper submission is May 15, 1996. The invited presentations, the accepted papers and the contribution of experts to panel discussions will be collected and published in the Proceedings.

Poland Section to Co-Sponsor MIXDES’96

Encouraged by the success of the two previous Advanced Training Courses “Mixed Design of VLSI Circuits”, in Poland and Krakow, this type of meeting is being continued with a call for participation to this year’s workshop, now called MIXDES’96. The Third Advanced Training Course entitled “Mixed Design of Integrated Circuits and Systems—Education in Computer Aided Design of Modern ICs and Devices” is planned to provide an international forum for discussion and the exchange of information on all of the problems which have to be taken into account by future designers of modern integrated circuits and devices. Different aspects of the advanced electronic design, testing and manufacturing that should be reflected in high-level education will be presented.

The workshop is organized by the Division of Microelectronics and Computer Science at the Institute of Electronics of the Technical University of Lodz, Poland, and sponsored by the European Union TEMPUS Programme, the IEEE Poland Section, the Polish State Committee for Scientific Research, and the Australasian Association for Engineering Education.

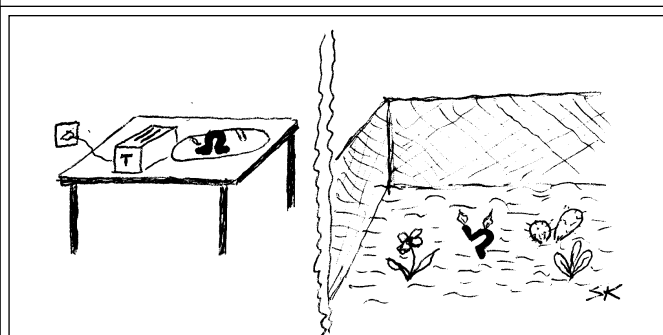
It is held in Lodz, a vibrant industrial and academic city in central Poland, with about 850,000 inhabitants and eight important higher-education institutions. Participation of East-European attendants and the publication of the Proceedings will be financially supported by the TEMPUS Complementary Measures Project CME–01059. The conference is intended to cover the most interesting problems in the microelec-

tronic design in a wide range of variety. A poster session, software demonstration, and round-table discussion devoted to education of microelectronics is planned.

The main topics are: design methodologies, techniques, and practical examples; thermal problems in semiconductor devices and ICs; analog and digital filters and signal processing; advanced testing methods and reliability; neural networks; sensors and actuators: modelling, simulation, and design; power devices and smart-power modules; and educational issues and student projects.

The coordinating organizer and contact person is Dr. Marek Turowski at the Technical University of Lodz, Institute of Electronics, ul. Stefanowskiego 18–22, 90–924 Lodz, Poland. Tel: (+48–42) 31 26 20; fax: (+48–42) 36 22 38; e-mail: TUROWSKI@J-23.PLODZ.PL.

THE ADVENTURES OFTHE ‘UMBLE OHM ...Shlomo Karni



ohm-made bread ohm-grown vegetables

‘Local Products’

IEEE CAS FELLOW PROFILES 1996

Bing J. Sheu

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

Bing Sheu received the B.S.E.E. degree with honors in 1978 from the National Taiwan University, and the M.S. and Ph.D.E.E. degrees from the University of California at Berkeley in 1983 and 1985, respectively. Dr. Sheu has taught in the electrical engineering department at the University of Southern California since 1985, and holds a joint appointment in the biomedical engineering department. His research interests include VLSI chips and systems, mobile computing, neural networks, and multimedia technology.

Dr. Sheu was a recipient of the NSF Engineering Initiation Award, the Tse-Wei Liu Memorial Fellowship at UC Berkeley, Best Presenter Award at IEEE ICCD Conference in 1990 and 1991, Best Paper Award of the *IEEE Transactions on VLSI Systems* in 1995, and Best Poster Paper Award of the World Congress on Neural Networks in 1995. He has published over 170 technical

papers and is a co-author of the book *Neural Information Processing and VLSI* in 1995 and leading editor of *Microsystems Technology for Multimedia Applications* in 1995. For IEEE publications, he served as guest editor of the *Journal of Solid-State Circuits* and on computer technologies for the *Transactions on VLSI Systems*, and was an associate editor of the *Transactions on Neural Networks*, the *Transactions on Circuits and Systems, Part I* for Express Letters, and *Part II* for VLSI DSP. At present, he serves as an associate editor of *Transactions on VLSI Systems*, a guest editor on multimedia for *Transactions on Circuits and Systems for Video Technology*, CAS editor of *Circuits & Devices Magazine*, and on editorial boards of journals from other publishers. He was the tutorials chair of the 1995 IEEE ISCAS and technical program chair of 1996 IEEE International Conference on Neural Networks

Bing J.
Sheu

Tetsuo Nishi

For contributions to linear and nonlinear circuit theory.

Tetsuo Nishi received the B.E., M.E., and D.E. degrees from Kyushu University, Fukuoka, Japan, all in electronics engineering in 1964, 1966, and 1969, respectively. After graduation he joined the Department of Communication Engineering of Kyushu University. Since 1983 he has been a professor in the Department of Computer Science and Communication Engineering at the same university.

Professor Nishi's research interests include linear and nonlinear circuit theory. He wrote many papers on the synthesis of transformerless networks, mixed lumped-and distributed-circuits and switched-capacitor circuits, and on the topological analysis of nonlinear resistive circuits.

Professor Nishi served as chairman of the Institute of Electronics, Information, and

Communication Engineers (IEICE) Technical Group on Circuits and Systems in Japan, and chairman of the 1994 Symposium on Nonlinear Theory and its Applications. He also served as the guest editor of several special issues of the *IEICE English Transactions* and an associate editor of the *IEICE English Transactions* from 1990–1994. He is presently editor of the *IEICE Transactions—A* (in Japanese). He has been an associate editor of the *IEEE Transactions on Circuits and Systems—I*, and the *Journal of Circuits, Systems, and Computers*. He was a vice-chairman of the CAS Tokyo Chapter of the IEEE.

Professor Nishi is the co-author of the book *Exercise for Network Synthesis*. He is the recipient of the 1985 IEICE Best Paper Award and the co-recipient of the 1985 Guillemin-Cauer Prize Award.

Tetsuo
Nishi

CIRCUITS AND SYSTEMS SOCIETY MEMBERS

Keshab K. Parhi

For contributions to the field of VLSI digital signal processing architectures, design methodologies and tools.

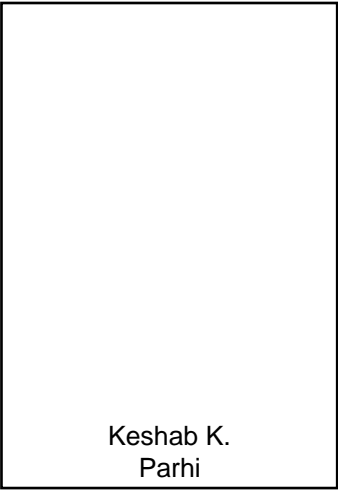
Keshab K. Parhi is a professor of electrical engineering at the University of Minnesota, Minneapolis. He received degrees from the Indian Institute of Technology, Kharagpur, India, in 1982, the University of Pennsylvania, Philadelphia in 1984, and the University of California at Berkeley in 1988.

His research interests include concurrent algorithm and architecture designs for communications, signal and image processing systems, digital integrated circuits, VLSI digital filters, computer arithmetic, high-level DSP synthesis, and multiprocessor prototyping and task scheduling for programmable software systems. He has published over 150 papers in these areas and has co-authored the research monographs *Pipelined Adaptive Digital filters* in 1994, *Digit-Serial Computation* in 1995, and *Pipelined Lattice and Wave Digital Recursive filters* in 1996.

Dr. Parhi received the 1994 Darlington and the 1993 Cuillemin-Cauer best paper

awards, the 1991 paper award from the IEEE Signal Processing Society, the 1991 Browder Thompson prize paper award from the IEEE, the 1992 Young Investigator Award of the NSF, the 1992–1994 McKnight-Land Grant professorship of the University of Minnesota, and the 1987 Eliahu Jury award for excellence in systems research at the University of California, Berkeley. He is a former associate editor of the *IEEE Transactions on Circuits and Systems*, is a current associate editor of the *IEEE Transactions on Signal Processing* and the *IEEE TCAS—II*, and an editor of the *Journal of VLSI Signal Processing*. He is a distinguished lecturer of the CAS.

Dr. Parhi was technical program co-chair of the 1995 IEEE VLSI Signal Processing Workshop and the 1996 ASAP International Conference. He has participated in program committees of a number of conferences including ISCAS the and Great Lakes Symposium on VLSI.



Keshab K.
Parhi

Louis R. Hunt

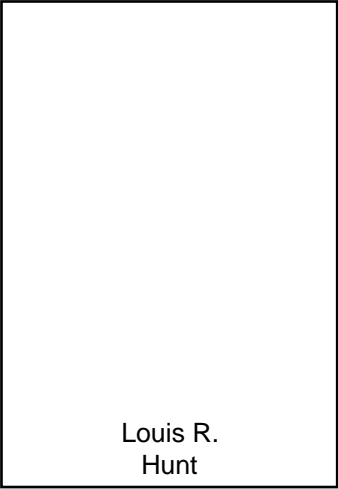
For contributions to nonlinear control systems and mathematics/engineering education.

Louis R. (Bob) Hunt received the B.S. degree from Baylor University in 1964 and the Ph.D. degree from Rice University in 1970, both in mathematics. From 1969 to 1984 he was with the Department of Mathematics at Texas Tech University, taking a leave at the NASA Ames Research Center from 1980–1982. Since 1984 he has been with the Programs in Mathematical Sciences at the University of Texas at Dallas, serving as program head from 1992–1994. He is also director of the Center for Engineering Mathematics and a member of the EE faculty.

His early research was in the mathematical fields of several complex variables, differential geometry, and partial differential equations. His research evolved to nonlinear systems and control, where he first worked

on nonlinear controllability using differential geometric techniques. Professor Hunt's leave to the NASA Ames Research Center led to joint results with George Meyer and Renjeng Su on feedback linearization. This work was driven by applications to automatic flight control. Feedback linearization has become a major control design technique, and its application has spread from control of aircraft to control of robots, power systems, electric systems, etc. Dr. Hunt has also produced interesting research on right coprime factorizations for nonlinear systems, nonlinear stability and stabilization, nonlinear observability and observers, and nonlinear realizations and modeling.

Professor Hunt has strongly encouraged interdisciplinary research and education between mathematicians and engineers.



Louis R.
Hunt

IEEE CAS FELLOW PROFILES 1996

Kurt William Keutzer

For contributions to logic synthesis and computer-aided design specifically for the development of algorithms for the optimization of area, delay, testability, and power of digital circuits.

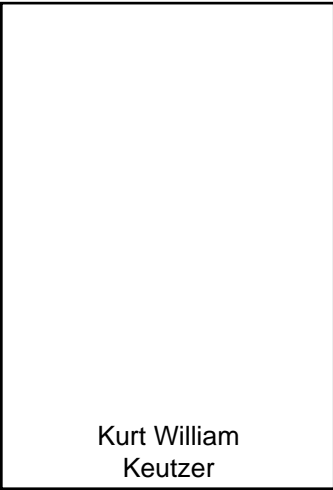
Kurt Keutzer received the B.S. degree in mathematics from Maharishi International University in 1978 and the M.S. and Ph.D. degrees in computer science from Indiana University in 1981 and 1984, respectively. After graduating, he joined AT&T Bell Laboratories in 1984, where he worked to apply various computer-science disciplines to practical problems in computer-aided design. In 1991 he joined Synopsys, Inc. where he continues his work as chief scientist.

Kurt's research in technology mapping led to the inclusion of a paper in the anthology *Twenty-five Years of Electronic Design Automation*. He received best paper awards in the 1990 and 1991 Design-Automation Conferences, as well as a Distinguished Paper Citation at the International Conference on Computer-Aided Design in 1991 and a Best Paper Award at the International Con-

ference on Computer Design in 1992. Kurt's research interests now include the areas of logic synthesis, electronic-system design automation and programming-language compilers.

Dr. Keutzer has co-authored two books and his book *Logic Synthesis* was published in 1994. He has also published over sixty articles in refereed journals and conferences.

Dr. Keutzer presently serves on the editorial boards of three journals: *Design Automation for Embedded Systems*, *Formal Methods in System Design*, and *Integration—the VLSI Journal*. He was an associate editor of *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* from 1989 until 1995. He has served on numerous technical program and executive committees including those of DAC, EuroDAC, ICCAD, and ICCD. He also serves on the technical advisory board of C-Cubed Microsystems.



Kurt William
Keutzer

Ming-Ting Sun

For contributions and leadership to the technology of video signal processing and transmission.

Ming-Ting Sun received the B.S. degree from National Taiwan University in 1976, the M.S. degree from the University of Texas at Arlington in 1981, and the Ph.D. degree from the University of California, Los Angeles in 1985, all in electrical engineering.

After graduation he joined Bellcore where he is currently the director of the Video Signal Processing Research Group. His research interests include video coding, video transport over heterogeneous networks, multipoint multimedia conferencing, VLSI architecture and implementation for real-time video signal processing, and adaptive filtering.

Dr. Sun has been awarded six patents and has published more than 50 technical papers including three book chapters in the area of video technology. He developed new VLSI architectures for several critical func-

tions in video compression including Discrete Cosine Transform (DCT), Motion Estimation, and Entropy Coding, and led a team in demonstrating the first working two-dimensional DCT chip. He and his group have contributed to the development of H.261, MPEG-1, and MPEG-2 video and systems standards. He was a founding associate editor, the Express Letter editor, and a guest editor of the *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)* from 1991 to 1994. He was a co-recipient of the *TCSVT* Best Paper Award in 1993. From 1988 to 1991 he served as the chairman of the IEEE CAS Standards Committee and established an IEEE Inverse Discrete Cosine Transform Standard. He received an Award of Excellence from Bellcore in 1987. He is currently the editor-in-chief of *TCSVT*.



Ming-Ting
Sun

CIRCUITS AND SYSTEMS SOCIETY MEMBERS

Max Schaldach

For contributions to the development of biomedical implantable devices.

Max Schaldach received the Diploma in Physics, and the Dr.-Ing. degree from the Technical University, Berlin in 1964 and 1966, respectively, in the areas of solid-state physics, electrochemistry, and electronics. In 1969, he joined the faculty as professor of experimental physics. Since 1970, he has been professor of physics and chairman of the Department of Biomedical Engineering, at Friedrich-Alexander-University, Erlangen-Nürnberg, Germany.

His research activities include solid-state physics, material sciences, electrochemistry, and biomedical engineering; protein-solid interaction with electron transfer reactions in solutions and living tissue, resulting in an electrochemical model of protein activation, and biomaterials, electrophysiology, electrotherapy, and microelectronics.

During the past 30 years, his industrial activities have resulted in the development of electronic implants, i.e., heart pacemakers, neurostimulators, defibrillators, and cardiac assist systems, and other microelectronics and diagnostic equipment, with more than 150 inventions. He has founded several high-technology companies in the biomedical

industry, as well as two microelectronics companies.

Prof. Schaldach is co-editor of *The Journal of Biomedizinische Technik*, and has served on the editorial and advisory boards of many scientific journals and professional organizations. His scientific activities include *Electrotherapy of the Heart* and two volumes on *Engineering in Medicine*, over 560 papers, numerous review articles, selected chapters written for scientific textbooks and encyclopedia, and more than 860 presentations at scientific congresses. He has also helped organize over 50 national and international scientific conferences and symposia. He is past president of the German Society of Biomedical Engineering, and a member of the board of directors of the International Federation of Biomedical Engineering.

Prof. Schaldach is the recipient of numerous awards and honors, including recognition in 1989 by the president of the Federal Republic of Germany with the country's highest and most distinguished service medal for outstanding technical and industrial developments.

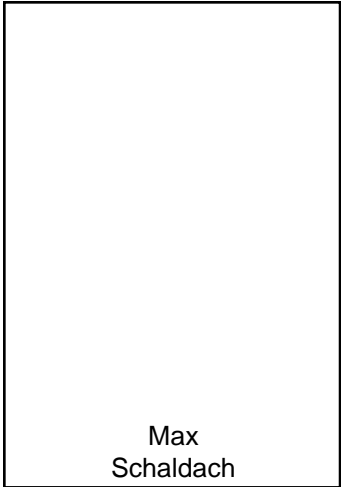
John M. Cioffi

For contributions to the theory, practice, and promotion of advanced communication methods in data transmission and storage.

John M. Cioffi received the B.S.E.E. in 1978 from the University of Illinois and the Ph.D.E.E. degree in 1984 from Stanford University. He worked as a modem designer at Bell Laboratories from 1978–1984, and as a disk read-channel researcher at IBM from 1984–1986. He has been on the faculty at Stanford University since 1986, where he is now a tenured associate professor. He founded Amati Communications Corp in 1991 and has served as an officer and director since 1991, and is presently Chief Tech-

nical Officer of Amati in addition to continuing in his Stanford position.

Cioffi's specific interests are in the area of high-performance digital transmission and storage systems, where he has over 100 publications and 15 patents, all of which are licensed. Cioffi received the 1991 IEEE Communications Magazine Best Paper Award and the 1995 T1 Outstanding Achievement Award of the American National Standards Institute. Cioffi was an NSF Presidential Investigator from 1987–1992.



Max
Schaldach



John M.
Cioffi

The Region 8 CAS Conference

ICECS '96

Third International Conference on Electronics, Circuits, and Systems

October 13-16, 1996

Rodos, Greece

For further information:
ICECS Secretariat, EE Department
University of Patras, 26500, Greece
Tel: +30 61 997 283
Fax: +30 61 994 798

General Chair:
Dr. Thanos Stouraitis
Univ. of Patras
E-mail: thanos@ee.upatras.gr

**For updated information
regarding the conference,
please consult the www site:**
<http://www.vlsi.ee.upatras.gr/>
ICECS96/

~ CALL FOR PAPERS ~

IEEE Region 10 Conference
≈ ≈ **TENCON'96** ≈ ≈

Digital Signal Processing Applications
Perth, Western Australia
November 27-29, 1996

Submission of papers:
May 10, 1996

Notification of acceptance:
July 5, 1996

Submission of camera-ready papers:
August 23, 1996

For further information:
TENCON'96, Conference Secretariat
Australis Promotions Pty Ltd
PO Box 1025

Bentley Delivery Centre
WA 6983, AUSTRALIA
Tel: +61-9-470-2552
Fax: +61-9-470-2556

E-mail: tencon96@ee.uwa.edu.au
WWW: <http://ciips.ee.uwa.edu.au/tencon96.html>

Final Call for Papers

APCCAS'96

IEEE Asia-Pacific Conference on
Circuits and Systems '96

The Swiss Grand Hotel
Seoul, Korea
November 18-21, 1996

Theme: Circuits and Systems for
Multimedia Computing
and Networking

Author's Schedule

Submission of extended summaries:
April 15, 1996

Notification of acceptance:
July 15, 1996

Submission of camera-ready paper:
Sept. 15, 1996

Secretariat of APCCAS '96

Prof. Jae Ho Chung, General Secretary
c/o INTERCOM Convention Service, Inc.
4Fl., Jisung Bldg.
645-20 Yoksam 1-dong
Kangnam-ku, Seoul 135-081, Korea
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Fax: +82-2-565-2434, 3452-7292
E-mail: intercom@soback.kornet.nm.kr

IEEE/ACM INTERNATIONAL CONFERENCE
ON COMPUTER AIDED DESIGN



ICCAD 96
A CONFERENCE FOR THE EE CAD PROFESSIONAL

CALL FOR PAPERS

NOV. 10-14, 1996 SAN JOSE, CA

ICCAD is oriented towards Electrical Engineering
CAD professionals, concentrating on CAD for
Electronic Circuit Design.

Conference Chair – Rob A. Rutenbar
Program Chair – Ralph H. J. M. Otten
Tutorial Chair – Robert Aitken

AUTHOR'S SCHEDULE

Deadline for submissions: April 10, 1996
(Postmarked)

Notification of acceptance: July 1, 1996

Deadline for final version: August 9, 1996

Please direct all correspondence to:

ICCAD-96 Publications Department
MP Associates, Inc.
5305 Spine Rd., Suite A
Boulder, CO 80301
Telephone: (303) 530-4562

ICCAD'S Home Page:
<http://www.e2w3.com/ICCAD.html>

1996 WORKSHOP ON ELECTRONIC DESIGN PROCESSES

Monterey, California April 24-26, 1996

General Co-Chairs:

JAY BROCKMAN, University of Notre Dame
JACK WOIDA, Mentor Graphics

The Workshop on Electronic Design Processes will provide a
forum for an interchange of ideas on techniques for improving the
efficiency of processes for the design, development and delivery
of electronic products.

For further information and registration forms contact:

1996 Workshop on Electronic Design Processes
Department of Computer Science & Engineering
University of Notre Dame, Notre Dame, IN 46556
E-mail: edp96@cse.nd.edu

Up-to-the minute conference information may be found on
the WWW at: <http://www.nd.edu/~cseda/edpw96>

CALL FOR PAPERS

•••••
1996 BIPOLAR/BiCMOS
CIRCUITS AND TECHNOLOGY
MEETING

Marriot City Center Hotel
Minneapolis, MN

•••••
Short Course: September 29, 1996
Conference: Sept. 30-Oct. 1, 1996
•••••

Deadlines:

Receipt of abstract and summary

Monday, April 1, 1996

Notification of acceptance

Monday, May 20, 1996

Receipt of proceedings manuscript

Monday, July 15, 1996

All questions or inquiries for further
information regarding this conference
should be directed to the

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

Call for Papers

ASP-DAC '97

Asia and South Pacific Design
Automation Conference 1997
with EDA TechnoFair '97

Jan. 28 - 31, 1997

Makuhari Messe, Chiba
JAPAN

Submission of papers:

Deadline for submission

July 20, 1996

Notification of acceptance

October 18, 1996

Deadline for final version

November 5, 1996

Conference Secretariat:

CONVEX Inc.

Ichijoji Building 2-3-22

Azabudai, Minato-ku

Tokyo 106, JAPAN

Phone: +81-3-3589-3355

Fax: +81-3-3589-3974

CNNA-96 Sevilla

Fourth IEEE International Workshop
on Cellular Neural Networks
and Applications

**Seville, SPAIN
June 24-26, 1996**

For further information,
please contact:

CNNA'96 Secretariat

Centro Nacional de
Microelectrónica
Edif. CICA, Avda. Reina
Mercedes s/n
E-41012 Sevilla - SPAIN
Tel: (34) 5 423 9923
Fax: (34) 5 423 1832
E-mail: cnna96@cnm.us.es
WWW page: <http://www.cica.es/~cnm/cnna96>

1996

Midwest Symposium on Circuits and Systems

August 18-21, 1996

Iowa State University
Ames, Iowa

The Symposium will be devoted
to all aspects of the theory,
design, and applications of
circuits and systems.

ORGANIZING COMMITTEE

General Chair - **Marwan M. Hassoun**
Technical Program Chair -

Michael Soderstrand

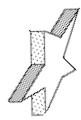
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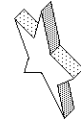
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International Conference on Neural Networks



ICNN'96 Washington, DC June 2-6, 1996



Sheraton Washington Hotel Washington, DC, USA
For further information, contact:

General Chair

Benjamin W. Wah Tel: (217) 333-3516
Coordinated Science Laboratory Fax: (217) 244-7175
University of Illinois, E-mail: icnn96@manip.crhc.uiuc.edu
Urbana-Champaign or visit our WWW page at:
Urbana, Illinois 61801 <http://www-ece.rice.edu/96icnn/>

A

33rd DESIGN AUTOMATION CONFERENCE

JUNE 3-7, 1996



LAS VEGAS CONVENTION CENTER
LAS VEGAS, NEVADA

This year's conference features 142 technical papers,
10 exciting panels and 11 informative embedded tu-
torials, as well as 2 exciting keynotes: Arati Prabhakar,
Director of NIST; and Jim Clark, CEO of Netscape
Comm. Corp.



Sessions on:

Design & Implementation Verification, Hardware
Description Languages: VHDL/Verilog HDL, Logic
Synthesis, Standards Issues: VHDL/CFI/EDIF, De-
sign Methodology, Low Power Design, Design Reuse,
and Physical Design

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DAC fax: (303) 530-4334
5305 Spine Rd., Suite A e-mail: dacinfo@dac.com
Boulder, Colorado 80301 Web: <http://www.dac.com/>



Sevilla NDES-96

Fourth International Workshop
on Nonlinear Dynamics of
Electronic Systems

**Seville, SPAIN
June 27-28, 1996**

For further information,
please contact:

NDES'96 Secretariat

Centro Nacional de
Microelectrónica
Edif. CICA, Avda. Reina
Mercedes s/n
E-41012 Sevilla - SPAIN
Tel: (34) 5 423 9923
Fax: (34) 5 423 1832
E-mail: ndes96@cnm.us.es
WWW page: <http://www.cica.es/~cnm/ndes96>

NICROSP'96

1996 International Workshop on Neural
Networks for Identification, Control,
Robotics, and Signal/Image Processing

Venice, Italy

August 21-23, 1996

General Chair

Prof. Edgar Sanchez-Sinencio

Program Chair

Prof. Vincenzo Piuri

For further information

Dr. Cesare Alippi
Dept. of Electronics & Information
Politecnico di Milano
piazza L. da Vinci 32
I-20133 Milano, Italy
Fax: +39-2-2399-3411
E-mail: alippi@elet.polimi.it

WWW: <http://www.csee.hw.ac.uk/~acc/confs/conf.126.html>

CALL FOR PAPERS AND PARTICIPATION

The Tenth International Conference on VLSI Design

January 4-7, 1997

Hyderabad, India

Theme: VLSI in Multimedia Applications



Regular Papers/Proposals to reach Program Chair

June 3, 1996

Tutorials Proposals to reach Tutorial Chairs

May 20, 1996

Design Contest entries to reach Organizing Committee

September 16, 1996

N. Ranganathan

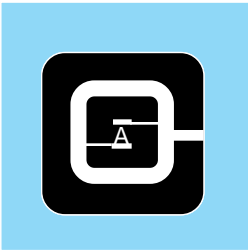
Center for Microelectronics Research
Dept. of Computer Science and Engg.
U. of South Florida, ENB 118, Tampa, LS 33620
Tel: (813) 974-4760; Fax: (813) 974-5456
ranganat@babbage.csee.usf.edu

Bernard Courtois

Laboratoire TIMA/INPG
46 Avenue Felix Viallet
38031 Grenoble Cedex, FRANCE
Tel: +33-76574615; Fax: +33-76473814
bernard.courtois@imag.fr

The Call for Papers can be obtained from the web site: <http://www.csee.usf.edu/vlsi-link/web/vlsideign/CFP97.ps>

Editor: Dr. Michael K. Sain
 Electrical Engineering
 University of Notre Dame
 Notre Dame, IN 46556 USA



CALL FOR NOMINATIONS

Board of Governors

Each year, 5 members of the CAS Society are elected to the Board of Governors for 3-year terms. The Board of Governors shall represent the members of the Society and approve the Society's annual budget, amendments to the Constitution and Bylaws, and authorize the expenditure of Society funds. Members of the Board of Governors should not miss annual meetings (at ISCAS in May/June and ICCAD in November) more than 2 times consecutively. Nominations from the Society membership must include at least 15 signatures of Society members, excluding students. Upon receipt of nominations, the Nominations Committee will submit at least 11 candidates for Society-wide election of the five Board members.

If you wish to nominate a member to the Board of Governors, then, after obtaining the consent of the nominee to serve if elected, please fax the name of the nominee, address, telephone, fax number, and e-mail address, if available, to the CAS Nominations Committee Chair on the form below. Board of Governors nominations must be received by **June 1, 1996**. Send nominations to Professor Wai-Kai Chen at the address on the form below.

Society Officers

Each year, members of the Board of Governors elect President-Elect, Vice Presidents for Administration, Publications, Technical Activities, Conferences, Region 8, Region 9, and Region 10. The CAS Bylaws have provision for nominations from Society members by written petition with at least 15 members' signatures, excluding students.

If you wish to nominate a member to any of the above CAS offices, then, after obtaining the consent of the nominee to serve if elected, please fax the name of the nominee, address, telephone, fax number, and e-mail address, if available, to the CAS Nominations Committee Chair on the form below. Officer nominations must be received by **September 1, 1996**. Send nominations to Professor Wai-Kai Chen at the address on the form to the right.

THE INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS, INC.
 445 HOES LANE
 PISCATAWAY, NJ 08855

CAS NOMINATION FORM

CAS Office:

- | | |
|---|--|
| <input type="checkbox"/> Member of the Board of Governors | <input type="checkbox"/> President-Elect |
| <input type="checkbox"/> Vice President, Administration | <input type="checkbox"/> Vice President, Conferences |
| <input type="checkbox"/> Vice President, Publications | <input type="checkbox"/> Vice President, Technical Activities |
| <input type="checkbox"/> Vice President, Region 8 | <input type="checkbox"/> Vice President, Region 9 |
| <input type="checkbox"/> Vice President, Region 10 | <input type="checkbox"/> The Candidate has agreed to serve if elected; and 15 valid names and addresses (mail, phone, fax, email), with signatures, are attached! |

Candidate:

Name _____

Address _____

Phone _____ Fax _____

Nominator:

Name _____

Address _____

Phone _____ Fax _____

Please mail or fax this form to:
 Wai-Kai Chen, CAS Nominations Committee
 Dept. of Electrical Engineering and Computer Science
 The University of Illinois at Chicago, Mail Code 154
 851 South Morgan Street; Chicago, IL 08540
 Tel. (312) 996-2462 Fax (312) 413-0024