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## Saturday, June 10

**EXHIBITS—9:00–5:00 P.M. and 6:30–9:30 P.M.**

### 8:00 – 9:45 A.M. — CONCURRENT SESSIONS

#### PAPER SESSION 201 IMAGE PROCESSING

Chair: David Rogers

1. A New Interface for Handwriting Patterns Using Pen Accelerations—T. Miyagawa, Y. Yonezawa, K. Itoh, M. Hashimoto, Shinshu University
2. Quantization Aspects in Karhunen-Loeve Transform Space for Fractal Image Compression—Macarie Breazu, University “Lucian Blaga” of SIBIU
3. Implementation of the Image Processing System for Low-Light-Level TV—Z. Zhang, J. Shen, X. Wang, Z. Ma, Y. Zhang, Tsinghua University
4. Orthogonal Fourier-Mellin Moments with Centroid Bounding Circle Scaling for Invariant Character Recognition—C. Kan, M.D. Srinath, Southern Methodist University

#### PAPER SESSION 202 DIGITAL COMMUNICATION

Chair: Raghe Gejji

1. Blind Channel Estimation and Detection for DS-CDMA in Unknown Correlated Noise—Y. Zhang, B. Poh Ng, G. Bi, Nanyang Technological University
2. Adaptive Narrow-Band AR Modeling, Venkat Anant—Roland Priemer, University of Illinois at Chicago
3. New Adaptive BCH Encoder Architectural Design for Wireless ATM Networks—M. Al-Khatib, Lakshmikar, M. Rahman, University of South Alabama
4. Efficient Vector Quantization of a Parametric Source—Laurence Wolfe, U.S. National Institute of Health

#### PAPER SESSION 203 SIGNAL PROCESSING

Chair: Ikhlas Abdel-Qader

1. Demonstration of the Feasibility of Using the Internet for Acquisition and Review of Diagnostic Images for Use in Medical Research and for Medical Testing Examinations—M.A. Pauley, B. Pitman, G. V. Dalrymple, Q. Zhu, W. Chu, R. Wobig, R. Bunting, University of Nebraska at Omaha
2. Gabor Eigenspace Time-Variant Filter—Zuochang Zheng, Hans G. Feichtinger, University of Vienna
3. Multiband Warped Filter Equalizer Design for Loudspeaker Systems—W. Peng, W. Ser, M. Zhang, Nanyang Technological University
4. H2 Optimal Envelope-constrained Filter Design with Uncertain Input—Z. Tan, Y. Soh, L. Xie, Nanyang Technological University

### 9:45 – 10:00 A.M. — BREAK

### 10:00 A.M.—NOON—CONCURRENT SESSIONS

#### PANEL DISCUSSION II

Moderator: Dimitar Filev, Ford Motor Company

“Intelligent Control: A Practical Perspective.” The presentation by Dr. Filev will cover an overview of the major trends in fuzzy and neural control systems from the perspective of their application in industry along with experience in development of industrial control technologies.

#### PANEL DISCUSSION III

Moderator: Nanua Singh, RGBSI

“Integrated Product Development.” Integrated product development is the 21<sup>st</sup> century’s response to the competitive conditions of the world market. What is required is to simultaneously consider the requirements of assembly and manufacturing with design requirements in order to reduce unit cost of production, improve quality and reduce total lead time.

#### TECHNOLOGY PRESENTATION III

Mohammed Samji, Microsoft

### NOON–1:30 P.M.—LUNCH ON YOUR OWN

\* Please consult the conference Web site for up-to-date information about workshops and presenters. Conference participants must sign up for the workshop due to limited seats available. Send your request to Hossein Mousavinezhad, General Chair ([hossein.mousavinezhad@ieee.org](mailto:hossein.mousavinezhad@ieee.org)) after registering for the conference. We will add additional workshops on Sunday, June 11, depending on interest and industrial participation.

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## SATURDAY, June 10, continued

### 1:30-3:15 P.M.—CONCURRENT SESSIONS

#### PAPER SESSION 204 SOFT COMPUTING

Chair: Daniel Litynski

1. A Neural Network Based Nonlinear Filter Image Enhancement—S. Zhang, E. Salari, University of Toledo
2. Sliding Mode Neural Network Inference Fuzzy Logic Control for Active Suspension Systems—N. Al-Holou, D. Joo, J. Weaver, T. Lahdhiri, F. Al-Abbas, University of Detroit-Mercy
3. Edge Detection Based on Quadruple Child Windowing and Fuzzy Logic—J. Khazaai, F. Severance, M.Z. Atashbar, Western Michigan University
4. Fuzzy Controller and Observer for Affine Takagi-Sugeno Fuzzy Systems—Pontus Bergsten, Orebro University

#### PAPER SESSION 205, SOFTWARE SYSTEMS

Chair: Jung-Chih Chiao

1. Speeding Smalltalk Programs by Follow-up Compilation—Sanjeev Baskiyar, Auburn University
2. Structured Genetic Algorithm: A Novel Approach to Simultaneous Optimization of Beam Intensity Profile and Orientation—C. Lim, A. Leyman, S. U. Ahmad, M. Er, Nanyang Technological University
3. Facing Different Spatial Ontologies in Heterogeneous Multi-Agents—L. Vocariu, I. A. Leoia, University of Cluj-Napoca, G. A. Fodor, Orebro University
4. Mobile Agent Based Web Cache Proxy System—K. Kishimoto, T. Nagata, Y. Taniguchi, S. Kono, S. Tamaki, University of the Ryukyus

#### PAPER SESSION 206, NOISE CAN- CELLATION (ERROR REDUCTION)

Chair: Chang Liu

1. Real-Time Noise Cancellation with Spectral Diffusion—Hyoung-Gook Kim, Klaus Obermayer, Dietmar Ruwisch, Cortologic AG, Technical University of Berlin
2. Noise Patterns on Seismograms—Kandiah Balachnadran, Amy H. Liao (Amy L. Liang), Kalamazoo Valley Community College
3. The Analytical Decoding Performance of Majority-Logic-Like Vector Symbol Codes—Jong-Moon Chung, Oklahoma State University, John Metzner, Penn State University
4. Efficient Bit Allocation and Space Quantization for Wavelet Image Coding—Chen Shuran, Toh Guan Nge, Zheng Song, Nanyang Technological University

### BREAK: 3:15–3:30 P.M.

### 3:15–5:15P.M.—CONCURRENT SESSIONS

#### PAPER SESSION 207, FIRMWARE SYSTEMS

Chair: George Fodor

1. A Design of a Hardware Intelligent Agent for Pattern Recognition—N. N. El-Nadi, G. M. Aly, Z.T. Fayed, H.M. Faheem, Ain Shams University
2. An IT-Qualified Server for Parallel Multi-Channel Digital Flatness Measurement—J. Bosson, K. Frefve, C. Sjogren, G. Wrang, ABB Automation Products AB
3. A Quantitative Approach to the Definition of Just Noticeable Difference (JND) for Artificial Neural Networks—Ehsan Mesbahi, University of Newcastle upon Tyne, UK
4. Universal Thin Client: Enterprise Desktop Computing Matures—Don McIntosh, Chicago eWorks, Inc.

#### PAPER SESSION 208, WAVELET TRANSFORMS

Chair: Massood Atashbar

1. Block Wavelet Transform Adaptive Filtering—W. Huang, W. E. Alexander, C. S. Gloster, North Carolina State University
2. A Sampling Algorithm for Medical Image Signal Compression—Yung-Gi Wu, Shen-Chuan Tai, National Cheng Kung University
3. Medical Image Compression by Discrete Cosine Transform Spectral Strategy—Yung-Gi Wu, Shen-Chuan Tai, National Cheng Kung University
4. A Feedforward Neural Network Based DWT Chip for the Detection of VLP's in ECG—S. Mahalingam, S. Ganesan, S.R. Vishnubhotla, Oakland University

#### TECHNOLOGY PRESENTATION IV

Mohammed Samji, Microsoft

### 6:30-9:30 P.M.—FOCUS ON EXHIBITS, REGION, ORGANIZING COMMITTEE MEETINGS

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**Sunday, June 11**

**ADDITIONAL PAPER SESSIONS, IF NEEDED**

**WORKSHOPS II (DEPENDING ON INTEREST AND INDUSTRY PARTICIPATION)**

**CLOSING SESSION (INCLUDING AWARDS)**

**BUSINESS MEETINGS**

**ADDITIONAL INFORMATION ON FEATURED SPEAKERS**

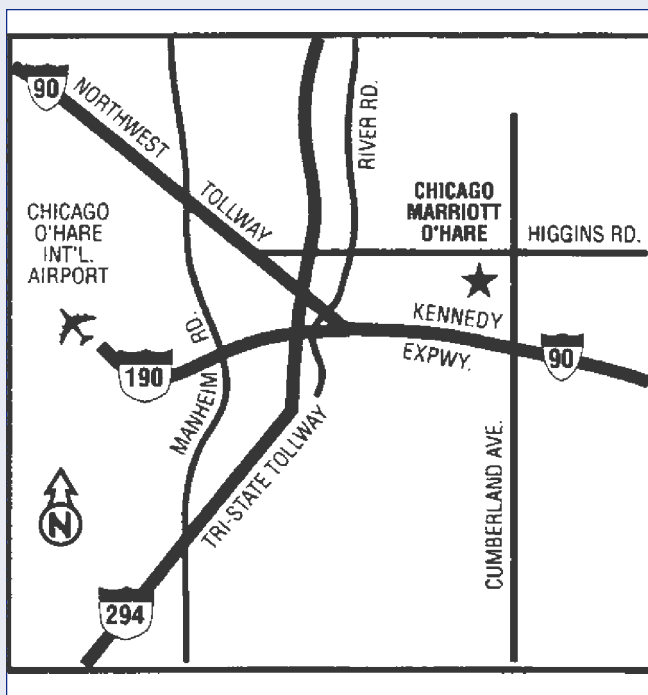
**Joseph Bordogna**, Deputy Director and Chief Operating Officer of the National Science Foundation, has made contributions to the engineering profession in a variety of areas including early laser communications systems, electro-optic recording materials, and holographic television playback systems. He is a Fellow of the American Association for the Advancement of Science, the American Society for Engineering Education, the Institute of Electrical and Electronics Engineers, and the International Engineering Consortium.

**Martha Sloan** concentrates in computer networks and fault tolerance at Michigan Technological University. Prior to going to Michigan Tech, Dr. Sloan worked at the Palo Alto research laboratories of the Lockheed Missiles and Space Company in communications research, and taught at the Frankfurt International School in Oberursel, Germany. Dr. Sloan has served IEEE as a member of the Board of Directors, Past President, President, and President-Elect, Executive Vice President, Treasurer and Division V Director.

**Mark J. T. Smith** is a Fellow of the IEEE and has authored papers in the areas of speech and image processing, filter banks and wavelets, and object detection and recognition. Dr. Smith is past Chairman of the IEEE SP Digital Signal Processing Technical Committee and has served on the Board of Governors of the IEEE Signal Processing Society. He has served as an Associate Editor for the IEEE Transactions on ASSP and as a member of the MIPs Advisory Board of the National Science Foundation. In addition to professional service, research, and teaching, Dr. Smith was the U.S. National Fencing Champion in 1981 and 1983, and a two-time member of the U.S. Olympic Team. In 1996, he was one of the final runners carrying the Olympic Torch to the Opening Ceremonies in the Summer Olympic Games in Atlanta.

**Lotfi A. Zadeh** is a professor in the Graduate School, Computer Science Division, Department of EECS, University of California-Berkeley. In addition, he is serving as the Director of Berkeley Initiative in Soft Computing (BISC). Dr. Zadeh is an alumnus of the University of Tehran, MIT, and Columbia University. He has held visiting appointments at the Institute for Advanced Study, Princeton, N.J.; MIT; IBM Research Laboratory, San Jose, CA; SRI International, Menlo Park, CA; and the Center for the Study of Language and Information, Stanford University. His earlier work was concerned in the main with systems analysis, decision analysis and information systems. His current research is focused on fuzzy logic, computing with words and soft computing, which is a coalition of fuzzy logic, neurocomputing, evolutionary computing, probabilistic computing and parts of machine learning. The guiding principle of soft computing is that, in general, better solutions can be obtained by employing the constituent methodologies of soft computing in combination rather than in stand-alone mode. Dr. Zadeh is a Fellow of the IEEE, AAAS, ACM, and AAAI. He is a member of the National Academy of Engineering and a Foreign member of the Russian Academy of Natural Sciences. He is a recipient of the IEEE Education medal, the Richard W. Hamming Medal, the Medal of Honor; the ASME Rufus Oldenburger Medal; the B. Bolzano Medal of the Czech Academy of Sciences; the Kampe de Fariet Medal; the AACC Richard E. Bellman Central Heritage Award; the Grigore Moisil Prize; the Honda Prize; the Okawa Prize; the AIM Information Science Award; the IEEE-SMC J.P. Wohl Career Achievement Award; the SOFT Scientific Contribution Memorial Award for the Japan Society of Fuzzy Logic; and other awards and honorary doctorates.

\* Please consult the conference Web site for up-to-date information about workshops and presenters. Conference participants must sign up for the workshop due to limited seats available. Send your request to Hossein Mousavinezhad, General Chair ([hossein.mousavinezhad@ieee.org](mailto:hossein.mousavinezhad@ieee.org)) after registering for the conference. We will add additional workshops on Sunday, June 11, depending on interest and industrial participation.



## LOCATION / ACCOMMODATIONS

All conference activities will be held at the Chicago O'Hare Marriott Hotel, 8535 West Higgins Road, Chicago, Illinois. The Marriott features five restaurants, a pool, and 24-hour health club, complimentary shuttle, and free parking.

To reach the Marriott, from O'Hare International Airport, take I-90 to Cumberland Avenue North Exit. Turn left on Higgins (west); continue one block to the hotel.

A block of rooms has been reserved for IEEE Electro/Information Technology participants at the O'Hare Marriott for the conference rate of \$129 single or double, plus tax, per night. **Please make your own reservation** by calling the hotel's Reservation Center at (847)375-3426 or (800)228-9290. Be sure to identify yourself as an IEEE EIT participant to receive the special rate. Reservations must be made on or before May 17, 2000; after this date rooms may be reserved on a space-available basis only.

Mark your calendar now for the

2<sup>ND</sup>

ELECTRO / INFORMATION  
TECHNOLOGY CONFERENCE

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## HOTEL / AIRPORT SHUTTLE

The hotel provides complimentary shuttle service from O'Hare Airport's Bus/Shuttle Center to the hotel. **Note that you must go to the Bus/Shuttle Center; the shuttle does not pick up at the various baggage claim areas.**

The Bus/Shuttle Center is located between Terminals 1, 2, and 3. Signs, both overhead and on the floor, in the Baggage Claim areas of the airport will direct you to the nearest underground pedestrian walkway. Proceed to Elevator Centers 3 or 4 and press the Bus/Shuttle Center elevator button.

The Airport Shuttle Bus will pick up passengers beginning at approximately 6:15 A.M. and then every 15 minutes until 11:00 P.M. **The Shuttle operates on an "on call" basis only between 11:00 P.M. and 6:00 A.M.** The Airport Shuttle Bus will stop first at the O'Hare Marriott Suites, then proceed to the hotel.

## REGISTRATION

Please return the registration form with either full payment (check, money order, or VISA/MasterCard/Discover number) or purchase order number. **U.S. funds only are accepted.** You may also register by phone (616) 387-4174 or FAX (616) 387-4189. A confirmation letter will be sent upon receipt of registration.

**IEEE MEMBERS:** Advance Registration is \$300 if received on or before May 19, 2000, after May 19<sup>th</sup> the Registration fee is \$350. Registration deadline: June 2<sup>nd</sup>.

**NON-MEMBERS:** Advance Registration is \$350 if received on or before May 19, 2000, after May 19<sup>th</sup>, the Non-Member registration fee is \$400. Non-Member Registration deadline: June 2<sup>nd</sup>.

**STUDENT FEES:** Students who are members of IEEE pay a reduced registration fee of \$100 if received on or before May 19<sup>th</sup>. After that date the fee increases to \$120. **Please note this reduced fee does not include the banquet.** Tickets may be purchased separately if you would like to attend. See registration form for dinner ticket information.

**Full Registration fees** include participant materials, morning and afternoon breaks, Thursday evening reception, and Friday evening banquet. (Student fees cover all of the above except for the banquet).

## CANCELLATIONS AND REFUNDS

Full refunds are available for cancellations received by June 1<sup>st</sup>. Registered attendees who do not attend or who cancel after June 1<sup>st</sup>, are responsible for the entire fee. Substitutions may be made at any time.

# IEEE ELECTRO/INFORMATION TECHNOLOGY CONFERENCE

## REGISTRATION

**Please Print** (Only one registration per form; duplicate as necessary)

Circle one: Dr., Prof., Mr., Ms., Mrs.

Name \_\_\_\_\_  
First Last

University/Business Affiliation \_\_\_\_\_

Mailing Address \_\_\_\_\_ ☐ Business ☐ Home  
Number and Street

\_\_\_\_\_ city State Zip

Phone ( ) \_\_\_\_\_ FAX Number ( ) \_\_\_\_\_

E-mail address \_\_\_\_\_

**SPECIAL NEEDS:** ☐ No red meat ☐ Vegetable vegetarian ☐ Please do not list my name on the Participant Roster  
☐ Motor/sensory impairment; please call (616) 387-4174 by May 26, 2000 about special needs.

REGISTRATION FEES: U.S. Currency Only	Received on/before May 19	Received after May 19	Amt. Due
IEEE Members, Membership # _____	\$300	\$350	\$ _____
Non IEEE Members	\$350	\$400	\$ _____
IEEE Student, Membership # _____	\$100	\$100	\$ _____
Non IEEE Student	\$120	\$120	\$ _____

**IMPORTANT INFORMATION REGARDING THE FRIDAY EVENING BANQUET:** Students and guests wishing to attend the banquet Friday evening are encouraged to do so, but must purchase a ticket. **Tickets are necessary only for students and guests.**  
The banquet **is included** for participants paying full conference fees (\$300-\$400).

No. of student or guest banquet tickets needed \_\_\_\_\_ X \$45.00 = \$ \_\_\_\_\_

☐ I will ☐ will not attend the Banquet

**TOTAL AMOUNT DUE:** \$ \_\_\_\_\_

**PAYMENT METHOD:** U.S. Currency only, please

☐ Enclosed is a check or money order payable to Western Michigan University in the amount of: \$ \_\_\_\_\_

Please charge my: ☐ VISA ☐ MasterCard ☐ Discover

Authorized Signature \_\_\_\_\_

Account Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

☐ Enclosed is a copy of an institutional purchase order or supervisory letter of authorization.

Contact Name \_\_\_\_\_ Contact Phone Number \_\_\_\_\_

**SEND YOUR COMPLETED REGISTRATION FORM AND PAYMENT TO: IEEE EIT CONFERENCE, CONFERENCES AND SEMINARS, WESTERN MICHIGAN UNIVERSITY, KALAMAZOO, MI 49008-5161. PHONE (616) 387-4174; FAX (616) 387-4189.**

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# ELECTRO / INFORMATION TECHNOLOGY CONFERENCE

June 8 - 11, 2000

CHICAGO MARRIOTT O'HARE



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## **E/IT Conference**

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