

# SCANFAX

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IEEE

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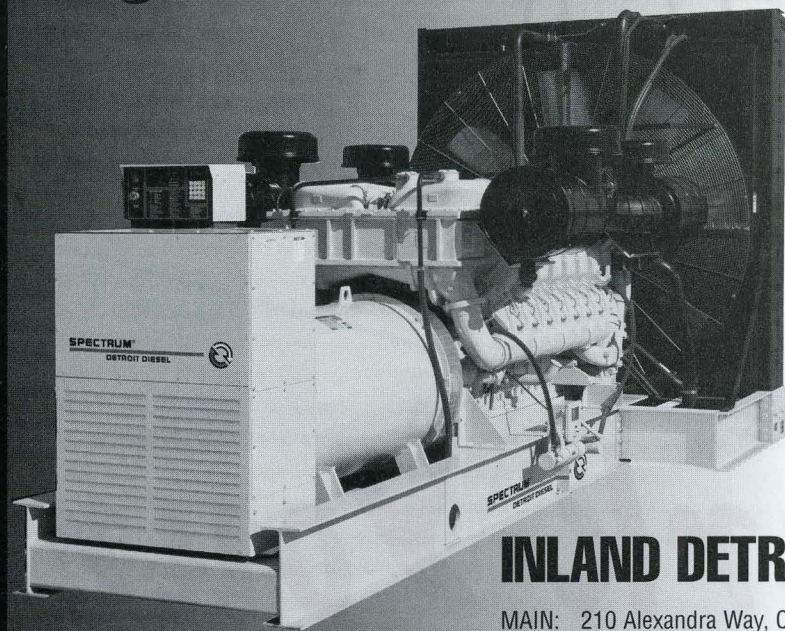
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# SCANFAX

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## Upcoming Events

- 4 ICAST 2001- The 17th International Conference on Advanced Science and Technology  
INFORMATION SCIENCE AND TECHNOLOGY  
Saturday, October 6, 2001
- 7 Chicago Chapter of the IEEE Power Engineering Society  
UTILITY-INTERACTIVE PHOTOVOLTAIC POWER SYSTEMS  
Wednesday, October 10, 2001
- 7 IEEE EMC Society-Chicago Chapter  
MEETING DATES  
Wednesday, October 17, 2001
- 8 IEEE -IAS/PES Dinner Presentation  
PROVIDING POWER TO FIRE PUMPS  
Wednesday, October 17, 2001
- 8 IEEE Chicago  
HARDWARE SOCIETIES KICKOFF MEETING  
Wednesday, October 24, 2001
- 9 ED/CAS/SSC (Electron Devices/Circuits and Systems/Solid State Circuits)  
ATOMIC-SCALE NANOELECTRONICS  
Wednesday, October 25, 2001

**CHICAGO SECTION EXECUTIVE COMMITTEE MEETING**  
Tuesday, October 9, 6:30 pm  
DeVry DuPage, Room TBA, 1221 N. Swift Rd., Addison, IL  
No Registration Needed

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# ICAST 2001-The 17th International Conference on Advanced Science and Technology

## Information Science and Technology

### Saturday, October 6, 2001

#### Time:

8:00 – 9:00 AM Registration  
 9:00 – 10:00 AM Keynote Speech  
 10:00 – 10:15 AM Coffee Break  
 10:15 AM – 12:00 PM  
 Parallel Sessions for A1, C1, T1 and P1  
 12:00 – 1:00 PM Lunch or Touring IIT Campus  
 1:00 – 2:45 PM Parallel Sessions for A2, C2, and T2  
 2:45 – 3:00 PM Coffee Break  
 3:00 – 4:45 PM Parallel Sessions for A3, C3, and T3  
 4:45 – 5:00 PM Adjourn

#### Session A1: Human and Health

**A1.1:** *Evaluating Technologies for Smart Living.* James Miller and Peter Musilek, University of Alberta, Alberta, Canada, John D. Ferguson, Strathclyde University, Glasgow, UK  
**A1.2:** *Evaluation of the Turn Planer in CIRCSIM-Tutor.* Feng-Jen Yang, Michael Glass, and Martha Evens, Illinois Institute of Technology, Chicago, IL

**A1.3:** *Building and Up-to-Date Medical Record System.* Kuo-pao Yang and Martha W. Evens, Illinois Institute of Technology, Chicago, IL, David Trace, Trace Consulting, Lake Forest, IL

**A1.4:** *Computer-Assisted Medicine in the Treatment of Nephrolithiasis.* Pankaj Jain, Robert Nadler, Smuel Kim and Adam Weiser, Northwestern University, IL, Nazli Goharian, Illinois Institute of Technology, Chicago, IL

#### Session C1: Software Quality and the Software Process

**C1.1:** *Guiding Software Product Evaluation with a Dynamic Process Model.* Lamia Has-sine Mehri, Faten Labbene Ayachi et Henda Hadjami Ben Ghezala, National School of Computer Sciences, High School of Communications, Manouba

**C1.2:** *On the Use of Fault Finding and Solving Control for Software Development Quality Management.* Paosheng Chang and Akli Gana, Lucent Technologies,

Naperville, IL

**C1.3:** *Quality Dashboard: Toward the Institutionalization of a Quality Management System for Software Development.* Bob Bonvallet and Paosheng Chang, Lucent Technologies, Naperville, IL

**C1.4:** *New Directions in Software Inspection.* John D. Ferguson, Strathclyde University, Glasgow, UK, James Miller and Peter Musilek, University of Alberta, Alberta, Canada

**C1.5:** *Automatic Construction of Software Test Data using Evolutionary Algorithms.* James Miller, University of Alberta, Alberta, Canada, John D. Ferguson, Strathclyde University, Glasgow, UK

#### Session T1: Panel Discussion

**Next Generation Wireless Network Technology: Trend, Applications, and Issues** (Detailed Topics and panelit to be determined)

**Session P1: Technology in Education: Teacher Preparation, Foreign. Languages**

#### Teaching and Computer Morality"

**P1.1:** *Using Computer in Teacher Preparation Program.* Rosemary Buteau, Chicago State University, Chicago, IL

**P1.2:** *Using Computer in Foreign Languages Acquisition.* Virginia Shen, Chicago State University, Chicago, IL

**P1.3:** *Using Computer in Teaching Foreign Cultures.* Robert Chierico, Chicago State University, Chicago, IL

**P1.4:** *Using Computer in Teaching Business.* Evelyn Delgado-Norris, Chicago State University, Chicago, IL

**P1.5:** *Moral Issue in Computer Technology* Jeng-Yi Tzeng, Indiana University, Bloomington, IN

#### Session A2: Business and Engineering

**A2.1:** *Simulated Agent Model for Investor's Behaviors.* Feng-Yu Chang and Deng-Yiv Chiu, Chung Hua University, Hsin-Chu, Taiwan

**A2.2:** *Tendency Forecasting for Stock Market in Taiwan with Backpropagation Algorithm and Document Classification Technique.* Kun-Po chung and Deng-Yiv Chiu, Chung Hua University, Hsin-Chu, Taiwan

**A2.3:** *A Recognition System of Game Teams' Emblems.* June-Horng Shiesh and

Ling-Jen Tsuei, National Taichung Institute of Technology, Taiwan

**A2.4:** *Estimation of Internal Structure of Asphalt Concrete with Digital Image Process.* Jyh-Dong Lin, Shih-Huang Chen, Chuan-Chi Zung, National Central University, Chungli, Taiwan, Shu-Hau Lin, Sze-Hai Institute of Technology and Commerce, Taipei, Taiwan

#### Session C2: Program Understanding and Computer Applications

**C2.1:** *Understanding Software – Static and Dynamic Aspects.* Welf Lowe and Andreas Ludwig, Universitat Karlsruhe, Karlsruhe, Germany, Andreas Schwind, RapidSolution Software, Karlsruhe, Germany

**C2.2:** *An Agent Based Software Construction Method.* Chia-Lin Hsu, Je-Way Huang, Ren-Ji Liao, and Feng-Jian Wang, National Chiao Tung University, Hsin-Chu, Taiwan  
**C2.3:** *Signature-based Program Plan Retrieval.* Yachai Limpiyakorn and Ilene Burnstein, Illinois Institute of Technology, Chicago, IL

**C2.4:** *An Efficient Chart Bottom-up Parsing Algorithm Used in the Chinese Language Interface.* Tsong-Yi Chen, National Kaohsiung University, Kaohsiung, Taiwan

Da-Jinn Wang, Southern Taiwan University of Technology, Tainan, Taiwan

**C2.5:** *A VQ-Based Tamper Detection and Reconstruction System in Digital Sport Images.* June-Horng Shiesh and Ling-Jen Tsuei, National Taichung Institute of Technology

#### Session T2: Wireless Network and Applications

**T2.1:** *On the Global Roaming Management Services for the IMT-2000.* Yeongkwun Kim, Lucent Technologies, Naperville, IL

**T2.2:** *Sharing Resources for Heterogeneous Circuit-Switched Services on a Cellular Network.* Susan Lincke-Salecker, Illinois Institute of Technology, Chicago, IL

**T2.3:** *WAP Technology and its Application* Jason Jian-Chern Chen and Wei-Wei Cheng, Governors State University, Janjo Chen, Chicago State University

**T2.4:** *The Prospects of Foreign Investment in China's Mobile Service Market in the post-WTO era.* Shu-Chun Ho, Shu-Te University, Kaohsiung, Taiwan

**T2.5:** *Trigger of Moving Objects Database Based on Web Environment.* Fengli Zhang, Ouri Wofson, University of Illinois at Chicago, IL ➔

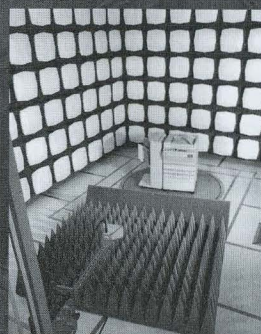
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**Session A3: Construction Technology**  
**A3.1: Effects of Quality Control on Construction Safety for Formwork Engineering.** Yong-Chan Tsao, Shu-Sheng Kang, and Shu-Hui Wu, Work Disaster Prevent Association of ROC, San-Chong, Taiwan

**A3.2: Applications of Centrifuge to the Research on Structural Foundations in the Slope.** Hung-Wen Chen, Sze Hai Institute of Technology and Commerce, Tucheng, Taiwan

**A3.3: Multivariate Analysis for the Impact Factors of Slope Safety Evaluation.** Pu-Shang You, Yu-Min Chang, Ken-Fu Cheng, and Dogy-Yone Wang, De Lin Institute of Technology, Tucheng, Taiwan

**A3.4: Artificial Neural Network Modeling of Layer Moduli from Falling Weight Deflectometer.** Shu-Hau Lin, Sze-Hai Institute of Technology and Commerce, Taiwan

**A3.5: Application of Adaptive Fuzzy Sliding Mode Control for Bridges.** Ken Yeh, Sze-Hai Institute of Technology and Commerce, Taiwan

#### Session C3: Database Systems and Applications

**C3.1: Discovery of Temporal Knowledge from Databases.** Kohei Watanabe and Takao

Miura, Hosei University, Tokyo, Japan Isamu Shioya, Sanno College, Kanagawa, Japan

**C3.2: Safe Query Languages for Constraint Databases with Complex Values.** Hong-Cheu Liu and Jeffrey X. Yu, Queensland University of Technology, Brisbane, Australia

**C3.3: Using a Relational Database Management System to Implement XML-QL.** Steven M. Beitzel and Eric C. Jensen, Illinois Institute of Technology, Chicago, IL, Frederick J. Ingham and Tim Lewis, Bitsystems Inc.

**C3.4: Interpreting and Generating Indirect Answer in the DBMS Interface.** Da-Jinn Wang, Southern Taiwan University of Technology, Tainan, Taiwan, Tsong-Yi Chen, National Kaohsiung University of Applied Sciences, Kaohsiung, Taiwan

**C3.5: Improving Sequential Search in B-tree.** Satoshi Watanabe and Takao Miura, Hosei University, Tokyo, Japan

#### Session T3: Computer and Communication Systems

**T3.1: Visualization of Automatic Evolution of Parallel Programs - A Research Agenda.** Petr Musilek and James Miller, University of Alberta, Alberta, Canada, John D. Ferguson, Strathclyde University, Glasgow, UK

**T3.2: Server Availability Comparison between Load Sharing and Standby Configurations.** James J. Han, Yue Ma, and Guoqing Liu, Motorola Inc., Elk Grove Village, IL

**T3.3: A System State Dependent Repair Strategy for Failed Units in a Mobile System with Standby.** James J. Han, Yue Ma, and Guoqing Liu, Motorola Inc., Elk Grove Village, IL

**T3.4: Object-Oriented Compression Benchmark for the Security of Audit Trail Files in Unix Systems.** Michael Fangnien Lu and Ophir Frieder, Illinois Institute of Technology, Chicago, IL

**T3.5: SIP for VoIP and its Applications.** Kae-Sheng Hsueh, Tellabs, Lisle, IL

**Location:** Hermann Hall Illinois Institute of Technology, 3241 S. Federal Street, Chicago, Illinois, USA, Phone: 312-567-3000.

**Directions: From the North:** Dan Ryan Expressway east to 31st Street exit, continue south to 33rd Street, turn left (east) to just past State Street, visitor parking on right (southeast corner). **From the South:** Dan Ryan Expressway west to 35th Street exit, continue north to 33rd Street, turn right (east) to just past State Street, visitor parking on right (southeast corner). **From Lake Shore Drive:** Exit at 31st Street, go inland (west) to State Street, turn left (south) to 33rd Street, turn left and visitor parking is on the right (southeast corner).

**Reservations:** Registration forms available at <http://macs.csu.edu/~macapa/icast>

The following schedule might be different from the final schedule. Please refer to <http://macs.csu.edu/~macapa/icast> for any updated information.

Tours for Fermi Lab, Motorola, IIT, and area attractions can be arranged for Sunday October 7, or Monday October 8, 2001.

The IEEE Communications Society - Chicago Chapter would like to invite its members to attend the panel "Next Generation Wireless Network Technology: Trends, Applications, and Issues." The panel will be held 10:15 AM - 12:00 PM, October 6, 2001 at Hermann Hall, Illinois Institute of Technology, 3241 S. Federal Street, Chicago, Illinois, 60616.

## LUNCH MEETING

### Chicago Chapter of the IEEE Power Engineering Society Utility-Interactive Photovoltaic Power Systems

Wednesday, October 10, 2001

Kent Whitfield, Sr. Project Manager, Spire Solar Chicago

#### About the Topic:

Mr. Whitfield will discuss utility-interactive photovoltaic power systems with an emphasis on the direct current-to-alternating current static inverter. This equipment provides the link between the photovoltaic energy generation and the building electrical distribution system, where the power is consumed. Aspects of testing and certification of this equipment will be provided as well as general information on Commonwealth Edison interconnection requirements and the local 2000 Chicago Electric Code (Article 690 of the 1999 NEC).

#### About the Speaker:

Mr. Whitfield has a MS degree in mechanical engineering from Arizona State University and an Illinois PE license. Following his graduate

work, Mr. Whitfield was hired to manage the Photovoltaic Testing Laboratory at ASU. During his tenure, he created a quality assurance program for testing that lead to the first North American accreditation of a testing laboratory to conduct IEEE 1262, IEC 61215 & 61646 and UL 1730 certification testing. Following this position Mr. Whitfield was a Sr. Project Engineer at Underwriters Laboratories in the section responsible for the testing of photovoltaic modules, inverters and charge controllers. Recently, he was hired by Spire Corporation to oversee the development and installation of PV power systems in the City of Chicago.

#### Location:

Chicago Bar Association, 321 South Plymouth Court (Near Jackson & Dearborn), Chicago

#### Time:

11:30 PM Social  
12:00 PM Lunch (optional)  
12:15 PM Presentation  
1:00 PM Adjourn

#### Reservations:

Lunch tickets can be purchased in the lobby bookstore (\$10.50). Please call the IEEE Business Office at (800) 898-IEEE to make your reservation.

For more information, please visit the Chicago Chapter IEEE PES web site:  
[www.ece.iit.edu/~flueck/chicago\\_pes/](http://www.ece.iit.edu/~flueck/chicago_pes/)

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### IEEE EMC Society- Chicago Chapter

Meeting dates are listed below. Please stay tuned to our web site for meeting topics, locations and guest speakers. Start time for Chapter Meetings is 7:30 PM.

[www.ewh.ieee.org/soc/emcs/chicago/](http://www.ewh.ieee.org/soc/emcs/chicago/)

October 17, 2001 Chapter Meeting  
November 14, 2001 Chapter Meeting  
December 12, 2001 Chapter Meeting  
January 16, 2002 Chapter Meeting  
February 20, 2002 Chapter Meeting  
March 26, 2002 Chapter Meeting  
April 17, 2002 Chapter Meeting  
May 21, 2002 Mini-Symposium

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## EVENING MEETING

### IEEE - IAS/PES Dinner Presentation Providing Power to Fire Pumps Wednesday, October 17, 2001

James S. Nasby, Master Control Systems

#### About the Topic:

The electrical code requirements for electric-drive fire pumps are covered in NFPA 20, NEC articles 230, 430, 695 and CEC article 18-27-695. This presentation will review and compare the key electrical requirements of these codes including where to derive normal power in the electrical distribution system, emergency power requirements, protective device sizing, disconnects, conductor and raceway issues and other important design considerations.

#### About the Speaker:

Jim Nasby holds a B.S.E.E degree from the Illinois Institute of Technology (IIT). He is a full member of the Institute of Electrical and Electronic Engineers (IEEE), the Society of Fire Protection Engineers (SFPE), and the National Fire Protection Association (NFPA). He has been involved in fire pump controller design since 1972 and holds several patents for this work. He has previously served as a member of the NFPA Technical Committee for Fire Pumps (NFPA-

20) and the Technical Committee for Emergency Power Supplies (NFPA-110) and is an alternate member on NEMA SC-10 sub-committee on fire pump controllers. He is a member of the Underwriters Laboratories (U.L.) newly formed Standards Technical Panel for UL-218 Standard for Fire Pump Controllers. He is the current Director of Engineering at Master Control Systems, Inc. in Lake Bluff Illinois.

#### Location:

Costa's (Greektown)  
340 S. Halsted St.  
Chicago, IL

Costa's is located in Greektown on the corner of Van Buren and Halsted.

See [www.iaschicago.com](http://www.iaschicago.com) for detailed directions and a map.

#### Time:

5:30 PM Social  
6:00 PM Dinner  
7:00 PM Presentation

#### Reservations:

Your cost includes the presentation and a four-course dinner with a choice of the main entry - Roast lamb, Chicken, or Fish. (Vegetarian or special dietary meals available upon request). Cost is \$25 IEEE Member and \$30 non-member. Valet parking is included with your meal. Please call the IEEE Business Office at (800) 898-IEEE or (630) 493-4333 with your reservation. Please note any special meal requests at the time of the reservation. **You can also make your reservations on line at [www.iaschicago.com](http://www.iaschicago.com)**

Note: For PE licenses that require continuing education for renewal, attendance at IEEE Technical Meetings is acceptable as one Professional Development Hour (PDH) per meeting.

## EVENING MEETING

### ED/CAS/SSC (Electron Devices/Circuits and Systems/Solid State Circuits) Atomic-Scale Nanoelectronics Thursday, October 25, 2001

Mark C. Hersam, Northwestern University

#### About the Topic:

Chemical, mechanical, and electrical properties of individual molecules differ significantly from the behavior of bulk materials. Dr. Hersam's research group develops nanofabrication techniques that enable spontaneous self-assembly of single molecules into pre-defined atomic resolution patterns on technologically significant silicon surfaces. The properties of these surface-mounted molecules are directly measured and then interfaced to the macroscopic world via conventional microfabrication. Dr. Hersam will discuss their accomplishments in single molecule electronic and mechanical devices and assess future prospects for chemical and biological sensors. His research group's nanoscale approaches have also been applied to problems currently facing conventional micro-electronic circuits. In particular, Prof. Hersam will describe experimental results that have addressed contemporary issues ranging from electromigration to hot electron degradation.

#### About the Speaker:

Mark C. Hersam is currently an Assistant Pro-

fessor in the Department of Materials Science and Engineering at Northwestern University. His research interests include single molecule devices and sensors, nanostructured materials, intra-molecular scanned probe microscopy and spectroscopy, semiconductor surfaces, and electron device reliability. In 2001, Dr. Hersam was named an Arnold and Mabel Beckman Young Investigator, a Junior Fellow of the Searle Center for Teaching Excellence, and a Co-Finalist for the Discover Magazine Innovation Award in Electronics. Dr. Hersam completed his Ph.D. in Electrical Engineering from the University of Illinois at Urbana-Champaign in 2000. He received the Master of Philosophy degree in Microelectronic Engineering and Semiconductor Physics from the University of Cambridge (UK) in 1997 and a BSEE from the University of Illinois at Urbana-Champaign in 1996. Dr. Hersam has also participated in two internship programs at Argonne National Laboratory and IBM T. J. Watson Research Center where he performed research on surface acoustic wave sensors and electrical properties of carbon nanotubes respectively. Dr. Hersam is a member of

the American Physical Society, the American Vacuum Society, the Materials Research Society, the American Society of Engineering Education, and the IEEE.

#### Location:

Motorola Schaumburg Campus  
1301 Algonquin Road  
Enter Campus using Gate A, westmost gate off Algonquin Road, west of Meacham. Door 13 is under Motorola sign on west face of six story building. Preregistration is required.

#### Time:

6:30 PM Social (Free Sandwiches, Snacks, and Beverages)  
7:00 PM Presentation

#### Reservations:

Please call the IEEE Message Center at (800) 898-4333 or (630) 493-4333 by 1PM Wednesday, Oct. 24th. For information, call Norm Phoenix at (847) 523-1078.

## EVENING MEETING

### IEEE Chicago Hardware Societies Kickoff Meeting Wednesday, October 24, 2001

**Time:** 7:00 to 9:30 PM

**Place:** Motorola, Schaumburg Campus. Registrants will receive directions.

**Cost:** \$2 Honor System - if you are employed or can afford it. \$5 if you want to prepay for your next 3 meetings.

**Speaker:** YOU, if not you then ME.

If me, then Prospects and Advances of Materials Science Analytics

#### Coordinator:

Jack Sherman [j.sherman@ieee.org](mailto:j.sherman@ieee.org) • (847) 576-8222

**Registration:** deadline Monday, October 22 at noon. Use the IEEE Chicago Office.

Unregistered, do not expect to be admitted.

#### Agenda

Introduction, each tell:

- who you are, what society(s) how long an IEEE member,
- how many jobs held to the present
- what your interests are for future meetings,
- what topics you can present on,
- how much time do you want to present, and when can you do it.

Hardware societies differ in content from pencil and paper societies:

- Industrial Electronics

- Power Electronics
- Reliability
- Components, Hybrids, Manufacturing Technology
- Consumer Electronics
- Antennas and Propagation/Microwave Theory and Techniques
- Ultrasonics, Ferroelectrics and Frequency Control
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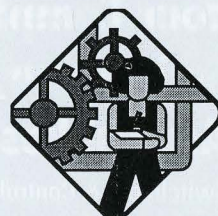
Both courses, developed by Don and his associates over a 15-year period, are up-dated four times yearly. They begin with the fundamentals of electromagnetic compatibility (EMC/EMI) and then show how to minimize EMC problems from the beginning stages of design through final testing. The courses are based on two textbooks and are supplemented with practical information. Don originally offered these classes through the University of Wisconsin; however, today they are instead offered directly through D.L.S.

For more information or to receive a brochure with a detailed description of the classes, phone (847) 537-6400 or look at [www.dlsemc.com](http://www.dlsemc.com)

DONALD L. SWEENEY

Donald Sweeney, Senior EMC Engineer is president of D.L.S. Electronic Systems, Inc. He is a graduate of the department of electrical engineering, University of Illinois at Urbana and has 30 years experience in the electrical engineering field. Most of

his time has been devoted to solving problems in electromagnetic engineering and closely related disciplines. He has worked for Exel Corporation, Teletype Corporation, Gates Radio, and Collins Radio prior to forming D.L.S. Electronic Systems, Inc., a Wheeling, Illinois based company. He specializes in EMC, RFI, & EMI consulting and testing. Don has taught at Oakton College & the University of Wisconsin (at both the Madison and Milwaukee Campuses), and consults nationwide on electromagnetic compatibility. He has served as a special consultant to Lawrence Livermore National Laboratory and the Nuclear Regulatory Commission. He was the Chicago area Chairman of the IEEE EMC Society, founding chairman of U.S. Council of EMC Laboratories, and a NARTE certified EMC Engineer and has served on the board of directors of IEEE EMC Society for six years.



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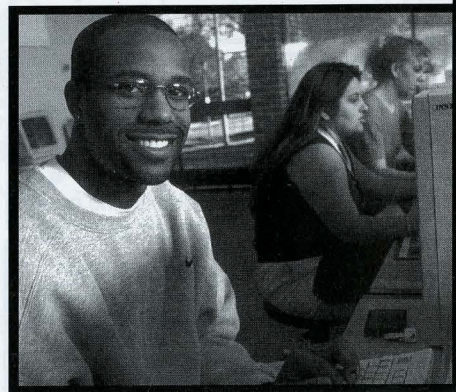
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