

IEEE/SEM Fall '00 Section Meeting Program

Date: Wednesday, October 25th 2000
Location: Yazaki North America, Inc.
6801 Haggerty Road, 2896W
Canton, MI See Map on Page 7)

Program:
5:30pm Registration & Check in opens
5:45pm-6:45pm Concurrent technical meetings
(locations posted at the meeting site)
6:30pm-7:05pm Social period
University Showcases/Vendor Exhibits
7:15pm Check-in closes
7:05pm-7:45pm Dinner
7:45pm-8:45pm Featured speaker: Dr Ken Laker – Past
IEEE President
9:15pm The meeting will conclude

How to Register:
Mail in the registration form on page 7 by Oct. 15th to receive

the early registration rate. Late registrations (full price) are accepted by phone or express mail until 5:00pm on Monday, Oct. 23rd. There is no fee for attending the technical sessions only, but pre-registration is encouraged to aid in room assignments. Dinner is not guaranteed to attendees registering after the Oct. 23rd late registration deadline nor during the night of the event.

Student Registration:
Students must register through the student branch to receiver the discounted rates. Student branch signup procedures are posted on the section's web page. Contact Dr. Edzko Smid 248-370-2082 or smid@oakland.edu, Director of Student Activities, for further information.

Contact:
Kimball Williams 248-354-2845 or check the web page at http://ewh.ieee.org/r4/se_michigan/ion.

IEEE/SEM Fall 2000 Section Meeting Featured Speaker

by Kimball Williams, IEEE/SEM Vice Chair

This year's featured speaker is **Dr Ken Laker, 1999 IEEE President** and current IEEE Past President. Dr. Laker's presentation will include the IEEE's accomplishments during 1999 and an IEEE Past President's view of the challenges and opportunities ahead.

Dr. Laker received the B.E. degree in Electrical Engineering from Manhattan College, and the M.S. and Ph.D. degrees from New York University. In 1999 he received the Honorary Doctorate of Electronics and Computer Engineering from the Technical University of Crete, Chania - Greece. From 1973-77, he served as a USAF officer at the Air Force Cambridge Research Labs. In 1977 he joined AT&T Bell Labs. He was appointed to the University of Pennsylvania faculty in 1984, as Professor and Chair of the Electrical Engineering Department. He served as Department Chair until the end of the 1992 academic year. In 1990 he was appointed the Alfred Fitler Moore Professor of Electrical Engineering. From 1997 - 2000 Dr. Laker was a member of the founding Board of Directors of AANetcom, Allentown, PA until its sale to PMC Sierra. Dr. Laker is also an External Examiner for the Electrical Engineering graduate programs at the National University of Singapore and a member of the Advisory Board of the Communications Group for



Safeguard Scientifics, Inc., Wayne, PA.

Dr. Laker's work in microelectronic filters has contributed four textbooks, over ninety scientific articles, and six patents. He was elected to Fellow of the IEEE in 1984. In 1984 Dr. Laker received an IEEE Centennial Medal and in 1994 he received the AT&T Clinton Davisson Trophy for his patent in switched capacitor circuits. In 1998 he was co-recipient of the IEEE Circuits and Systems Darlington Award for the paper "Integrated Circuit Testing for Quality Assurance in Manufacturing: History, Current Status, and Future Trends," IEEE Trans. on Circuits and Systems, Part II, vol. 44, pp. 610-633, August 1997. This year he has received the IEEE Pinnacle Award for his service as 1999 IEEE President, and he is designated to receive IEEE CAS Society Golden Jubilee and IEEE Millennium Medals.

Dr. Laker was President of the IEEE Circuits and Systems Society in 1983 and Chair of the IEEE Philadelphia Section in 1994. He served on the IEEE Board of Directors (BOD) from 1992-95 and from 1998-2000, as Director of Division I, Circuits and Devices, (1992 and 93), Vice President of Educational Activities (1994-95), President-Elect (1998) and President (1999).

TABLE OF CONTENTS

Fall Meeting Program & Speaker	1	Calendar of Events	3	Judging/Awards at ISEF 2000	6,8
Career Fair	2	Technical Sessions/Activities ...	4,5,6	Fall Meeting Registration & Map ..	7
Nominate Member or Student Branch ..	2	Shannon Statue Unveiled	6		

WAVELENGTHS

**One location!
Over 30 companies!
Over 600 jobs!**



BrassRing Detroit Tech Career Event

Monday, October 16, 2000 • 3 - 8pm

Embassy Suites Hotel
19525 Victor Parkway, Livonia, MI 48152

- **BrassRing Career Events** bring you the quickest, easiest, and most effective way of furthering your career.
- **Meet face-to-face** with recruiting managers from local, regional and national companies.
- **Find out about jobs** that may not otherwise be advertised.
- **Positions require 2+ years experience** in Engineering, Information Technology, Telecommunications, and Related Technical Disciplines.
- **U.S. citizenship required** for most positions.
- **See the October 15th issue of the Detroit News** for a complete list of participating companies or visit **BrassRing.com**

Candidates - Your resume is never as effective as a face-to-face meeting. However, if you can't attend, take advantage of our resume distribution service. Submit your resume by mail to: Attn 10DET, BrassRing Career Events, 1081 19th St., Ste. 109, Virginia Beach, VA 23451 or by fax to 757-437-2243.

Companies - To participate, call BrassRing Career Events at 800-288-2890

- **Free Admission**
- **Business Attire Recommended**
- **Bring Plenty of Resumes**


**BRASSRING
CAREER EVENTS**
www.BrassRing.com

Nominate a Member or Student Branch for an IEEE/SEM Award

by Jim Woodyard, IEEE/SEM Awards Committee Chair



The IEEE/SEM has had an outstanding awards program for the past eight years. The success of the program depends on nominations received from IEEE/SEM members like you. Let's work together during the 2000-01 program year to recognize our members and student branches that set a high standard for IEEE service. I want to urge you to set as a personal goal for yourself to submit at least one nomination to the IEEE/SEM Awards Committee. The members of the committee are David Horvath, Sandy Hunter and Jim Rillings with me serving as chair. The awards will be presented at the IEEE/SEM Spring 2001 Section Meeting during the ninth annual awards ceremony. Nominations are solicited for the following awards:

Outstanding Engineer: The award is presented to a member who has demonstrated outstanding activity or accomplishment in the electrical, electronic, or computer engineering profession. The award is used to recognize long-term achievement in business, academia, patents, inventions, papers, developing standards, encouraging student interest in engineering, and other professional endeavors.

Outstanding Section Involvement: The award recognizes a member who has been actively involved in the section and is deserving of recognition for leadership, participation and accomplishments at the section level.

Outstanding Chapter Involvement: The award acknowledges a member who has been actively involved in one of the IEEE/SEM technical society chapters and is deserving of special recognition for leadership, participation and accomplishments in chapter activities and programs.

Outstanding Student Branch Involvement: More than one award may be presented. An award may be presented to a student branch, student branch member(s), section member(s), or a student branch counselor/advisor to recognize leadership, participation, support, or accomplishments related to the operations and programs of a student branch(s) and for promoting the engineering profession among students.

There are three nomination rules:

1. All nominees and nominators must be members or student members of IEEE/SEM in good standing.
2. Nominations must be submitted on IEEE/SEM forms and address the criteria listed above for the specific award.
3. All nominations must be received by the deadline shown below for the applicable award.

The deadlines for receipt of nominations are:

Outstanding Engineer Friday, December 1, 2000

Outstanding Section Involvement Friday, December 1, 2000

Outstanding Chapter Involvement Friday, December 1, 2000

Outstanding Student Branch Involvement Friday, Feb. 16, 2001

Award nomination forms may be downloaded from the IEEE/SEM Web site, http://www.ewh.ieee.org/r4/se_michigan/, in Microsoft® Word format. I will also be happy to fax or mail copies to you if you will send a request to one of my addresses below or telephone me at 313-577-3758. The forms are designed to solicit relevant information about the nominees' accomplishments and should make it easier to submit nominations. Completed nomination forms must be received by Jim Woodyard on or before the deadlines shown above; they may sent to woodyard@eng.wayne.edu or Jim Woodyard, ECE Dept., Wayne State University, Detroit, MI 48202. They may also be covered with a sheet marked ATTN: Jim Woodyard and faxed to 313-577-1101.

The IEEE/SEM Awards Committee looks forward to recognizing the IEEE service of section members with your assistance. Please feel free to contact me if you have any questions about the awards program or need assistance with nominations. THANKS!



IEEE Southeastern Michigan Section Executive Committee

Officers

Chair	John Miller	(313) 322-7486
Vice Chair	Kimbal Williams	(248) 354-2845
Secretary	Walter Schilling	(313) 390-9981
Treasurer	Mohamed Zohdy	(248) 370-2234

Administrative Activities

Past Chair	James Woodyard	(313) 577-3758
Section Advisor	Don Bramlett	(313) 235-7549
Student Activities	Edzko Smid	(248) 370-2082
Professional Act.	Tarek Lahdhir	(810) 947-2398
Technical Activities	Suleiman Barada	(313) 323-7996
Educational Act.	Ece Yaprak	(313) 577-8075
Membership	Maurice Snyder	(734) 973-1300

IEEE/SEM Chapters

- I Circuits & Signal Processing:** Acoustics, Speech & Signal Processing (ASSP-01), Circuits & Systems (CAS-04), Information Theory (IT-12) and Control Systems (CS-23)
- II Vehicular Technology:** Vehicular Technology (VT-06)
- III Comm. & Aero. Electronics:** Aerospace & Electronics Systems (AES-10) and Communications (COM-19)
- IV Trident:** Electron Devices (ED-15), Microwave Theory & Techniques (MTT-17) and Antennas & Propagation (AP-03)
- V Computer:** Computer (C-16)
- VI Geoscience & Remote Sensing:** Geoscience & Remote Sensing (GRS-29)
- VII Power Eng. & Ind. Apps.:** Power Engineering (PE-31) and Industrial Applications (IA-34)
- VIII EMC:** Electromagnetic Compatibility (EMC-27)
- IX Power & Ind. Electronics:** Power Electronics (PEL-35) and Industrial Electronics (IE-13)
- X Engineering Management:** Eng. Management (EM-14)

Wavelengths

EDITORS

Lubna Khaled
O: 248-370-2056
H: 248-340-8629
lkhaled@oakland.edu

Cindy Witkor
O: 734-930-7500
H: 734-513-7390
cqw@adventengineering.com

Jason Richmond
O: 651-483-4488
H: 810-240-6440
jrichmond@ieee.org

PRINTER

Progressive Printing
1326 Goldsmith
Plymouth, Michigan
48170



734-459-2960

COPY DEADLINE: News items are due the first day of the month for an issue which is published the following month, e.g. April 1 is the deadline for the May issue.

ADVERTISING RATES CIRCULATION OVER 4000

Ad Size	Annual Rate (8 issues)	Single Issue Rate
1/8 page	\$525	\$85
1/4 page	\$1000	\$160
1/2 page	\$1900	\$300
1 page	\$4000	\$650

(Second color, other sizes & special placement quotes available upon request)

POSTMASTER Send address changes to: IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. Phone: 732-981-0060x150. USPS 878-660

POSTAL INFORMATION NOTICE

The newsletter of the Southeastern Michigan Section of IEEE, "Wavelengths", (USPS 878-660), is published monthly 8 times per year except June, July, August & December by the Institute of Electrical and Electronics Engineers, Inc. Headquarters: 345 East 47th Street, New York, NY 10017-2394. \$1.00 per member, per year (included in annual dues) is designated for each member of the Southeastern Michigan Section.

Periodicals Postage Paid at New York, NY and at additional mailing offices.

Visit the following IEEE World Wide Web sites:

Section: www.ieee.org/regional/section/se_michigan
Computer Chapter: www.egr.msu.edu/ieeesem/chapv/
IEEE: www.ieee.org
IEEE Region 4: www.ieee.org/regional/r4/



Calendar of Events

- | | |
|--|---|
| Sunday - Tuesday
Oct 1- 3 rd | Event: 2000 IEEE Intelligent Transportation Systems Conference (ITSC 2000) (Meeting # 7160)
Location: Dearborn, Michigan
Sponsor: IEEE Intelligent Transportation Systems Council
Contacts: Prof. Toshio Fukuda, CCRAS, Nagoya University, Furo-Cho, Chikusa-ku Nagoya 464-8603, JAPAN, +81-52-789-4478, fax: +81-52-789-3909, tofukuda@ibm.net Conference Services Dept., at IEEE Operations Center at 732-562-3878. |
| Monday - Thursday
2 nd -5 th | Event: IEEE ITS/SID/IVS 2000 Conference, Combined conference for Intelligent Transportation Systems, Society for Information Displays, and Intelligent Vehicle Systems.
Time: 8.00pm-5.00pm.
Location: Ritz-Carlton Hotel, Dearborn, Michigan
Contact: Dr. Ka C. Cheok; 248-370-2232, email:cheok@oakland.edu, Dr. Edzko Smid, 248-370-2082, email: smid@oakland.edu |
| Wednesday - Thursday
Oct. 4 th - 5 th | Event: 2000 IEEE Intelligent Vehicles Symposium (Meeting # 7329)
Location: Dearborn, Michigan
Sponsor: IEEE Intelligent Transportation Systems Council
Contacts: Professor Ichiro Masaki, Room 38-107, MIT 545 Technology Square Cambridge, Massachusetts 02139, 617-253 8532, fax: 617-258 7334 or Conference Services Dept. |
| Friday
Oct. 6 th | Event: Shannon Statue to be Unveiled in Gaylord
Time: 6.00 pm - 8.30 pm
Location: Gaylord, Michigan
Contact: Dr. Neuhoff, College of Engineering and Computer Science, U of M, Ann Arbor : 734-764-6586, email : euhoff@eecs.umich.edu |
| Monday
Oct. 9 th | Event: Tuned De-Coupling Networks
Speaker: Mr. John-Cyril Hanisko
Time: 6:00 pm
Location: Eaton Corporation - Innovation Center, B Conference Rooms - 2nd Floor, 26201 Northwestern Highway, Southfield, MI 48076
Sponsor: EMC Society
Contact: Kimbal Williams, k.Williams@ieee.org, 248-354-2845 Scott Lytle, email: ScottRLytle@eaton.com, 248-354-5245 |
| Wednesday
Oct. 25 th | Event: IEEE Fall 2000 Section Meeting
Time: 5.30 pm - 9.15 pm
Location: Yazaki North America, Inc. 6801 Haggerty Rd, 2896W, Canton, MI
Sponsor: Southeastern Michigan Section IEEE
Contact: Kimball Williams, k.Williams@ieee.org, 248-354-2845 |
| Monday
Nov 6 th
(Tentative) | Event: SEM Executive Committee Meeting
Time: Dinner at 6:00 pm, Meeting 6:30 pm
Location: Eaton Corp., 26201 Northwestern Highway, Southfield, Michigan
Contact: Kimbal Williams, k.Williams@ieee.org, 248-354-2845 |

The deadline for nominations for officers to service during the IEEE/SEM 2001-02 Program Year is December 15, 2000.



24 Frank Lloyd Wright Dr.
PO Box 555
Ann Arbor, MI 48106-0555
734/930-7500
www.adventengineering.com

Award winning services in:

- ⇒ Information Management
- ⇒ Design Process Improvement
- ⇒ Regulatory Compliance
- ⇒ Complex Problem Solving
- ⇒ Engineering Design & Evaluation
- ⇒ Quality Assurance

Chapter I: Circuits & Signal Processing



The Speaker: Dr. Misoon Mah
Affiliation: Air Force Research Lab, Dayton, Ohio
Title of Presentation: 3D IC Technology Development

Abstract: The purpose of this technology development is to provide the technology advancements needed for implementing affordable compact 3D MMICs for next generation microelectronics for commercial and military communication applications.

To accomplish this goal, the current MMIC technology needs to be reengineered for it to be able to increase its functionality with the necessary concomitant reduction in cost and size. The size reduction in current technology is limited because it is two dimensional (2D), planar technology. To achieve the degree of miniaturization required innovative 3D interconnect and integration technologies are required beginning at the chip level and continuing throughout the microwave multichip assembly (MCA).

The content will focus on the multilayer interconnect technology development as this technology provides the greatest potential for improvements in miniaturization. Included is a discussion on 3D unique microwave circuit components, such as 3D-Balun, 3D-inductor & 3D-Wilkinson Combiner/Divider, as well as compatibility with current MEMS technology for microwave applications.

Biography: Dr. Mah is an electronics engineer in the Multi-Chip Integration Branch of the Aerospace Components and Subsystems Concepts Division of Sensors Directorate at Air Force Research Lab. She has worked in the field of micro-electronic devices and components for 17 years. She received BS in chemistry from Sogang Jesuit University and also holds BSEE and MSME from University of Dayton and the University of Utah. In 1998 she received a PhD in Electrical Engineering at the University of Cincinnati with the focus of her research on developing innovative 3D MMIC. She also has extensive experience in the MMIC fabrication and electromagnetic simulation areas. Currently she is working on 3D interconnect technology development for the microwave/mm wave electronic components. Professional Activities include IEEE, KSEA (Korean Scientists and Engineers in America).

Chapter II: Vehicular Technology
 Chapter IV: Trident

Speaker: Michael J. Harrigan Sr.
Affiliation: Ford Motor Company
Title of Presentation: The Potential Role of Electronics in Advanced Fuel Systems

Abstract: The automotive fuel system has evolved from a simple container with a soda straw fuel line through which the engine sucked fuel, to the modern high-pressure fuel injection systems of today. It has evolved from all metal with rubber connections to almost all plastic with only rubber seals. In addition, evaporation of gasoline has been identified as a significant source of hydrocarbons contributed by automobiles to atmospheric

pollution. The sophisticated emission control systems on today's fuel systems almost completely eliminate any loss of fuel through evaporation or leakage. Electronic controls have been instrumental in all of these developments and its use will continue to grow.

This presentation will describe the modern fuel system and present some opportunities for expanding the role of electronics in each of the fuel system functions of:

- Refueling
- Fuel Delivery
- Vapor Management/Emission Control
- Fuel Indication


Finally, there will be a discussion of the role fuel systems have in creating stray electrostatic charges that can affect vehicle electronic systems.

Biography: Mr. Harrington joined Ford Motor Co. in 1972. Initially he worked as metallurgist for the Ford Aeronutronic Division in Newport Beach CA. In 1977, he was transferred to the Ford's Car Chassis Fuel Systems Dept. Mr. Harrington is the first Ford Motor Co. fuel systems Technical Specialist. He is the SAE Fuel System Technical Standards Committee Chair and is representative to USCAR/LEP Evaporative Emissions Control Systems. He has three patents for fuel system devices. His major accomplishments are:

- Developed the first all plastic fuel tubing system for US automobiles in 1982.
- Developed and introduced the first plastic quick connect fittings for fuel delivery systems in the world.
- Received the 1988 "Most Innovative Use of Plastic" Award from the Society of Plastics Engineers for the Taurus fuel line system.
- His team was awarded Ford's Customer Driven Quality Award in 1992 for their pioneering work in developing one of Ford's first System Design Specifications for Fuel Systems. This was the beginning of Ford's current SDS system.

Mr. Harrington has a BS in Mechanical Engineering from Loyola University of Los Angeles and a Masters in Materials Science from Stanford University.

Chapter V: Computer

Speaker: Darrin Hanna

Affiliations : Technology Integration Group Services, Inc.
Title of Presentation: Optimizing the Co-Design Process with Field Programmable Gate Arrays

Abstract: Forth is a programming language invented by Chuck Moore in the late 1960s while programming minicomputers in assembly language. His idea was to create a simple system that would allow him to write many more useful programs than he could by writing his programs in assembly. A unique version of Forth called *WHYP*, an acronym for *Words to Help You Program*, has recently been described in a new book on using the Motorola 68HC12 microcontroller in embedded systems by Dr. Richard E. Haskell. *WHYP* is a *subroutine-threaded* Forth since it uses

the subroutine-calling mechanism built into a microcontroller to go from one WHYP word to the next. A microcontroller called the W8X+ will be introduced based on the ideas developed in these early Forth engines. It is designed using a three-state VHDL implementation on a Xilinx FPGA. The W8X+ is a stack based high-performance microcontroller that incorporates a serial peripheral interface to integrate with external components. A compiler that compiles a high level programming language to W8X+ instructions will also be introduced. After compiling the program to W8X+ instructions, the compiler configures the W8X+ to include only the necessary components for the particular system and optimizes the resulting components to maximize execution time or minimize required chip space. This approach can be used to eliminate the need to pre-determine which system requirements should be implemented in software and which should be supported by the hardware in embedded system design.

Biography: Darrin Hanna graduated from Oakland University in 1999 with a B.S. in Computer Engineering and Mathematics. He teaches classes at Oakland University while pursuing graduate work in the School of Engineering and Computer Science. He is president of Technology Integration Group Services, Inc., a Rochester, MI computer hardware and software company that he founded in 1995.

Chapter VII: Power Eng. & Ind. Apps.

Speaker: Donald Zipse

Affiliations: President, Zipse Electrical Engineering, Inc.

Title of Presentation: Stopping Lightening in Mid-Air

Abstract: The end may be near for the 200 year old method of using a Franklin rod to collect, control and convey to earth the awesome and destructive power of lightning. The side effects of allowing thousands of amperes to flow adjacent to and near computers and sensitive electronic equipment can be considered foolhardy and costly. The Charge Transfer System of preventing lightning strikes to protected areas is a valid concept and will replace the Franklin rod method in many applications. The changes that are occurring with lightning protection technology include the renewed debate over sharp pointed versus blunt rods. The advent of a method for the detection and measuring the magnitude of lightning strikes is replacing the old iskeraunic level charts. Come hear about this exciting use of technology!

Biography: Donald Zipse received his Electrical Engineering degree from the University of Delaware. He spent 16 years with ICI America, Inc. as a company wide electrical specialist. For the next 14 years, he was with the FMC Corp. functioning as an Electrical Engineering Consultant, responsible for providing electrical design of new facilities and consulting service to the corporation.

He is a registered Professional Engineer. He serves on the National Electrical Safety Code, Grounding Subcommittee. He's served on many IEEE committees, including the Standards Board and the Standards Board's Review Committee. He is a member of the IEEE COMAR, Committee on Man and Radioation and Standards Correlating Committee #28, Non-Ionization Radiation. Mr. Zipse received the Standards Medallion for his work in and promoting standards.

He has published technical papers on such diverse and controversial

subjects as Unity Plus Motors, Computers, Health Effects of Electrical and Magnetic Fields. For the last five years, he has been President of Zipse Electrical Engineering, Inc, a consulting firm. For the past three years, he has been primarily involved as a forensic engineer and expert witness in cases resulting from electrical accidents and electrocutions.

Chapter VIII: EMC

Chapter X: Engineering Management

Speaker: Daniel D. Hoolihan

Affiliation: Hoolihan EMC Consulting, PO Box 367, Lindstrom, MN 55045

Title of Presentation: Two Years as President of the EMC Society

Abstract: In the years 1998 and 1999, Dan Hoolihan had the honor and privilege of being the President of the EMC Society of the IEEE. The position is primarily an administrative position with a minor amount of technical activity. Of course, there are benefits that accompany the position.



The administrative aspects of the duties revolved around the Board of Directors meetings of the EMC Society, the Technical Advisory Board (TAB) meetings of the IEEE, and the daily correspondence from the IEEE. The "Board" meetings were held three times a year and involved running a meeting with about 20 participants as a Roberts Rules of Order. The TAB meetings were held three times per year and this involved representing the EMC Society's interests at this gathering of all the Society and Council Presidents. A special task in the second year of Dan's presidency was to coordinate and present a 5-year review of our Society to a committee of the IEEE.

The benefits of the position include the honor and positive publicity that go with the position. This included traveling to several symposiums outside the United States to give speeches representing the EMC Society, attending the TAB meetings held at various location around the US, and controlling the pace and direction of the Board of Directors of the EMC Society.

Biography: Dan Hoolihan is the President of his own Electromagnetic Compatibility (EMC) consulting firm; Hoolihan EMC Consulting. The firm specializes in Standards, EMC Education, and Laboratory Audits to ISO 17025.

Dan is the Past-President (1998-1999) of the EMC Society of the IEEE.



32540 Schoolcraft Road, #130 Livonia, MI 48150

For Technical Information:
(P) 734/513-0330 (F) 734/513-0335
e-mail: ekco@compuserve.com

Power Equipment Sales for the following Products:

C&D Stationary Batteries, DELTA-UNIBUS Isophase Bus, DOBLE Test Equipment, ELECTRIMOLD Box Pads & Utility Boxes, FISHER-PIERCE Photo Electric Controls, MEHTA-TECH Fault Recorders, GE MULTILIN Protective Relays, JOSLYN HV Vacuum Switches, OLSUN Cast Coil & Dry Transformers, PAUWELS Liquid Filled Transformers, POWELL Switchgear, PRINGLE High Current Switches, SANTANA Insulators, SOLIDSTATE CONTROLS UPS Systems, SOUTHERN STATES HV Switches, STERLING STEEL STRUCTURES Steel Structures, UNIBUS Bus Duct Systems.

He has been a member of the Board of Directors of the EMCS since 1987. He is also a member of the Standards Development Committee of the EMC Society.

His activities on the American National Standard Institute (ANSI) Accredited Standards Committee on EMC (C63 Committee) include being a member of the full committee, a member of the steering committee of C63, Chairman of Subcommittee 6 on Laboratory Accreditation and Conformity Assessment and Chairman of Subcommittee 8 on Medical Device EMC Test Methods.

Hoolihan is a NARTE Certified EMC engineer. He has given numerous technical papers at symposiums around the world and has published many magazine articles on EMC Technology.

Dan was the Vice-President for the Minnesota Operations of TÜV Product Service from 1994-1999. He is the co-founder and past Chief Operating Officer of AMADOR Corporation (1984-94) and he was a Manager/Engineer in the EMC Lab of Control Data Corporation from 1969-1984.

His education includes a MBA from the University of Minnesota, a M.S. in Physics from Louisiana State University, and a B.A. in Physics from St. John's University (Minnesota).

Chapter IX: Power & Ind. Electronics

Speakers: Joe Kalisz

Affiliations: Yazaki North America, Inc.

Title of Presentation: Automotive PowerNet (42V) Systems

Abstract: The automotive industry is undergoing an evolution from the existing 12V system to a 42V system. In order to achieve a smooth transition to the 42V architecture, the need to control 12V components at the higher source voltage will be necessary. These loads (typically lamps and motors) can be controlled effectively through the use of a PWM converter. There are several advantages gained through a PWM design including smart load management, fault tolerance capability, current limiting, regulated output voltage and an optimized EDS (Electrical Distribution System) design. Yazaki's SNAP Architecture solution of the PWM design will be functionally demonstrated at the presentation.

Biography: Mr. Kalisz joined Yazaki North America, Inc. in June, 2000 and is currently the Manager of the Power and Modular Advanced Technology Group. He has worked in the automotive field for 23 years. His past experience includes electrical distribution system architecture design and development as well as ABS development. He is a currently a member of SAE.

Shannon Statue to be Unveiled in Gaylord

A statue of Claude Shannon will be unveiled on Friday, October 6 in his hometown, Gaylord, MI. This sculpture by Eugene Daub was commissioned by the IEEE Information Theory Society. The public is warmly invited to attend the Oct. 6 program, which includes the unveiling ceremony at 6 pm, followed by a reception and a panel of distinguished Information Theorists discussing the impact of Shannon's work on everyday life.

For more information about the program, Gaylord, travel, accommodations, and Claude Shannon, please consult the website.

IEEE Judging and Awards at ISEF 2000

by Don C. Bramlett, PE - IEEE/SEM Section Advisor

We want to thank the members of the IEEE Southeastern Michigan (IEEE/SEM) Section, the IEEE Northeast Michigan Section, the IEEE West Michigan Section and the IEEE Toledo Section for the response to the call for judges to serve on the IEEE Presidents' Scholarship special awards judging team and the IEEE Region 4 special awards team at the Intel International Science and Engineering Fair 2000 (ISEF 2000) on May 9 - 10 at Cobo Center in downtown Detroit, Michigan.



- The final listing of judges for the IEEE teams is as follows:
- Don C. Bramlett, PE** (IEEE/SEM Section) (Detroit Edison/DTE Energy) (Lead Judge)
 - Sat Basu** (IEEE/SEM Section) (Detroit Edison/DTE Energy)
 - Keith Gudger** (Santa Clara Section, CA) (Atmel Corporation)
 - Ted C. Huff** (IEEE/SEM Section) (VDO North America, LLC)
 - Laurence G. Dishman** (IEEE/SEM Section) (Wayne State University)
 - James Stevenson** (Northeast Michigan Section) (Consulting Communications Engineer)
 - Adam Stienecker** (Toledo Section, OH) (University of Toledo)
 - Mitch Van Ochten** (IEEE/SEM Section) (Federal APD)
 - William Quinlan** (IEEE/SEM Section) (Compuware)

One of the IEEE judges, Keith Gudger, this year was from the Santa Clara Section in California. The future site of ISEF 2001 next year will be in San Jose, within the boundaries of the Santa Clara Section. Keith will be the Lead Judge and coordinator for the IEEE Judging Team for ISEF 2001.

Continued on page 8

Automotive EMC Component Test Laboratory

- European Standards 95/54/EC and 72/245/EEC
- DaimlerChrysler Certified for PF-9326
- Ford Certified for ES-WX7T1-A278-AA and -AB
- General Motors GM9100, GMW 3097GS, GMW 3100GS
- SAE J1113, J1725, J1455
- CISPR, IEC, ISO and EN Testing
- A2LA and NVLAP ISO Guide 25 Certified Laboratory
- MIL-STD 461
- NARTE Certified Engineers and Technicians



Eaton Innovation Center
EMC Test Laboratory
26201 Northwestern Highway
Southfield, Michigan 48076
800-341-4892 Toll Free
248 354-5245
ScottRLytle@Eaton.com

Visit our web page at
<http://www.eaton.com/EMC>



IEEE/SEM Fall '00 Meeting Registration Form

Complete and mail form with an early registration fee of \$30 per person. The registration fee includes technical session attendance and dinner. If this form is for multiple people, you must provide full contact information for one person plus Name, Technical Session Preference, and Meal Selection for each additional registrant. **Please make check payable to IEEE/SEM** and forward along with a completed registration form to:

Dr Ece Yaprak, Wayne State University, College of Engineering
4855 Fourth Street, Rm.1152 Detroit,MI. 48202

There will be express check in for pre-registered attendees.

Please type or print:

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone #: _____ [] H [] W

Technical Session # _____ (* Select from list at right, 0 for none)

Meal Selection: [] None, [] Chicken, [] Vegetarian

Total amount enclosed: \$ _____ Registration (\$30 per person)

[] Check enclosed [] Visa [] MasterCard
US dollars

Credit Card Number _____

Expiration Date _____

Signature _____

Fees:	Amount	Deadline
Pre-registration	\$30 US	Received by mail before Oct. 15'th
Late registration	\$35 US	Contact Ece Yaprak at 313 577 8075 or yaprak@eng.wayne.edu by 5:00pm October 23, 2000
Student branch	\$15 US	Register and pay through student branch. Contact: Edzko Smid at 248 370-2082 or email: smid@oakland.edu by Oct. 15, 2000

Technical Sessions

_____ Chapter	Indicate session you wish to attend:
_____ Chapter I	Circuits & Signal Processing 3D IC Technology Development by Dr. Misoon Mah
_____ Chapter II	Vehicle Technology
_____ Chapter IV	Trident
_____ Chapter V	Advance Fuel Systems Involving Electronics by Michael J. Harrigan, Sr.
_____ Chapter VII	Computers
_____ Chapter VIII	Optimizing the Co-Design Process FPGAs by Darrin Hanna
_____ Chapter X	Power Engineering/Industrial Applications
_____ Chapter IX	Stopping Lightning in Mid-Air by Donald W. Zipse
	EMC
	Two Years as President of EMC Society by Dan Hoolihan
	Power & Ind. Electronics
	Automotive 42V PWM Technology by Joseph P. Kalisz

Credit card registrations are non-refundable after October 25.

Additional Registrants (Non Students Only) Name:	Company	* Technical Session #	Meal Selection			Fee
			Chicken	Veg.	None	
						\$30 ea

YAZAKI NORTH AMERICA, INC. CAMPUS MAP



Directions to Yazaki - North America

From the map you can see that the closest major freeway junction to the plant is at I-275 and Ford Road. Exit from I-275 proceeding West on Ford Road. The first major street you encounter will be Haggerty Road.

Turn North (Right) onto Haggerty and immediately begin looking for the Yazaki building and the IEEE signs on the West (left) side of the road. 6801 Haggerty Road will be the large building set back from the road, with the large parking lot in front. If the weather is inclement, park close to the sheltered walkway and follow it to the building entrance. The front entrance is the only entrance we will use for our event. Once inside, follow the signs or ask our Student Chapter volunteers for directions to the registration area and the Chapter meeting rooms.

IEEE Judging and Awards at ISEF 2000

Continued from page 6

This is the second year that IEEE has provided the \$10,000 Presidents' Scholarship Award to a high school senior who demonstrates in a project, outstanding achievement in research and presentation of engineering knowledge in electrical engineering, information technology or other IEEE field of interest. Incoming IEEE President Joel Snyder, PE flew in from the IEEE ExCom Meeting in Paris, France to Detroit, Michigan to make the award presentation the evening of Thursday, May 11th at Cobo Arena.

Since the ISEF 2000 was within the boundaries of the Region, IEEE Region 4 presented eight awards to students who demonstrate in their projects, excellence in technical content and presentation of engineering knowledge in electrical, electronics and computer engineering. Bob Adams, Region 4 Director, and Don C. Bramlett, PE, IEEE Region 4 East Area Chair and IEEE/SEM Section Advisor, presented the awards to the recipients on May 11th at Cobo Arena.

We want to also thank the officers of the four noted Sections in the East Area of Region 4 and the Region 4 officers involved in providing the funding for the eight \$500 awards to the deserving, talented high school students. Most of the funding for the Region 4 awards came from Region 4 PACE funds, requested by the Sections to fund these ISEF 2000 awards as PACE Pre-College Education Projects.

The eight high school student recipients of the IEEE Region 4 awards and their projects were as follows:

"QBots System for Developing Mobile Robot Software in Less Time for Less Cost" by Eser Kubali Chamoglu, 17, Horace Mann School, Bronx, NY.

"Taskable Simple Onboard Adaptive Robot Controllers in Real-World Complex Environments: Two-Year Study" by Leonardo F. Urbano, 17, Christ The King Regional High School, Middle Village, NY.

"GPS Device to Transmit From a Data Module to a Hand-held Computer", by Matthew Olivier Hart, 18, Alfred M. Barbe High School, Lake Charles, LA.

"Brushless Electric Motors: Three-Year Study", by Stan S. Pozmantir, 14, Clark High School, Plano, TX.

"Sleuthbot Robotic Search Tool", by Ryan Randall Patterson, 16, Central High School, Grand Junction, CO.

"Remote Flight Data Collection and Analysis System", by Etan Diamond Karni, 18, Leigh High School, San Jose, CA.

"Active Spin Control: Next Step After Anti-Lock Brakes", by Hans Christiansen Lee, 17, The York School, Monterey, CA.

"Discrete Electron Density Theory Finite Tensor Solutions to Schrodinger's Equation", by Jason L. Douglas, 18, Cincinnati Country Day School, Cincinnati, OH.



47523 Clipper Street
Plymouth
MI 48170
Tel: + 1 734 455 8200
Web: <http://www.Defiance-inc.com>

Our New EMC test laboratory offers the following automotive engineering services:

- Component and system testing to Ford and Toyota's requirements.
- European road vehicle type approval - 'e' and 'E' marking
- European EMC Directive certification - 'CE' marking
- EMC testing for suppliers of components and systems to car, truck, bus, agricultural, forestry, construction, industrial vehicles and related industries.
- Radio interference suppression (audio systems development).
- World-wide radio approval testing (FCC) and certification.
- Full vehicle development work.

If you sell your products into Europe we have the specialist knowledge you need.
Visit our Web Page: <http://www.Defiance-inc.com>

Contact: Graeme Rogerson, Project Engineer, Defiance

ENGEL - KLAES COMPANY

32540 Schoolcraft Rd., #130 Livonia, MI 48150

Power Equipment Sales for the following Products:

ABB Cast Coil Transformers, ADALET-PLM Cast Enclosures & HV Cable Accessories, C&D Stationary Batteries, DELTA UNIBUS Isophase Bus, DOBLE Test Equipment, FISHER-PIERCE Photo Electric Controls, HUBBELL/FEMCO Remote Control Systems, METHA TECH Fault Recorders, GEC ALSTHOM Breakers, GE MULTILIN Protective Relays, OLSUN Dry Transformers, PAUWELS Liquid filled Transformers, POWELL Switchgear, PRINGLE High Current Switches, SANTANA Insulators, SOLIDSTATE CONTROLS UPS Systems, SOUTHERN STATES HV Switches, UNIBUS Bus Duct Systems.

For Technical Information : P(734) 513-0330 F(734) 513-0335