

WAVELENGTHS

Greetings from the Chair!

by Dave Horvath,
IEEE/SEM Section Chair



Thank you for electing me to the position of Chair of the Southeastern Michigan Section. As we begin our new year as elected officers, this is a good time for reflecting on past successes for the section as well as goals for the coming year. During the past year under the leadership of Dave McKendry, the Executive Committee and the section completed a notable year in terms of technical and professional program achievements. As an example, all nine of our section's chapters were active and offered interesting and provocative meeting topics throughout the year.

Also, thanks to Jim Woodyard's meticulous and tenacious editorial skills as editor, we witnessed another stellar year of *Wavelengths* keeping the section's membership informed. During the past year, a new record was set in total number of issue-pages published while not sacrificing quality, and we have seen the initiation of availability of *Wavelengths* on the Web. Unfortunately, all good things must eventually come to an end. After over six years as Editor of *Wavelengths*, Jim is stepping down in order to undertake the duties of his newly elected Treasurer position. The good news is that the superbly qualified team of Sandy Hunter and Mark Hunter have volunteered to step in and take over the helm of *Wavelengths* as co-editors. Sandy has played a key role in the past on the Technical Program Committee and Mark has been assisting in and is presently the Director of Membership Activities. We are grateful to Sandy and Mark for taking on this important endeavor.

I have given a lot of thought to what my personal goals should be as Section Chair during the coming year. Our section is blessed with a large number of energetic and qualified volunteers who are quietly but aggressively marching down a large number of diverse paths and ways to benefit our section membership both from a professional and technical standpoint. The members of the section's Executive Committee are separately developing their own goals on how further improvements in their individual responsibilities can be made and will report on their goals in future issues of *Wavelengths*.

For my part, I have decided upon two goals which will reap additional benefits for our section. First, I wish to improve the interface between our section and Region 4 and second, improve the liaison between our section and the several outstanding universities and colleges that are in our geographical area.

Region 4 consists of approximately 20 Midwestern IEEE sections headed by an elected Region Director, Jim Fancher, and its own Executive Committee. This region contains several large and aggressive sections where numerous "lessons learned" are readily available to us for improving our section's operations. We only need to spend some time reviewing what other sections are doing with an eye out for something that we like.

(Continued on page 4)

Chapter V

Planning Another Award Winning Year

by Nizar Al-Holou, Ph.D., Chair, &
Charles Severance, Vice Chair Operations

The Computer Chapter officers had a meeting in June to plan activities for 1996-97. This year, I am very excited to have nine active officers from industry and academia. The officers are listed in the yearbook section of this issue of *Wavelengths*.

We have planned more than fifteen activities for this program year, which will set the record. Its also a great start for being able to apply for the IEEE Computer Society Outstanding Chapter Award, which our chapter won last year. We have scheduled one or two activities for every month from September through June. We are very excited to have many activities this year in both the metro Detroit and Lansing/Ann Arbor areas.

We are very interested in your ideas, suggestions, and input to improve the quality of our activities. Feel free to contact any of the officers.

Please check the Computer Chapter web page for any recent changes to these meetings and the section web page for other section and chapter activities. The web addresses are listed on page 2.

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

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Calendar of Events

Monday September 9
Tour: MSU National Superconducting Cyclotron Laboratory
Time: 7:30 to 9:00 p.m.
Location: Michigan State University, East Lansing
Sponsor: Chapter V
Contact: Charles Severance, 517-353-2268, crs@egr.msu.edu

Sunday thru Wednesday September 15-18
Event: IEEE International Conference on Control Applications with the IEEE International Symposium on Intelligent Control, and IEEE International Symposium on Computer-Aided Control System Design
Location: Ritz-Carlton, Dearborn Michigan
Sponsor: IEEE Control Systems Society
Contact: Laszlo Hideg, Lawrence Technological University, 810-204-2535, HIDEG@LTU.EDU.

Monday September 23
Event: The Internet Information Delivery Revolution
Speaker: Richard Wiggins
Time: 7:30 to 8:30 p.m.
Location: Room A-100 Engineering Building, MSU, East Lansing
Sponsor: Chapter V
Contact: Charles Severance, 517-353-2268, crs@egr.msu.edu

Wednesday September 25
Event: The Internet Information Delivery Revolution
Speaker: Richard Wiggins
Time: 6:00 - 7:30 p.m.
Location: GM Management Center, Warren
Sponsor: Chapter V
Contact: Sylvia Karmanoff, 810-947-0076

Monday October 7
Meeting: Executive Committee
Time: Dinner at 6:00 p.m.; meeting 6:30 p.m.
Location: Eaton Corporation, 26201 Northwestern Highway, Southfield
Sponsor: IEEE/SEM
Contact: Kimball Williams, 810-354-2845

Thursday October 10
Event: Oakland University's 10th Annual Hammerle Lecture
Speaker: The speakers are Dr. John Jackson, physicist, who led the 40 member international team that examined the Shroud of Turin in 1978, and Rebecca Jackson, ethnologist, who specializes in Judaic Middle East and Judaeo Semitic culture.

Title: Science and the Shroud
Time: 3:30 p.m.
Location: Room 201, Dodge Hall, at Oakland University
Comment: Open to the public at no charge.
Sponsor: Oakland University
Contact: School of Engineering & Computer Science, 810-370-2212

Thursday & Friday October 24-25
Event: IEEE Workshop on Power Electronics in Transportation
Location: Hyatt-Regency hotel in Dearborn, Michigan
Sponsor: Co-sponsored by the Power Electronics Society, Industrial Electronics Society, and Vehicular Technology Society.
Contact: John Miller, 313-322-7486

Wednesday October 30
Event: Fall '96 Section Meeting
Time: 5:45 - 9:00 p.m.
Location: GM Management Center
30901 Van Dyke Ave., Warren, Michigan
Comment: See article in this issue.
Sponsor: IEEE/SEM
Contact: George Peters, 519-966-1656 x4445#

For up to date information visit the following:

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



IEEE/SEM Fall '96 Meeting Announcement

Guest Speaker: Mr. Paul Bondy, City of Windsor's Development Commissioner

Topic: Windsor's Industrial and Technical Development Trends.

Date: Wednesday, October 30, 1996

Location: GM Management Center, 30901 Van Dyke Ave, Warren, Michigan

5:30-7:00 p.m. Registration and Check In

5:45 p.m. Concurrent technical sessions. (*Descriptions begin below*)

6:30 p.m. Social period with cash bar begins. *Note that the technical society meetings may end at different times during the social period.*

7:15 p.m. Dinner. The menu could not be confirmed at press time.

8:00 p.m. Introductions and featured presentation.

The meeting will end at approximately 9:00 p.m.

Reservations: Mail registration form from page 11 by October 18.

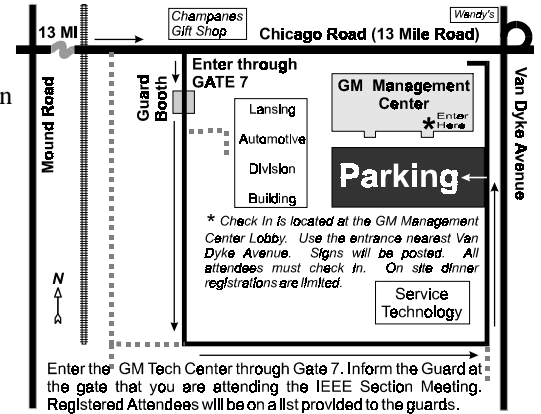
Late registrations accepted by phone from October 18-25.

Students must register through their student branch.

Student branch officers should contact George Peters to receive registration forms.

There is no fee for attending technical sessions only.

Contact: George Peters 519-966-1656 x4445#



Directions to the GM Tech Center: From I-696 take Mound Road north past 12 Mile. Turn Right (East) onto 13 Mile Road. Turn Into the Tech Center at the second gate past the railroad tracks (Gate 7).

IEEE/SEM Fall '96 Concurrent Technical Session Descriptions

Chapter I

Smart Integrated Automotive Microsystems

by Hoda S. Abdel-Aty-Zohdy, Ph.D. Oakland University

High performance Very Large Scale Integrated (VLSI) electronic designs are needed for successful and globally competitive engineering applications. Microelectronic applications require a mix of full-custom and semi-custom designed components, as well as a hybrid of analog and digital elements. These can be implemented in monolithic integrated circuits, or the more practical Multi-Chip-Modules (MCM), Flat-Panel-Display technologies (FPD), or Micro-Electro-Mechanical-Systems (MEMS).

This seminar will describe the current status of microsystems and microelectronics, and briefly introduce the facilities at the Microelectronics System-Design Lab (MSDL) at Oakland University. Several automotive related microelectronic projects will be presented. The possible impact of smart neural networks on the above will also be discussed.

Dr. Hoda S. Abdel-Aty-Zohdy is an Associate Professor of Electrical Engineering at Oakland University. She received the B.A.Sc. degree, from Cairo University, Cairo, Egypt, and the M.A.Sc. and the Ph.D. degrees from the University of Waterloo, Waterloo, Ontario, Canada, all in Electrical Engineering. Dr. Abdel-Aty-Zohdy is the Founder and Director of the Microelectronics System Design Lab (MSDL), and also Coordinator of the Engineering Physics Program at Oakland University. Her current research and teaching activities are in Application Specific Integrated Circuits; Neural Networks Implementation; Modeling and Simulation of Field Effect Transistors; Sensors Interfacing and Applications.

Chapter II

Chapter II is planning to have a technical session at the Fall Section meeting.

Chapter III

Fiber Optic Communications, Basics to Present Day

by Robert G. Desoff, Ameritech

Chapter III will hold a presentation titled Fiber Optic Communications, Basics to Present Day. The presentation will cover the basic terms, demonstrate some of the products used, and discuss the transmission techniques and hierarchy. The discussion will focus on the use of fiber optics in high speed communications used by the telephone industry but will also discuss the use of fiber in other industries. The presentation will cover the principles of fiber optic technology, digital hierarchy, fiber optic planning, uses pros & cons, material and techniques used for placing cable.

Fiber optic facilities are currently used for both voice and data transmission in telephony, cable TV applications, computers, automotive and aircraft applications, etc. Very few technologies have been integrated and accepted into everyday use as quickly as optic communications. Or have they?

The presenter will be Mr. Robert G. Desoff of Ameritech. Mr. Desoff has been an IEEE member for approximately 30 years and is currently Chair of Chapter III. Mr. Desoff has worked for Ameritech, and earlier Michigan Bell, for 27 years. He has worked in Data Provisioning, Mobile Radio & Video Transmission and Interoffice Facility Planning. Robert has also held assignments at Bell Laboratories and taught Fiber Optics to Bell System employees.

(Continued next page)

Chapter V

Beyond RISC — The Next Generation of Computer Architectures *by Charles R. Severance, Michigan State University*

Mr. Severance will speak on today's newest computer architectures. He will start with the principles of the RISC architecture, which guided the design of the previous generation of processors. These principles have accelerated the performance gains of RISC processors over their predecessors. The current generation of CPUs, called Post-RISC, is poised to continue this rapid acceleration in performance due to changes that are decidedly not RISC. Mr. Severance will describe the characteristics of Post-RISC processors and review six processors of the current generation which highlight the principles of the Post-RISC architecture.

Mr. Severance is currently the Director for Computing Services for the College of Engineering at Michigan State University. He is an instructor in the Computer Science department at MSU and teaches classes on computer architecture. He is the vice chair of the IEEE POSIX standards committee and edits a monthly column on computer standards in the IEEE Computer magazine. He has a bachelor's and master's degree in Computer Science from MSU. His research area is the use of parallel processors for high performance computing.

Chapter VI

Chapter VI is planning to have a technical session at the Fall Section meeting.

Chapter VII

Underground Medium Voltage Distribution System Protection Utilizing Power Fuses

by William G. Edwards Jr., Territory Manager, S&C Electric Company

Mr. Edwards has been employed by S&C Electric Company since early 1992 as the Territory Manager for the lower peninsula of Michigan. Prior to joining S&C, he worked in facilities engineering at the University of Missouri-Columbia. Earlier, he developed in-depth technical expertise as an electronics technician and instructor during eight years in the US Navy.

Chapter VIII

Electrostatic Discharge and Electrostatic Charging

by Mr. Kerfegar Katrak, General Motors

The speaker for the EMC Chapter will be Mr. Kerfegar Katrak of the Integration and Subsystems Centers, EMC Group, at the GM Proving Grounds. Mr. Katrak will discuss electrostatic discharge (ESD) and electrostatic charging (ESC) using the human body model. He will review the evolution of the human body ESD model. He will examine environmental concerns such as humidity and temperature and their impact on the ESD model in the actual environment. Deficiencies in existing test methods and standards will be identified. Mr. Katrak will present the results of surveys measuring the ESD field present in the assembly line environment compared to previously established levels. Mr. Katrak will review the changes in handling procedures that resulted from his studies and planned future studies in ESD testing at General Motors.

Chapter IX

Expert Knowledge-Based Traction Control of a Truck Using Fuzzy Logic

by Dr. Ka C. Cheok, Oakland University

Chapter IX is hosting Dr. Ka C. Cheok of Oakland University for a presentation on the application of fuzzy logic for control of an automotive system. Dr. Cheok will describe a fuzzy logic approach for incorporating an expert knowledge-based traction control system (TCS) for a four-wheel drive vehicle. The knowledge base is provided by a survey of existing TCS methods, computer simulation studies, and feedback information from experienced traction test drivers. Extensive experiments for traction control were conducted at test facilities. The system level fuzzy logic approach readily permits modification of old ideas and incorporation of new ones. The success of this design was demonstrated to the government sponsor and industrial partners.

Dr. Cheok is Associate Professor in the Department of Electrical and Computer Systems Engineering at Oakland University. He received his bachelor's degree in electrical engineering from the University of Malaya, Kuala Lumpur, Malaysia in 1977, master's degree in electrical and computer engineering in 1979 and doctorate in systems engineering in 1982 from Oakland University. Dr. Cheok is active in the research areas of real-time computer controlled systems involving artificial intelligence systems, intelligent control paradigm, robust tracking control systems, computer visualization, and virtual driving simulators. His contributions include the development of heuristic search, fuzzy logic, and neural network techniques for guidance of autonomous mobile robots, and control of active suspension, automotive traction, and stabilized platform systems.

Student Session

A student session is planned.

Greetings from the Chair! *(Continued from page 1)*

As I mentioned our section is lucky enough to have within its boundaries several universities and colleges with excellent electrical and computer engineering credentials. These universities and colleges represent unique opportunities for both technical networking and talking with students about future careers. The EMC chapter is already doing a lot of this type of interfacing by providing presentations to students. I hope during the upcoming year to be able to meet with each of the individual electrical and computer engineering department chairs (beginning with the University of Michigan) to identify ways to improve the interface with each institution.

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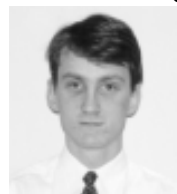
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NATRAD 1996 Conference



NATRAD '96 Technical Program Chairman, Dr. Adam Kozma, congratulates newly awarded IEEE Fellow Nicholas Curry.

The 1996 National Radar Conference was held at the Michigan League in Ann Arbor on May 13-16. The Southeastern Michigan Section co-sponsored this conference along with the Aerospace and Electronic Systems Society of IEEE. This conference was notable both in terms of interesting topics presented and local membership participation. Attendance was over 200 from more than a

dozen countries, and 65 papers were published in the proceedings. Both the poster session and exhibit areas were the scenes of several intense technical exchanges and demonstrations.

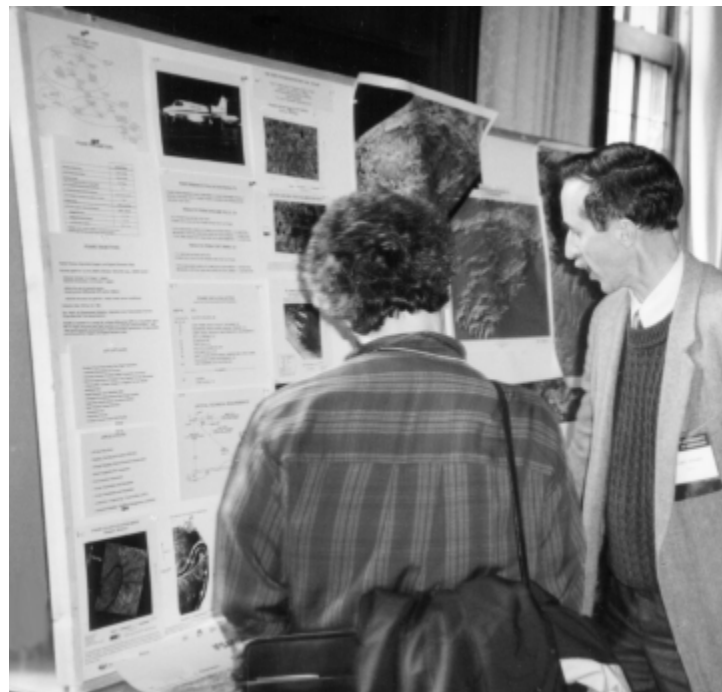
The theme of the conference was affordable radar technology (ART). "You gotta have ART" was heard more than once. The ready availability of low-cost signal processing through the use of 486 and Pentium® computers has greatly expanded and continues to improve the role of radar in our everyday lives. Remarkable performance has become possible with the combination of radar and low-cost, high power signal processing which has allowed the development of several interesting and creative applications such as:

- Hand held radars for use by enforcement authorities to determine whether suspects on the other side of a closed door are holding weapon. Wood, plasterboard, and concrete blocks are readily penetrated with this type of radar. In one application, a habitual graffiti artist was finally captured thanks to the use of radar detection from within the building.
- Ground penetrating radar for detection of land mines.
- Accident mitigating radar vehicle avoidance systems for about the same cost as air conditioning.
- Space based radar systems that can monitor any moving or fixed target with a resolution of a few meters anywhere in the world any time of the day or night using return signal Doppler shift and synthetic aperture radar technology.
- Improved severe storm location and intensity prediction and analysis.

by Dave Horvath, Conference Planning Committee

The Honorable Paul G. Kaminsky, Under Secretary of Defense for Acquisition and Technology was the conference banquet speaker. He spoke on the importance of the availability of low cost radar technology to recent information gathering capability advances and the way situations such as Operation Desert Storm are now conducted.

SEM Section members who actively contributed to the success of this conference included Dale Ausherman (Conference General Chair), Adam Kozma (Technical Program Chair), Valdis Liepa (Deputy General Chair), John Ackenhusen (Finance Chair), Bruce Block (Local Arrangements), Kamal Sarabandi (Program Arrangements and Technical Session Chair), Joseph Burns (Publications and Technical Session Chair), Mark Ricoy (Tutorials Chair), Robert Desoff (Local IEEE Liason), David Horvath (Poster Session Co-Chair), and Jozef Sypniewski (Poster Session Co-Chair).



Gary Adams (ERIM) explains synthetic aperture radar to a visitor during NATRAD '96 poster session.

Chapter IX

Industrial Strength Power Electronics Plans

First of all, I wish to thank the membership for again electing me chair of the Power Electronics and Industrial Electronics chapter. Please also welcome my fellow officers, Prof. Ka C. Cheok of Oakland University as Vice Chair and Dr. Gamze Erten of IC Technologies as Secretary. I am looking forward to working with these officers and planning an exciting year of activities.

Looking back over the past three years, it is humbling to see the list of professionals who have taken their personal time to present outstanding technical seminars at our meetings. The topical areas have intentionally been focused on issues relevant to the automotive, manufacturing and service industries of Southeastern Michigan. In 1994 as this chapter was being formed, we started with a series of point and counter-point seminars on Smart Power for automotive applications. Then in 1995 we proceeded to a set of seminars on

by John M. Miller, Chair

machine tool and AC drives topics pertinent to manufacturing operations. This year our focus has been on industrial electronics, specifically on the application of Fuzzy Logic to process control and automotive traction control. (*See the seminar announcement in this issue.*)

For 1997 we plan to return to topics on power electronics. I invite the membership to contact me with suggestions for future seminar topics and speakers, or to volunteer to participate. With the recent announcement of electric vehicles being offered for sale in Arizona and California, topics on electric drive systems, power conditioning, electric powered accessories for automotive and power distribution architectures are suggested technical topics. We would also entertain topics on trends in the marketplace, infrastructure issues, and servicing of EV's. Please get in touch with me, and we can discuss the details.

Satellite Antennas Presentation*by Joe Burns, Chapter IV Chair*

IEEE Distinguished Lecturer Dr. Antoine G. Roederer, Head of the Electromagnetics Division of ESA-ESTEC in Noordwijk, the Netherlands presented a talk on recent European developments and technologies for satellite antennas on Thursday, August 1, 1996. Thirty four IEEE members attended the presentation at the University of Michigan.

The lecture first reviewed some recent European developments and technologies for satellite antennas, mostly applied to telecommunications and remote sensing in the 1.5 GHz to 200 GHz frequency range. This included shaped reflectors with one or more feeds, complex feeds, beam forming networks and novel array elements.

Then the lecture focused on the new concept of semi-active transmitting antennas. Applicable to multifeed reflectors and to conformal or planar arrays with multiple beams, the design combines maximum flexibility in power to beam allocation, coverage reconfigurability and high power amplifier efficiency.

In such antennas, the amplifier modules are separated from the radiating elements or reflector feeds by several multiport hybrid couplers in quasi TEM or waveguide technology. The amplifiers all operate at the same output level, with optimum DC to RF efficiency. They are fed via fixed or variable phase shifters, which allow control of the distribution of power to the radiating elements optimally for each beam. In this way, power can be moved in the focal region of a reflector or around a conformal array to generate optimally shaped or scanned beams. In planar arrays, tapered distributions can be generated for low sidelobe or shaped beam operation from uniformly excited power modules. Adjacent beams have different frequency sub-bands (with amplifiers operating in multi carrier mode) or different modulation codes.

This concept has been selected for several upcoming mobile communication satellite payloads worldwide and has potential applications for radar and cellular communication base stations.

Volunteers Needed for Future City Competition*by D. Bramlett, IEEE/SEM Advisor*

The Future City Competition is probably the most publicized activity associated with National Engineers Week (NEW). The 1997 Future City Competition will offer 7th and 8th grade students in eleven metropolitan areas, including Detroit, a fun way to learn about engineering and designing cities of the future. By participating in this competition, middle school students enhance their skills relating to teamwork, problem-solving and computers. They learn how math and science knowledge can be applied in real world situations to solve problems of global concern.

Three students work as a team with an engineer and a teacher, who provide advice and technical assistance, to design and build a city of the future. The project consists of three phases including designing the city using supplied SimCity software and generating an aerial drawing, building a section of the city, and submitting a 500-word essay on a specified issue related to urban life and environmental issues.

IEEE/SEM Section members are encouraged to volunteer to assist a team of students and a teacher from a middle school or to serve as a contest judge or essay evaluator. There were 32 student teams in the 1996 local competition. The target for the local competition in 1997 is 40 teams, each from a different middle school. Volunteers can anticipate spending approximately 18-24 hours with the students during the months of October through January. Engineers will also be needed as judges for the local competition on Thursday, January 23, 1997, at Henry Ford Museum or to read and evaluate essays.

The first place team of students, along with engineer and teacher advisors, in the local metropolitan Detroit contest will travel to Washington, D.C. to compete in the National Finals during NEW, February 16-22, 1997. The metropolitan Detroit teams took second place in the National Finals in 1994 & 95, and first place last year. The project last year from Middle Years Alternative (MYA) in Ann Arbor was an outstanding vision of an orbiting space-city.

Last year, Mohamed Zohdy of Oakland University and Ed Gillis of Ford Motors Scientific Research Laboratories were engineer advisors to middle school student teams in the local competition. Don Bramlett of Detroit Edison and Lisa Anneberg of Lawrence Technological University were judges at the local competition at Henry Ford Museum.

A 20-page Teacher/Volunteer Handbook will available in September, which details the contest specifics and answers the type of questions that you as a volunteer might have regarding the contest and the activities. An orientation program for students, teachers, and engineer-advisors will be conducted on September 25 to answer questions. To receive this free handbook and get further information, please contact Don Bramlett at 313-586-1774 during normal weekday business hours or at 313-525-5422 in the evening or on weekends. My e-mail address is d.bramlett@ieee.org, and my fax number is 313-586-1911.

Additional corporate sponsors are being solicited to provide nominal contributions. Last year, sponsors included Detroit Edison, Rockwell International, Giffels Associates, and Henry Ford Museum. The IEEE/SEM Section is providing support for this educational competition in association with the Engineering Society of Detroit (ESD) and the Society of Manufacturing Engineers (SME).

As a member of a special steering committee for the 1997 Future City Competition, I would solicit any suggestions from those who have been involved in this event in the past. We are looking for suggestions to make the competition more interesting and rewarding for the students, parents, teachers, and engineers involved.



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The University of Detroit Mercy's IEEE student branch has had an eventful year of educational and exciting activities. The year began with a membership drive that was captured in the College of Engineering's annual "Party in the Pit." The large, open "pit" in the Engineering building gave students an opportunity to learn about engineering organizations and enjoy a free dinner. UDM's student branch set up a display to familiarize students with IEEE and its activities. In addition, the party facilitated an atmosphere where new engineering students could talk with IEEE members about the organization in particular as well as electrical engineering in general. UDM's IEEE student branch participated in Technology Day, which is a day dedicated to promoting engineering careers and technology among Detroit area high school students. The IEEE held a "Shouting Contest" that used a spectrum analyzer to calculate the power in each student's shout. The student with the loudest shriek was awarded a prize, while the IEEE contest facilitators were awarded pain relievers for noise-induced headaches! Despite this side effect, both event organizers and participants had a great time learning about the spectrum analyzer's operation.



The tension builds at the "Tournament of Doom".

UDM's student branch was also the proud sponsor of UDoom Tournaments I and II. The branch submitted a proposal to the university's Student Senate for sponsorship. It received unanimous support and funding for both tournaments, the first held in the fall semester and the second in the winter semester. The tournament was based on the networked version of the popular computer game, DOOM™, where each contestant tries to kill the others. After each game, the competitor emerging with the most "kills" moved on to the next round and the others were eliminated. The winner of the contest, who survived at the end of several rounds, was awarded a gift certificate for the Oakland Mall. The idea behind both tournaments was to host an event that students university-wide could enjoy while gaining publicity for the electrical engineering program at UDM.

The UDM student branch also hosted an eating contest during the college's Geek Week. During Geek Week, the chemical, civil, electrical, and mechanical engineers enter into friendly competition to determine who really is the "King of the Geeks." Although the electrical engineers did not win the overall championship, they certainly proved that no one could out-eat them. The eating contest was conducted in a relay format where the EE's devoured five donuts, dropped two drops of pudding into a partners mouth, and slurped a plate of Jell-O® in world record timing. With time to spare, the EE's coasted to an easy victory in the IEEE Eating Contest, with Bill Allmendinger being declared the MVP.

Finally, the 1995-96 year was wrapped up with the annual IEEE/Eta Kappa Nu summer party. The summer party was a day-long picnic for electrical engineering alumni, students, faculty, and other invited guests. Volleyball was used to justify a continuous bout of eating. "It was fun," commented Ray Maylone, a senior electrical engineer and former IEEE secretary. That was saying a lot for Ray, the resident Clint Eastwood of the EE Department. Indeed, fun was had by all after a long year of activity.

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IEEE/SEM Fall '96 Meeting Registration Form

Complete and mail form with an early registration fee of \$25 per person. The registration fee includes technical session attendance and dinner. Complete this form for each person attending. Please make check payable to IEEE/SEM and forward along with a completed registration form to: **Christin Clayborn, 4528 Rochester Road, #16, Royal Oak, Michigan 48073.**

Fee Type	Amount	Deadline
Early registration	\$25	Postmarked by 10/18/96.
Regular registration	\$30	Phone call to George Peters, 519-966-1656 x 4445#, by 10/23/96.
Student registration	\$12	Register & pay through student branch.

There will be express check in for those pre-registering.

Please type or print:

Name: _____
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 Phone Number: _____ [] H [] W
 Company: _____
 Amount enclosed: \$_____ Early registration (\$25 per person)

Indicate your choice of meal: [] Regular or [] Vegetarian

Indicate which technical session you wish to attend:

- Chapter I: Acoustics, Spch & Sig Prc, Circuit & Sys, Info Thry, Ctrl Sys
"Smart Integrated Automotive Microsystems"
- Chapter II: Vehicular Technology
- Chapter III: Aerospace & Electronics Systems and Communications
"Fiber Optic Communications, Basics to Present Day"
- Chapter V: Computer
"Beyond RISC - The Next Generation of Computer Architectures"
- Chapter VI: Geoscience & Remote Sensing
- Chapter VII: Power Engineering and Industrial Applications
"Underground Medium Voltage Distribution System Protection"
- Chapter VIII: Electromagnetic Compatibility
"Electrostatic Discharge and Electrostatic Charging"
- Chapter IX: Power Electronics and Industrial Electronics
"Expert Knowledge-Based Traction Control"
- Student Session

Executive Committee Meeting Report

by K.C. Liu, Secretary

The first IEEE/SEM Executive Committee meeting for the 1996-97 year was held on Monday, August 5, 1996, at the Eaton Corporate Research and Development facility in Southfield, Michigan. Eighteen people attended the meeting, presided over by Section Chair David Horvath.

- M. and S. Hunter introduced a new look and annual plan for *Wavelengths*.
- G. Peters updated the status of the upcoming Fall Section Meeting and announced the preliminary plan for the Spring Section Meeting of 1997.
- M. Hunter reported that the various membership materials have been requested from IEEE headquarters. Hunter also reported that the Region 4 web page lacks a link to the section web page.
- D. Rover updated the status of chapter technical meetings planned for the Fall Section Meeting.
- M. Zohdy reported the success of local students who participated in several national competitions. He also announced plans to revive the "Bucket O' Parts" competition, which will be hosted by a local university within the SEM section.
- H. Abdel-Aty-Zohdy reported for Chapter I that a technical meeting is scheduled for the Fall Section Meeting, and further activities are in store.
- R. Desoff reported that Chapter III will have an administrative meeting in mid-September, a technical meeting in October. He had no further information regarding the National Radar Conference.
- C. Severance reported for Chapter V that more meetings were lined up. He also handed out a list of three activities in September including the tour of the Cyclotron Lab at MSU.
- Bill Edwards reported for Chapter VII that a Power Engineering Society Transmission & Distribution conference will take place in September in Los Angeles.
- D. Barberi reported that Chapter VIII will have a meeting at the end of September. The chapter would also welcome having joint meetings with other chapters.
- J. Miller reported that Chapter IX will have a workshop in October in addition to a concurrent technical meeting at the Fall Section Meeting. He is recompiling the chapter's mailing list.
- A motion was made and subsequently approved by the Executive Committee that G. Peters will be the section's representative to the upcoming 1996 IEEE Section Congress.

The next Executive Committee is scheduled for Tuesday, September 3.

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Volunteers Wanted!

- Volunteer needed to place meeting signs for the IEEE/SEM Fall Section Meeting in the GM Management Center on October 30 from approximately 4:45 - 5:45 p.m. Call George Peters at 519-966-1656 ext.4445# to help.
- Meet local technical company representatives. Your assignment, should you choose to accept it, is to direct vendors to their assigned display areas at the Fall Section Meeting on October 30 from 4:45- 5:45 p.m. Call George Peters at 519-966-1656 ext.4445# for more information.
- SEM Section member sought to obtain additional advertisers for *Wavelengths*. The time commitment is approximately 3 to 10 hours a month. Great opportunity to make contacts with local area high-tech and technically oriented businesses! Contact Dave Horvath at 313-930-7500 or Sandy Hunter at 810-265-5638 for additional details.
- Future City mentors and judges needed. See story on page 9

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