

## Call for IEEE/SEM Section Awards Nominations

by David G. McKendry, IEEE/SEM Past Chair

LENGTHS

This is the fifth year the IEEE/SEM Section will be presenting section awards in recognition of outstanding member and student member accomplishments and contributions. The awards will be presented at the IEEE/SEM Spring '97 Section Meeting. Throughout this past year many individuals have given up hours of their time to organize and execute the programs that you may have attended. Some of these members have gone far beyond what was expected of them and deserve to be recognized for their contributions. If you know of such an individual or group, please take the time to nominate them so that they can be considered for the appropriate section award. Nominations are solicited for the following awards:

1. **Outstanding Engineer:** This award is presented to an IEEE/SEM member who has demonstrated outstanding activity or accomplishment in the electrical, electronics, or computer engineering profession.
2. **Outstanding Section Activity:** This award is presented to an IEEE/SEM member who has been actively involved in the section and is deserving of special recognition for leadership, participation, and accomplishments at the section level.
3. **Outstanding Chapter Activity:** This award is presented to an IEEE/SEM member who has been actively involved in the local technical society chapters within the section and is deserving of special recognition for leadership, participation, and accomplishments in chapter activities and programs.



4. **Outstanding Student Branch Activity:** This award is presented to a student branch, student branch member(s), section member(s), or a student branch counselor to recognize leadership, participation, support, or accomplishments related to the operations and programs of a student branch and for promoting the engineering profession among students.

### The rules for making a nomination are as follows:

- Both the nominator and the nominee must be IEEE/SEM members or student members.
- Provide the name, address, phone number and IEEE member number (if known) for both the nominator and the nominee.
- Nominations must be in written form (hard copy or e-mail are acceptable) and provide sufficient information to be a good basis for the nomination and to allow for a meaningful evaluation of the candidate for the intended award. Describe the specific contribution(s), date(s), location(s), etc. for which the nomination is being submitted.

Award nominations **must be received by December 1** in order to be discussed at the IEEE/SEM December Executive Board meeting. Please send nominations to the Awards Committee Chair:

**David G. McKendry**  
2585 Vhay Lane

Bloomfield Hills, MI 48304

[d.mckendry@computer.org](mailto:d.mckendry@computer.org)

Call 810-257-8868 to ask questions or for fax number.

### NEW 1997 Puns & Fun!!

National Engineers Week (NEW) is the week of February 16-22, 1997. We want to have some fun with the yearly celebration, not only conduct technical meetings. So as last year, we are soliciting contributions from the witty members of the section to a list of the "Top Ten Reasons to Participate in National Engineers Week" as well as a list of the "Top Ten Reasons to Hug an Engineer This Week." These two lists should be along the same lines as

by D. Bramlett, IEEE/SEM Section Advisor

those that are characteristic of the David Letterman show. In fact, if we get some really good and interesting contributions, we plan to submit one or both lists for possible use on the show. The lists will be published in the February issue of *Wavelengths* for all to enjoy. Prizes will be awarded to the top ten contributions. Send your contributions to me, by fax at 313-586-1911, by phone at 313-586-1774, or by e-mail at [d.bramlett@ieee.org](mailto:d.bramlett@ieee.org).

### TABLE OF CONTENTS

Calendar of Events .....	2,3	Computer Auto Parallelization .....	4	Computer Tour Report .....	7
Internet Addresses .....	2	Computer Virtual Reality .....	4	EXCOM Report .....	7
Comm & AeroSpace-Deep Space ..	3	Past Section Chair .....	5	Neuro-Fuzzy Workshop .....	8
Vehicular Technology Chair .....	4	PACE Conference Report .....	6	Top Ten Reasons for CS .....	8



## IEEE Southeastern Michigan Section Executive Committee

### Officers

Chair	David Horvath	313-930-7500
Vice Chair	George Peters	519-966-1656 x 4445#
Secretary	K. C. Liu	810-265-6964
Treasurer	James Woodyard	313-577-3758

### Administrative Activities

Past Chair	David McKendry	810-257-8868
Section Advisor	Don Bramlett	313-586-1774
Student Activities	Mohamed Zohdy	810-370-2234
Professional Activities	Donald Silversmith	313-577-3861
Technical Activities	Diane Rover	517-353-7735
Educational Activities	Lisa Anneberg	810-204-2539
Membership	Mark Hunter	313-453-0800

### IEEE/SEM Chapters

- 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)

### CO-EDITORS

Sandy Hunter	Mark Hunter
EDS, Mail Stop 4317	Link Engineering
750 Tower Drive	43855 Plymouth Oaks Blvd
Troy, Michigan 48098	Plymouth, Michigan 48170
810-265-5638	313-453-0800
s.e.hunter@ieee.org	m.hunter@ieee.org

### PRINTER

Action Printech  
31575 Glendale  
Livonia, Michigan 48152  
313-425-8150



**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 4100

Ad Size	Annual Rate (8 issues)	Single Issue Rate
1/8 page	\$400	\$65
1/4 page	\$800	\$125
1/2 page	\$1600	\$250
3/4 page	\$2400	\$375
1 page	\$3200	\$500

### POSTMASTER Send address changes to:

IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854.  
Phone: 201-981-0060x150. 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 47<sup>th</sup> 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](http://www.ieee.org/regional/section/se_michigan)  
**Computer Chapter:** [www.egr.msu.edu/~crs/ieeesem/chap/](http://www.egr.msu.edu/~crs/ieeesem/chap/)  
**IEEE:** [www.ieee.org](http://www.ieee.org)  
**IEEE Region 4:** [www.ieee.org/regional/r4/](http://www.ieee.org/regional/r4/)

## Calendar of Events

- Wednesday** Event: **Fall '96 Section Meeting**  
**October 30** Time: 5:45 - 9:00 p.m.  
 Location: GM Management Center  
 30901 Van Dyke Ave., Warren, Michigan  
 Sponsor: IEEE/SEM  
 Contact: George Peters at 519-966-1656 x4445#
- Monday** Meeting: **Executive Committee**  
**November 11** 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 at 810-354-2845
- Thursday** Topic: **Nuclear Fusion Propulsion and the Promise of  
 November 14** **Practical Manned Deep Space Missions**  
 Speaker: Dr. Terry Kammash, Professor of Nuclear Eng., U of M  
 Time: 5:30 social period, 6:15 dinner, 7:00 presentation  
 Location: Webers Inn in Ann Arbor on Jackson/Ann Arbor Road  
 Sponsor: Communications and Aerospace Engineering Chapter  
 and American Nuclear Society (ANS) joint meeting.  
 Comments: *Reservations required by November 11.*  
 See Deep Space Propulsion article on page 3  
 for details and dinner fees.  
 Contact: For reservations and directions, contact Dave Horvath at  
 313-327-7510 or DAHorvath@aol.com.
- Thursday** Meeting: **Knowledge Based Support for the  
 November 14** **Effective Use of Program Libraries**  
 Speaker: Dr. Fatma Mili of Oakland University  
 Time: 5:30 - 7:00 p.m.  
 Location: Dodge Hall room 237 at Oakland University  
 Sponsor: Chapter V: Computer  
 Contact: Dr. Subra Ganesan, 810-370-2206,  
 ganesan@oakland.edu
- Saturday** Meeting: **Workshop On Neuro-Fuzzy Computing  
 November 16** **and Applications**  
 Time: 8:30 a.m. - 5:30 p.m.  
 Location: Meadow Brook Hall, Oakland University, Rochester, MI  
 Comment: Advance registration required.  
 See article on page 8.  
 Contact: Dr. M. A. Zohdy at 810-370-2234,  
 zohdyma@oakland.edu
- Sunday** Event: **Award Nomination Deadline**  
**December 1** Contact: David G. McKendry, 2585 Vhay Lane,  
 Bloomfield Hills, MI 48304  
 d.mckendry@computer.org  
 Comments: See article on page 1.



## **POLARIS TECHNOLOGIES**

**Consulting in ...** Analog & RF Electronics  
Electro-Optics  
Global Positioning System (GPS)  
New Product Development  
Project Management  
Entrepreneurial Ventures

**Karl G. Wesolowicz - Principal**

6626 Weathersfield Way Canton, Michigan 48187  
Web Site: <http://www.mich.com/~polaris/>  
Email: [polaris@mich.com](mailto:polaris@mich.com)

Telephone/Fax: (313) 454-4181

## Chapter III: Communications & Aerospace Systems

### **Deep Space Propulsion to be Topic of Joint Meeting of IEEE and ANS**

*by Dave Horvath*

Dr. Terry Kammash will speak to a joint meeting of the IEEE Aerospace Chapter and the American Nuclear Society (ANS) Michigan Section on Thursday, November 14 on the topic of "Nuclear Fusion Propulsion and the Promise of Practical Manned Deep Space Missions" at Weber's Inn in Ann Arbor.

Specifically, Dr. Kammash will discuss how manned missions to Mars and exploration of the solar system and beyond will require propulsion systems with capabilities that far exceed those provided by present day chemical systems. Nuclear systems provide the answer in that they would allow such missions to be undertaken in relatively short times. In this lecture, he will examine various options that may become available in the near future, and assess their performance in terms of missions to the various planets in the solar system.

Dr. Kammash is a professor of Nuclear Engineering at the University of Michigan where he teaches a graduate level course on Advanced Techniques for Space Propulsion. He has completed numerous research projects and studies related to nuclear rocket propulsion and nuclear power plant applications in space. Dr. Kammash is nationally recognized as a leading expert in advanced nuclear technology, particularly in the areas of gas core fission and magnetic and inertial fusion reactors for space application. He developed and continues to be the leading researcher of the Gasdynamic Mirror (GDM) concept for deep space propulsion use. He is also a part-time consultant to Advent Engineering on the GDM concept.

This joint meeting will consist of a social period beginning at 5:30 p.m., dinner at 6:15 p.m. and the presentation beginning at 7:00 p.m. Price for attendance is \$10.00 for students and \$20.00 for all others. Reservations (name and phone number) are requested by end of business day Monday, November 11. Please call Dave Horvath at 313-930-7500, at 313-327-7510 and leave message, or via email at [DAHorvath@aol.com](mailto:DAHorvath@aol.com).

### **Calendar of Events (continued)**

Monday Meeting: **Executive Committee**  
December 2 Time: Dinner at 6:00 p.m., meeting 6:30 p.m.  
Location: Eaton Corporation  
26201 Northwestern Highway, Southfield  
Sponsor: IEEE/SEM  
Comments: Date is tentative  
Contact: Kimball Williams, 810-354-2845

Wednesday Topic: **Objected Oriented Design for Compiler Construction**  
December 4 Speaker: Dr. David Boddy, Oakland University  
Time: 5:30 - 7 p.m.  
Location: Dodge Hall room 237 at Oakland Univ.  
Sponsor: Chapter V: Computer  
Contact: Dr. Subra Ganesan, 810-370-2206,  
[ganesan@oakland.edu](mailto:ganesan@oakland.edu)

Thursday Topic: **Automatic Parallelization of Scientific and Engineering Programs**  
December 12 Speaker: Dr. Vipin Chaudhary  
Time: 6:00 p.m. on December 12  
Location: 1500 Engg. Building, Wayne State Univ.  
Sponsor: Chapter V: Computer  
Comments: See article on page 4.  
Contact: Syed Mahmud, 313-577-3855  
[smahmud@ece.eng.wayne.edu](mailto:smahmud@ece.eng.wayne.edu)

Monday Meeting: **Executive Committee**  
January 6 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

Monday Tour: **Driver Training System, Virtual Reality - Training & Simulation**  
January 27 Time: 5 - 7 p.m.  
Location: FAAC Inc., 825 Victors Way, Ann Arbor  
Sponsor: Chapter V: Computer  
Comments: See article on page 4.  
Contact: Paul Nelson, 313-769-1408  
[ir000135@mindspring.com](mailto:ir000135@mindspring.com)

#### **Member IEEE Accomplishments**

If you know of an IEEE/SEM member with recent accomplishments in IEEE related activities or publications, send a message to [m.hunter@ieee.org](mailto:m.hunter@ieee.org) or call Mark Hunter at 313-453-0800.

# **the talbot corporation**

11887 Belden Court  
Livonia, MI 48150  
(313) 261-3440

Members:  
IEEE, NECA, IBEW, IAIE

*Specializing in :*

- Commercial and Industrial Electrical Construction
- Standby Emergency Generating Systems
- Uninterruptible Power Supply (UPS) Systems
- Computer Room Electrical Distribution Systems
- X-Ray Equipment Installations for Hospitals and Clinics

**Please Contact: Stephen W. Talbot, P.E. Vice President**

**Chapter Plans Active Year**

*by Dr. Ken Rao, Chapter Chair*

Greetings IEEE members! I wish to thank you all for again electing me the chapter chair of Vehicular Technology. Please also welcome my fellow IEEE officers and our Assistant Chair



Kyle Williams. I am looking forward to working with these officers and planning an exciting year of activities.

Looking back over the past three years, I submit to you that you have contributed your valuable time and expertise to present outstanding technical seminars at our meetings. The technical issues of vehicular technology are closely related to automotive electronics, automotive manufacturing, and management. We started out on hybrid vehicle technology in 1994, automated navigation in 1995, and automated highway system in 1996.

For 1997 we plan to return to topics on intelligent transportation system (ITS) in close association with SAE (Society Of Automotive Engineers). I invite you to kindly contact me at 810-952-1628, krao@ccgate.hac.com, or Kyle Williams at 810-589-9930, KyleWW@aol.com, to express your interest and suggestions for improving the quality of our chapter meetings as suggested by our Past Section Chair Dave McKendry. I also request you to help me with your valuable suggestions on future speakers and seminar topics of interest. I invite volunteers to help us in our endeavors.

With the activities in automated highway systems, electric vehicle navigation systems, and intelligent transport systems, in which I had the opportunity to participate, I expect many good technical presentations in our chapter. We have the good fortune to invite Mr. Stephen Stonestreet, head of NAO for Electrical Engineering, General Motors, to speak on electrical engineering strategy and management planning for automotive electronics, as our Chapter II speaker. We hope to do very well in our coming year by taking active part in IEEE vehicular electronics in all areas: design, manufacturing, and management. Thank you.

**Automatic Parallelization Presentation**

*by Dr. Syed Mahmud*

The Computer Chapter will host a presentation on the environment for automatic parallelization (APE) of scientific and engineering applications on distributed memory computers. The meeting will held in the 1500 Eng. Building at Wayne State University at 6:00 p.m. on Thursday, December 12, 1996.

APE integrates compile-time and run-time parallelization techniques, focusing on loops with coupled subscripts. Coupled subscripts lead to irregular loops, which account for nearly half of all loops in scientific and engineering computations. Techniques based on convex hull theory will be shown to extract hitherto unavailable parallelism at compile-time. New run-time algorithms will be presented which can handle any type of loop-carried dependencies. Experimental results on Cray J916 and a Sun symmetric multiprocessor will be used to show the effectiveness of the above techniques. Development of the prototype APE will also be discussed.

Vipin Chaudhary received a B. Tech (Hons.) degree in Computer Science and Engineering from the Indian Institute of Technology, Kharagpur, in 1986, a master's degree in Computer Science, and a doctorate in Electrical and Computer Engineering from

the University of Texas at Austin, in 1989 and 1992, respectively.

He is currently an Assistant Professor of Electrical and Computer Engineering, an adjunct Assistant Professor of Computer Science, and the Director of the Parallel and Distributed Computing Laboratory, Wayne State University where he currently directs research of eight graduate students. From January 1992 to May 1992, he was a postdoctoral researcher with the Computer and Vision Research Center, the University of Texas at Austin. His current research interests are in the areas of parallel and distributed systems, particularly parallelizing compilers and run-time support systems for scientific computing; resource allocation, load balancing, and scheduling; computer architecture; computer vision; and biomedical engineering. His research has been supported by NSF, US Army, IBM, Ford Motor Company, General Motors Corp, and Cray Research, Inc. Dr. Chaudhary was awarded the President of India Gold Medal for academic excellence in 1986 and the NSF Research Initiation award in 1993.

Contact Dr. Syed Mahmud at 313-577-1101 or smahmud@ece.eng.wayne.edu for reservations.

**Virtual Reality Training Tour**

*by Paul Nelson*

The Computer Chapter has arranged for a tour and demonstration of FAAC Incorporated's Driver Training System (DTS). The DTS evolved from the TT150, the world's first tractor/trailer driver training system. The DTS sets even higher standards with simulator-based training, which now includes programs for buses, police cars, and automobiles. The Driver Training System provides real-time simulation economically at costs far below that of traditional simulator technology.

FAAC is a world leader in the research, analysis and development of simulation for complex training tasks. Founded in 1962, the company has its roots in advanced technology training software and hardware for the

military. FAAC provided systems to the U.S. Air Force and Navy Aviation Group for such programs as 'Top Gun', 'TACTS' (Tactical Aircrew Combat Training System), and 'SOFATS' (Special Operation Forces Aircrew Training System). Of particular note is FAAC's participation in the development of decision-support software for onboard computers used by fighter pilots in actual air combat dog-fights during the Gulf War.

The tour will be conducted on January 27 from 5:00 - 7:00 p.m. at FAAC Inc., 825 Victors Way, Ann Arbor. Contact Paul Nelson at ir000135@mindspring.com or 313-769-1408 for directions or more information.

*The Computer Chapter has an additional article on Page 7.*

## IEEE/SEM Section Pasture Article

by David G. McKendry

Section Past Chair... Section Pasture. Is there a coincidence in the similarity of these titles? This is supposed to be the position all volunteers strive to achieve, where we can relax and reflect on our IEEE "career." Yet once I "arrived," I found out that I am in charge of the Awards Committee, the Nominations Committee, and also responsible for crafting some meaningful words of wisdom for the membership for a ~~Pasture~~ Past Chair article for *Wavelengths*. I haven't even received my first retirement check yet or taken that vacation to Hawaii like all Past Chairs (that's what they told me to convince me I had to be an IEEE/SEM officer).

Before anyone starts an investigation into the section officers' compensation packages, let me get serious for a moment and tell you that you won't find any paper trail of money or gifts to these volunteers. Their "pay" is of a different kind which is ultimately more satisfying: personal accomplishment and self satisfaction in building an excellent organization, planning interesting (some would say provocative, but engineers don't use words like that) programs, and recognition by their peers for these accomplishments.

As I became active at the chapter level back in 1986 as the Computer Society Chair (and only officer at that time), my primary focus was to develop programs and technical meetings that you would want to attend. As more officers began to crowd into the Computer Society, I escaped into the series of section officer positions and tried to contribute some improvements to how each position functions. All along the way I have come to know some very talented and committed people as fellow officers of the IEEE/SEM Section and have developed a lot of respect for them. I, as well as many of them, have also been more active in the regional, national, and societal organizations, which is definitely a plus because most of the people involved at that level seem to have little or no section or chapter experience.

As you probably realize, this seems to cause a slow but steady turnover within the section and chapter officers which is both good and not so good. The good part is the local stability that comes with having continuity from year to year which also keeps experienced volunteers in place. The not so good part is that it also tends to let us reach a comfort level at which we do not always operate at our creative peak. The current slow turnover has added some new people recently with some very good ideas as well as lots of enthusiasm. This also tends to rejuvenate the rest of the group and so progress continues.

So what does this all mean? Well, I think it means that getting new people involved is one of the best things we can do for our section's growth and vitality. You probably see columns written in *Wavelengths* from time to time encouraging more of you to get involved and volunteer, and I didn't want this to be another one because the response is usually negligible. But I do want you to consider what this section is all about and how it could be different if only it would ... (insert your ideas here) .... The engineering profession has been generally very good to me, and to you as well, I presume. I think is important to give something back so that engineering can continue to be the respected (though often misunderstood) profession that it

is. Think of the feeling you would have if your example saved one student from going into business administration.

I know that the IEEE/SEM Section could be doing so much more if we had more people involved. For example, our professional activities or educational activities could be expanded significantly by having someone take on some specific area to focus on such as the GOLD (Graduates Of the Last Decade) program to concentrate on getting and keeping more younger members, or a program to focus on enlightening pre-college students to the particulars of an engineering career. There are more examples of areas we should be more proactive in than I care to mention. And while we do have directors responsible for these areas, they are usually spread too thin already and would like nothing better than to add someone to their committee who wants to tackle a specific challenge such as those just mentioned.

There are plenty of programs in the making to go around. I hope you decide to get involved if you are not doing so already. Contact any one of the section officers that has an area you would like to help out, or call me if you want to talk about possible involvement. Consider running or nominating someone for an elected position. Who knows, maybe someday you could be in the same elite group in which I find myself in today - a Pasture. Meanwhile, I am now closing in on the real prize position: Post-Pasture.



### Electromagnetic Test, Analysis & Consulting

The Eaton Detroit Center provides OEMs and suppliers worldwide with full-service test and analysis capability in more than 50 vehicle technologies, including the following electromagnetic test, analysis and consulting services:

- **New Product Test, Evaluation, Problem Resolution, Validation, and Standards Certification**
- **Evaluation of Materials Shielding**
- **Customer-Site Problem Analysis and Resolution**
- **In-Plant Power Quality Analysis**
- **NVLAP/NARTE Certified**
- **Consulting on EMC and Power Quality Issues**
  - **New Product Concepts**
  - **Existing Product**
  - **Specifications**
  - **Revisions**
  - **Test Plans**
  - **Re-Designs**

Eaton has earned more customer quality awards than any peer, and the first-ever *SAE Henry Ford II Distinguished Award For Excellence In Engineering* ... Find out why! For more information on laboratory hours and how we can support your test and developments programs, call **Kimball Williams at (810) 354-2845**.

Eaton Corporation  
Corporate Research & Development  
26201 Northwestern Highway  
Southfield, MI 48037



# PACE Conference Report

by Mark Hunter & Sandy Hunter

Three IEEE/SEM members attended the 1996 IEEE PACE Conference over Labor Day weekend in Phoenix. Dave McKendry represented the Computer Society (the international group, not the local chapter). Mark Hunter and Sandy Hunter represented the IEEE/SEM section.

PACE stands for Professional Activities Committees for Engineers.



PACE is a grassroots network of IEEE volunteers and committees organized at the section and chapter level in the United States with support from their respective regions and the United States Activities Board. The PACE Network promotes the professional interests of IEEE's US members and provides a mechanism for communication of members' views on their professional needs.

The theme for this year's conference was "the proactive engineer." The conference focused on ways for engineers to be proactive in managing their careers, balancing work and personal life, participating in government decisions affecting technology and careers, encouraging youth to pursue engineering careers, and educating society about technology and engineering. Sessions at the PACE conference covered a wide variety of topics including: mentors, negotiating, personal finance, job-hunting on the Internet, networking, telecommuting, early retirement decisions, impact of proposed government regulations, professional licensure, careers in consulting, and ethics.

One of the new IEEE programs announced at the conference was Graduates of the Last Decade (GOLD). GOLD is targeted at members who have graduated from college in the last 10 years. Sections can implement GOLD programs by conducting social and professional meetings targeted at young professionals. Social meetings help members to develop networks of business contacts. They can also assist members who have recently moved to the area in developing roots here. Meetings on professional topics provide strategies for advancing members' careers. Sections benefit by increasing retention of young members in IEEE and by developing new IEEE volunteers and leaders. Other sections have held successful social meetings at bars, cybercafes, comedy clubs, and sporting events. The approximately 60 young professionals at the 1996 PACE conference, including Sandy Hunter, are part of an email distribution list, which allows exchange of ideas for GOLD programs.



IEEE-USA displayed the Career Asset Manager (CAM) tool at the conference. CAM was developed to help members track job

information so that complete and accurate resumes can be created easily, determine their career goals, and plan steps to achieve their goals. The tool has 3 parts: CAMinfo, CAMindex, and CAMplan. CAMinfo contains information about career issues and options that will encourage and motivate you to do more planning. CAMindex is a handy structured format to help you keep your records and generate up-to-date resumes. CAMplan is a step-by-step action plan for personal professional development. If your company does not provide a career management tool, the IEEE CAM tool can help you manage your career proactively. The IEEE/SEM section is considering selling CAM tools to members at a discount.



A portion of the official dialog and general conversations dealt with politics within IEEE and the impending re-organization of IEEE. Vijay Bhargava and Joseph Bordogna, the candidates for 1997 IEEE President-Elect, were present for a candidates' forum luncheon. The courteous debate between the two candidates did not show the same rivalries present in the other major political election this year but rather showed common goals for the future of IEEE. Many other executives and staff were available for questions and general discussions throughout the conference.

Several of the programs that were described at the conference would benefit and interest members of IEEE/SEM if implemented locally. GOLD, CAM, and member professional activities conferences (M-PACs) offer numerous ways to give our members value from their IEEE membership. Contact Don Silversmith, 313-577-3861 or silversm@dbo.eng.wayne.edu, to voice interest in any of the above items or to offer your help in organizing professional activities. If you'd like additional information about the PACE conference, contact:

<b>Mark Hunter</b> 313-453-0800 m.hunter@ieee.org	<b>Dave McKendry</b> 810-257-8868 d.mckendry@computer.org
<b>Sandy Hunter</b> s.e.hunter@ieee.org	



**Photos:** Information was freely exchanged throughout the conference. Informative displays (Top Left) and on-line systems (Top Right) were located in a central area. Sessions provided a structured presentation of topics (Center) with informal discussions following most sessions (Lower Right). Attendees utilized breaks to network with other members and exchange ideas (Lower Left).

**Top Left, Top Right & Center photos courtesy of Chris Currie, IEEE-USA**

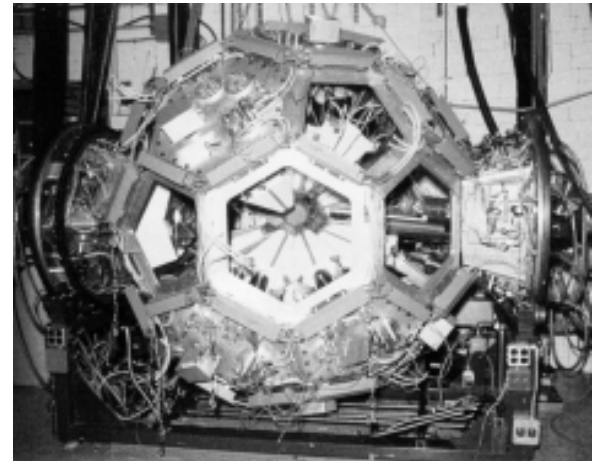
## High Energy Tour

by Charles Severance

The IEEE/SEM Computer Chapter sponsored a tour of the National Superconducting



Cyclotron Laboratory at Michigan State University on October 9, 1996. The group toured the K500 and K1200 superconducting cyclotrons. In addition they visited a number of the detector rooms where the high-energy particles collide with the targets and the results of the collisions are measured. The group viewed a video tape of how a superconducting cyclotron operates.



**Above:** Video picture of collision between nuclei, resulting fragments emerge at many different angles. **Right:** The 4p Array is a multi-particle detector array capable of identifying particles emitted in any direction from a target positioned in the center of the 6 foot "soccer ball".

## October IEEE/SEM Executive Committee Meeting Report

by K. C. Liu, IEEE/SEM Secretary

The third IEEE/SEM Executive Committee meeting of the 1996-97 year was held on Tuesday, October 8 at Eaton Corporate Research and Development facility in Southfield, Michigan. Sixteen people attended the meeting, presided over by Section Chair David Horvath.

- The Treasurer's report was approved. J. Woodyard also reported that the IEEE financial director requires signature authority on the section UM Credit Union account. It will be inconvenient to submit the signature cards to comply with this requirement due to the geographic remoteness of the credit union.
- S. and M. Hunter presented plans for the November and January *Wavelengths* issues, tips for preparation of articles, budget status, the addition of a new advertiser, and ways of soliciting more advertisements.
- P. Shrivastava briefed the Executive Committee on the progress of the establishment of an Engineering Management chapter. Presently the Engineering Management Society has 70 members in IEEE/SEM Section.
- C. Clayborn submitted a written report on Fall Section Meeting. The preparation for the Fall Section is in progress. So far there are 25 people signed up for the meeting.
- D. Silversmith submitted a written report on two subjects. First, two job fairs are coming up with IEEE/SEM Section's commitment of support. However, there is no support from any of student branch so far. Secondly, nearly 60 solicitation packages have been sent out for student attendee initiative and vendor tables. He had received some confirmations for vendor tables but none for the former.
- M. Hunter received the IEEE/SEM membership database update with about 45 new members and 50 members lost. The section currently has about 3740 members. He has also received membership applications. He proposed some volunteer positions for the following tasks: Volunteer Contact, GOLD Program Coordinator, CAM Program Coordinator, Public relations Contact, Arrears Contact Coordinator, Recent Student/Address Verification Contact Coordinator. He is also considering ways to help members applying for senior grade to network with senior members to obtain required references.
- M. Zohdy reported that the Student Session in the Fall Section Meeting is in good shape and relayed the preference expressed by the student sections to having faculties, engineers and professionals as the speakers for their meetings. He also suggested acknowledging graduating students at section meetings.
- D. Bramlett played a short video on last year's Future City Competition before the EC meeting. He reported that he has received responses from volunteers to serve as judges and mentors in the 1997 Future City Competition. He still seeks volunteers for this year's Detroit Science Fair. He also attended ESD opening Business Committee meeting. As regional Education Activities Director, he attended the Region 4 meeting in Minneapolis, Minnesota. He confirmed that the region will subsidize \$500 for SEM Section in attending the Sections Congress in November.
- B. Harrington reported that the Power Engineering Utility Show at Los Angeles was a failure this year. It attracted much smaller crowd than previous years. He also reported that Chapter VII will have a concurrent technical meeting in the Fall Section Meeting.

- R. Desoff submitted a written report which stated Chapter III will have an administrative meeting in the week following the EC meeting and will have a technical meeting at Fall Section Meeting. The chapter will also have a joint dinner meeting with American Nuclear Society on November 14.
- N. Al-Holou reported that Chapter V: Computer will have one concurrent technical meeting in Fall Section Meeting in October, and another in November. In addition, there is also a meeting of short notice on Thursday, October 10 with the title: "Commerce on the Internet" by Dr. N. Borenstein of First Virtual Holdings, Inc.
- K. Williams reported for Chapter VIII: EMC that there was an interesting magic demonstration by Dr. T. Van Doren of Univ. of Missouri-Rolla in the meeting on October 2. The chapter will also hold a technical meeting in the Fall Section Meeting.
- C. Severance reported that he is searching for a computer to be installed at Michigan State University and designated as a dedicated server for IEEE/SEM Section & other society web pages. He will receive the updated IEEE/SEM web page from J. Allen.
- D. Horvath reported National Radar Conference will return \$5,000 of seed money that the section had loaned toward the conference. At this time, the conference estimates a surplus of \$18,000 to \$20,000. IEEE/SEM Section will receive it's share when the finances are finalized.
- K. Liu gave an account of chapter meeting report status. He also brought up the issue of several EC members who could not attend meetings due to the conflict with the work schedules. EC Meeting were moved back to Mondays.

Next Executive Committee meeting will be held on  
Monday, November 11.

### FCC Class A and B Testing of Computing Devices and Systems

Radiation Laboratory  
University of Michigan  
(313) 764-0500

*Fast, accurate, local testing for  
compliance with FCC Regulation Part 15  
Subpart J.*

## Neuro-Fuzzy Computing and Applications Workshop

This workshop will focus on a balanced and introductory presentation of key design methods, recent innovations, and will also involve the integrated use and investigation of effectiveness in timely automotive as well as manufacturing system applications.

### Topics

- Neural Computing Paradigms
- Fuzzy Sets and Logic
- Design Methodologies and Automotive Applications
- Applications to Control Complex Systems
- Computational Tools: Software (e.g., Matlab toolbox)
- Computational Tools: Hardware (e.g., MicroController, DSPs)

The presenters are scientists conducting research and making contributions in academia and industry. The organizers believe the workshop to be a valuable outreach effort and forum in connecting the local scientific and engineering communities.

The workshop will be held on Saturday, November 16 from 8:30 a.m. to 5:30 p.m. The location is Meadow Brook Hall, Oakland University, Rochester, Michigan. Tuition is \$150 per person, and advanced registration is required. Contact Dr. M. A. Zohdy, 810-370-2234, zohdyma@oakland.edu, for information and registration.

### Co-Organizers

- Prof. M. A. Zohdy,**  
Oakland University, ESE Dept
- Prof. Fathi M. Salam**  
Michigan State University, ECE Dept.

## The Plans for 1997 National Engineers Week are on Track

### That Computer Science Humor... by Charles Severance

When giving a talk to the MSU IEEE Student Branch regarding his career choice of Computer Science, local member Charles Severance opened with the following:

#### Top Ten Reasons to Choose Computer Science over Electrical Engineering

10. No Lagrange Transforms
9. No Fourier Transforms
8. Every three years the whole field is discarded and we start over
7. Easier to figure out Bill Gates than Mother Nature
6. No need for safety glasses
5. None of those nasty solder burns
4. Don't even care what RLC stands for
3. Don't actually have to use differential equations
2. One in a million chance to create a product and become a millionaire and you don't even have to buy a lottery ticket

#### *And the Number one reason is:*

1. If you flunk out, you can always become a highly paid webmaster

See "NEW 1997 Puns & Fun!!" on page 1 to get your top ten list published in *Wavelengths*. Even if you don't have ten items, send us what you have and we'll pick the best top ten.

Look for more information about National Engineers Week in the January issue of *Wavelengths*!

## 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, PAUWELS Liquid Filled Transformers, SOLIDSTATE CONTROLS UPS Systems, SOUTHERN STATES HV Switches, UNIBUS Bus Duct Systems.

For Technical Information : P(313) 513-0330 F(313) 513-0335



*Pioneers in Research & Technology since 1946*

Environmental Research Institute of Michigan  
P.O. Box 134001, Ann Arbor, MI 48113-4001  
(313) 994-1200