



## Greetings from the Chair!

by George Peters, IEEE/SEM Chair

I wish to thank all members for electing me to the position of Section Chair. Last program year truly showed signs of the section's progress. Under David Horvath's leadership, the section has seen many changes. K.C. Liu was instrumental in encouraging chapters to conduct numerous meetings, well surpassing the mandatory number required for receiving a section rebate. The Fall and Spring Section Meetings were great successes, each having over 100 attendees. Ford and General Motors have been extremely accommodating in providing use of their facilities, which has allowed the section to work well within its operating budget. Don Silversmith continues to succeed in involving vendors and sponsors to participate in section meetings. As treasurer, Jim Woodyard led a subcommittee that addressed the problem of the section's degraded earning potential. One action item implemented was the reservation of section funds as seed money for major conferences.



I would like to congratulate all the award recipients who were recognized at the Spring meeting. The awards stemmed from the section, regional, and international

levels of the IEEE. A special award was given to Vikas Sinha for his outstanding endeavor in organizing a Student Leadership Conference at Wayne State University in April. As an attendee, I can attest that it was run effectively with well-selected motivational speakers.

As 1997-98 Section Chair, I have several goals. The first involves enticing more Windsor members to become active in section activities. In June, the executive committee held its first meeting in Canada at the University of Windsor thanks to the efforts of Tarrek Lahridi. The section's international essence might become more apparent if one or two meetings were held in Windsor each year. This might pique the interest of more Windsor members.

Secondly, I invite at least one active student branch member, preferably a senior, to executive committee meetings. This gives the students an opportunity to witness the section level IEEE operation and might lead to section involvement after graduation. On a related note, I encourage all student branches to inform the Director of Student Activities, Dr. M. Zohdy, of any major activities planned. The section may be able to assist in these events by providing funding, guest speakers, or other help.

**Continued on Page 6**

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## Fall Section Meeting Featured Speaker October 16, 1997

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### Automotive Information Integrated Engineering

by Dr. William F. Powers, Vice President - Research, Ford Motor Company

Global automotive companies are relying increasingly upon integrated computer and communications technology to deal with a rapidly changing global marketplace. The major business drivers are product development speed and efficiency, emerging markets, and technology. Utilizing the typical automotive business timeline, examples will be presented to illustrate the application and integration of emerging information technologies to the total automotive business. In particular, examples of virtual co-located teams, engineering data management, CAD/CAM/CAE, the roles of the Internet and Intranet will be covered.



William F. Powers has been with Ford Motor Company since 1979. On February 1, 1996, he was elected Vice President-Research. Prior positions at Ford include: Program Manager for the Lincoln Mark VIII and Executive Director of Information Technology. Before joining Ford, he was a Professor of Aerospace Engineering and Computer, Information and Control Engineering at the University of Michigan from 1968-90, and a consultant on the Space Shuttle Program from 1970-79.

He received his bachelor's degree in Aerospace Engineering in 1963 from the University of Florida, and his doctorate in Engineering Mechanics in 1968 from the University of Texas at Austin. He is a member of the National Academy of Engineering, a foreign member of Royal Swedish Academy of Engineering Sciences, an IEEE fellow, and serves on numerous government, university, and professional society committees. *See meeting announcement on page 3*

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- V Computer:** Computer (C-16)
- VI Geoscience & Remote Sensing:** Geoscience & Remote Sensing (GRS-29)
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- IX Power & Ind. Electronics:** Power Electronics (PEL-35) and Industrial Electronics (IE-16)
- X Engineering Management:** Eng. Management (EM-14)

### CO-EDITORS

Wavelengths	Sandy Hunter	Mark Hunter
	EDS, Mail Stop 301A 5555 New King St. Troy, Michigan 48098 248-696-9816 s.e.hunter@ieee.org	Link Engineering 43855 Plymouth Oaks Blvd Plymouth, Michigan 48170 313-453-0800x3138 m.hunter@ieee.org

### PRINTER

Progressive Printing  
1326 Goldsmith  
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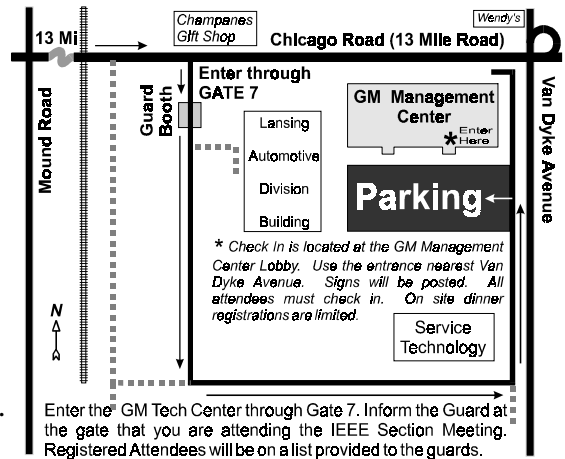
## Calendar of Events

- |                                      |  |  |
|--------------------------------------|--|--|
| <p>Tuesday<br/>August 26</p>         | <p>Tour:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:</p>                                 | <p><b>Tank Automotive Command Center</b><br/>9:00 - 11:15 a.m.<br/>Ann Arbor<br/>Chapter X: Engineering Management<br/>Call Prakash Shrivastava at 810-986-2206 or Steve Kishok at 810-574-5006 for registration.<br/>Pre-registration is required.<br/>Tour is open to IEEE members who are U.S. citizens.</p>                              |
| <p>Tuesday<br/>September 2</p>       | <p>Meeting:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:<br/>Comment:</p>                 | <p><b>Executive Committee</b><br/>Dinner at 6 p.m., meeting at 6:30 p.m.<br/>Eaton Corp., 26201 Northwestern Highway, Southfield<br/>IEEE/SEM<br/>Kimball Williams, 248-354-2845<br/>Date was tentative at press time.</p>   |
| <p>Thursday<br/>September 4</p>      | <p>Title:<br/>Speaker:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:</p>                   | <p><b>Artificial Intelligence &amp; Workflow Management Systems</b><br/>Dr. Sofiane Labidi, Professor, Brazil<br/>5:30-6:30 p.m.<br/>Room DHE 238, Dodge Hall, Oakland University, Rochester<br/>Chapter V: Computer and Oakland University<br/>Prof. Subra Ganesan, 248-370-2206,<br/>ganesan@oakland.edu</p>                               |
| <p>Mon.-Wed.<br/>September 15-17</p> | <p>Event:<br/>Location:<br/>Sponsor:<br/>Comment:</p>  | <p><b>17<sup>th</sup> Conference on Advanced Research in VLSI</b><br/>University of Michigan North Campus, Ann Arbor, Michigan<br/>IEEE Electron Device Society<br/>Registration and information will be continuously updated at <a href="http://www.eecs.umich.edu/arvlsi">www.eecs.umich.edu/arvlsi</a></p>                                |
| <p>Monday<br/>October 6</p>          | <p>Meeting:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:</p>                              | <p><b>Executive Committee</b><br/>Dinner at 6 p.m., meeting at 6:30 p.m.<br/>Eaton Corp., 26201 Northwestern Highway, Southfield<br/>IEEE/SEM<br/>Kimball Williams, 248-354-2845</p>   |
| <p>Thursday<br/>October 9</p>        | <p>Meeting:<br/>Speaker:<br/><br/>Title:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:</p> | <p><b>11<sup>th</sup> Hammerle Memorial Lecture</b><br/>Dick Rutan, former USAF fighter pilot and current aircraft company executive<br/>Around the World in 9 Days (One World, One Flight)<br/>3:30 p.m.<br/>Room 201, Dodge Hall, Oakland University, Rochester<br/>Oakland University<br/>For further information, call 248-370-2212.</p> |
| <p>Thursday<br/>October 16</p>       | <p>Meeting:<br/>Time:<br/>Location:<br/>Sponsor:<br/>Contact:</p>                              | <p><b>Fall Section Meeting</b><br/>5:45-9:00 p.m.<br/>GM Management Center, Warren, Michigan<br/>IEEE/SEM<br/>K.C. Liu, 248-265-6964,<br/>kliu01@cae.atg.gmeds.com</p>   |

Updated Calendar Items and additional reports on section and chapter activities may be found on the World Wide Web!

# IEEE/SEM Fall '97 Meeting Announcement

Guest Speaker: Dr. William F. Powers, VP-Research, Ford Motor Co.  
 Topic: Automotive Information Integrated Engineering  
 Date: Thursday, October 16, 1997  
 Location: GM Management Center, 30901 Van Dyke Ave, Warren, Mi  
 5:45 p.m. Concurrent technical sessions (see registration form).  
 6:30 p.m. Social period with cash bar begins.  
 6:30-7:15 p.m. Registration and check in  
 7:20 p.m. Dinner.  
 8:00-9:00 p.m. Introductions and featured presentation.  
 Reservations: Mail registration form from page 7 by October 6.  
 Late registrations accepted by phone from October 6-10.  
 Students must register through their student branch.  
 There is no fee for attending technical sessions only.  
 Contact: K. C. Liu, 248-265-6964



**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).

## Chapter X: Engineering Management

by Prakash Shrivastava

### Lean Thinking

At the March 26, 1997, chapter meeting, Dr. D. Rajamani made a presentation on the topic of "Lean Thinking in Product Development." Dr. Rajamani briefly discussed the lean production pioneered by Toyota, which has shown that there is a better way to organize and manage customer relations, product development, production operations and the supply chain. The focus of lean production is to "eliminate waste." Lean thinking extends the ideas of lean production but focuses on "value" and "perfection." The speaker presented the principles of lean thinking and their application with emphasis on product development. He also introduced an implementation plan for a lean enterprise.

## Chapter V: Computer

### Real-time Simulation Seminar Report

by Nizar Al-Holou, IEEE/SEM Computer Chapter Chair

The Computer Society held a seminar on "Recent advances in real-time simulation with HIL used in dynamic system design" on Monday, June 16, 1997, at 5:00 p.m. at the University of Detroit Mercy. The speaker, Maurice Snyder, is Director of Asia Marketing at Applied Dynamics International, Inc. The session was sponsored by IEEE/SEM and the University of Detroit Mercy.

A full report is posted on the section's web site.

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### Upcoming Tour of TACOM

A tour of TACOM has been scheduled for August 26, tentatively from 8:55 to 11:15am. TACOM stands for Tank Automotive Command Center and belongs to the Department of Defense. Steve Kishok secured the sponsorship of Dr. Richard McClelland, Executive Vice President, Business Group of TACOM.

This tour is open to IEEE members who are U.S. citizens.

**Pre-registration is required.** Please call Prakash Shrivastava at 810-986-2206 or Steve Kishok at 810-574-5006 for registration.

The tour will illustrate management techniques for software development, validation, testing, and project management. A tank can be considered a special purpose automobile. Since only a few are built, it requires a lot of design and computer simulation. TACOM uses "virtual prototyping" technology and computer simulation to develop battle scenarios that test the effectiveness of the tank. The "wargaming" part of the tour will demonstrate the battle scenarios. All of this requires considerable software development, validation and testing. It also uses project management techniques.

A complete tour agenda is posted on the IEEE/SEM web site.

### 17th Conference on Advanced Research in VLSI September 15-17, 1997

Southeastern Michigan (Univ. of Mi. North Campus, Ann Arbor) will be the site of the 17th Conference on Advanced Research in VLSI, co-sponsored this year by IEEE's Electron Device Society. The conference is a forum for interdisciplinary research with an emphasis on novel ideas at an early stage of development. Look on-line for full details or review the 1997 May/June issue of *Wavelengths*.

**Program Chair:** Richard B. Brown, brown@engin.umich.edu  
 University of Michigan, 2403 EECS - 1301 Beal Ave.,  
 Ann Arbor, MI, 48109-2122, ph/fax: 313-763-4207/9324.

**Publications:** Alexander Ishii, alex@cctl.nj.nec.com  
**Local Arrangements:** Trevor Mudge, tnm@eecs.umich.edu  
**Treasurer:** Marios Papaefthymiou, marios@eecs.umich.edu

Registration and other information will be continuously updated at:  
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## Section Officers

### Chair



**George Peters**  
St. Clair College  
O: 519-966-1656 x4447#  
H: 519-972-9907  
Fax: 519-966-3533  
GPeters@stclairc.on.ca

### Vice Chair



**Kung C. Liu**  
EDS  
O: 248-265-6964  
H: 810-656-0341  
Fax: 248-265-0574  
kliu01@cae.atg.gmeds.com

### Secretary



**James Woodyard**  
Wayne State Univ.  
O: 313-577-3758  
H: 313-563-3186  
Fax: 313-577-1101  
woodyard@eng.wayne.edu

### Treasurer



**John M. Miller**  
Ford Motor Co.  
O: 313-322-7486  
H: 313-429-2877  
Fax: 313-323-8239  
jmille24@ford.com

### Past Chair



**David Horvath**  
Advent Eng. Services, Inc.  
O: 313-930-7500  
H: 313-426-8452  
Fax: 313-741-9370  
d.horvath@ieee.org

## Section Directors

### Professional



**Donald Silversmith**  
Wayne State Univ.  
O: 313-577-3861  
H: 248-352-1421  
Fax: 313-577-5300  
silversm@dbo.eng.wayne.edu

### Membership



**Mark Hunter**  
Link Engineering  
O: 313-453-0800  
H: 248-588-0355  
Fax: 313-453-0802  
m.hunter@ieee.org

### Technical



**Diane Rover**  
Michigan State Univ.  
O: 517-353-7735  
H: 517-347-1228  
Fax: 517-353-1980  
Rover@ee.msu.edu

### Educational



**Ece Yaprak**  
Wayne State Univ.  
O: 313-577-0875  
H: 313-994-0550  
Fax: 313-577-1781  
yaprak@ozric.eng.wayne.edu

### Student



**Mohamed Zohdy**  
Oakland Univ.  
O: 248-370-2234  
H: 248-375-9159  
Fax: 248-370-4261  
zohdyma@vela.acs.oakland.edu

## Wavelengths

### Editor



**Sandra Hunter**  
EDS  
O: 248-696-9816  
H: 248-588-0355  
s.e.hunter@ieee.org

### Senior Past Chair



**David McKendry**  
General Motors  
O: 810-257-8868  
H: 248-258-6595  
Fax: 810-257-8230  
d.mckendry@computer.org

### Section Advisor



**Don Bramlett**  
Detroit Edison  
O: 313-235-7549  
H: 313-525-5422  
Fax: 313-235-5180  
d.bramlett@ieee.org

### Section Support



**Satyendra N. Basu**  
Detroit Edison  
O: 313-235-6523  
H: 248-524-0058  
Fax: 313-235-8597  
BasuS@detroitiedison.com

## Administrative



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## Obituary for John H. Bryant, Former IEEE/SEM Chair



John H. Bryant, 77  
Omni Spectra Founder  
Electronics Historian

John H. Bryant, a pioneer in the miniaturization of microwave systems and recipient of the 1996 MTT-S Microwave Career Award and the 1997 AESS Pioneer Award, died at his home in Ann Arbor, Michigan on June 10, 1997. He was an IEEE Fellow and two term chair of the Southeastern Michigan Section.

The Aerospace and Electronic Systems Society notified him

before his death that he is the recipient of its 1997 Pioneer Award. He shares that award with James Cheal and Vincent McHenry, with whom he founded Omni Spectra, Inc. (now part of AMP, Inc.) in 1962 to design, engineer, and produce miniature coaxial microwave components and connectors that became industry standards. World War II technologies then existent could not meet requirements for radars to fit inside space vehicles. Omni Spectra designs achieved weight and size reductions of 10:1 with improved electrical performance that opened use of the microwave spectrum to higher frequencies.

After retiring as Chairman of Omni Spectra in 1980, Bryant joined the Electrical Engineering and Computer Science Department of the University of Michigan, where he became a historian in radar, electromagnetics, and the work of Heinrich Hertz.

His citation for the 1996 Microwave Career Award was: "For leadership in the miniaturization of microwave circuits and interconnections, and for pioneer historical research on radar and the work of Heinrich Hertz." For the 1997 Pioneer Award, it is: "For contributions and leadership in the development of the technology that fielded the miniaturization and commercialization of the SMA RF coaxial connector series."

He served as an officer in the U.S. Army Signal Corps (1942-1946) in England and Europe in operational radar. Following graduate work, he joined IT&T Laboratories (1949-1955) and later Bendix Research Laboratories (1955-1962). There he organized and led efforts that resulted in the enabling technology for the first major step in microwave system miniaturization.

He was serving on the IEEE History Committee at the time of his

death. In the past he served on the Fellow Committee (1973-1975), the Heinrich Hertz Medal Committee (Chairman, 1988), as President of the Microwave Theory and Techniques Society (1970), and was a reviewer for the *Proceedings* for 1954-1962.

John Bryant served as Chair of the Southeastern Michigan Section during the 1970-71 and 1971-72 program years. He had been the Section Advisor for several years in the 80's and was responsible for the formation of the Geoscience and Remote Sensing Chapter in the IEEE/SEM Section. During his many years of service to the section, he inspired others to participate in IEEE. Jim Woodyard, current IEEE/SEM Secretary, remembered John Bryant this way:

*"As John Bryant's activities pulled him away from his service to the section, he felt a strong commitment to insure that volunteers were recruited to fill the void. He played an important role in convincing me to serve as editor of **Wavelengths** and become a member of the IEEE/SEM Executive Committee. ... Had it not been for John's encouragement, I am not sure that I would have become active with the section and benefited from the rewards of service to IEEE."*

Bryant holds a B.S. degree from Texas A & M University, and M.S. and Ph.D. degrees from the University of Illinois. He is the author of "*Heinrich Hertz, the Beginning of Microwaves*", journal articles, and holds 14 U.S. patents.

He is survived by his spouse Barbara Everitt Bryant of Ann Arbor, Michigan; two daughters, Linda Bryant Valentine of Hinsdale, Illinois, and Lois Bryant Chen of Lindenhurst, New York; a son Randal E. Bryant of Pittsburgh, Pennsylvania; and eight grandchildren.

Memorials are to go to the Historical Electronics Museum, PO Box 746, Mail Stop 4015, Baltimore, MD, or to the Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor, MI 48109-2122.

### Greetings...

*Continued from Page 1*

Other goals include the continuation of previously identified sources of improvements. Issues such as seeking corporate sponsorship of major IEEE/SEM events, supporting conferences, conducting cost effective section meetings, improving liaison with Region 4, continuing to monitor the membership database, and others are of paramount importance in order for the section to thrive.

I look forward to another great year of activities. Having served as an executive committee member for four years, I found the experience has been extremely rewarding and valuable.

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## IEEE/SEM Fall '97 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, 2206 Judy Lane, Shelby Township, Michigan 48316.**

Fee Type	Amount	Deadline
Early registration	\$25	Postmarked by 10/6/96.
Regular registration	\$30	Phone call to K. C. Liu, 248-265-6964, by 10/10/96.
Student registration	\$12	Register & pay through student branch.

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

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Indicate which technical session you wish to attend:

- Chapter I: Circuits & Signal Processing  
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- Chapter II: Vehicular Technology  
"Magnetostrictive Sensors"
- Chapter V: Computer  
"The Early Years of the Internet"
- Chapter VI: Geoscience & Remote Sensing  
"Present and Future Direction of National Remote Sensing Initiatives"
- Chapter VII: Power Eng. & Ind. Apps.
- Chapter IX: Power & Ind. Electronics  
"High Temperature Electronics: Needs and Challenges"
- Chapter X: Engineering Management  
"Concurrent engineering topic"
- Professional Activities Session  
"Career Issues to Monitor in A Global Economy"

### Volunteers Needed for Future City Competition by Don C. Bramlett, PE, IEEE/SEM Section Advisor

IEEE/SEM Section members are invited to participate in the fifth annual National Engineers Week (NEW) Detroit Regional Future City Competition. For this competition, a team of middle school students, with a teacher and an engineer as advisors, will take part in hands-on education as they design a "future city" by computer, produce a CAD representation, build a scale model, write an essay and present their project at the regional contest, and possibly the national competition in Washington, DC, during NEW. Engineers are needed to advise teams and to judge the local contest.

Volunteer engineers are needed to help teams of seventh and eighth grade students and their teachers to use a computer to design and model a city of tomorrow. As a volunteer engineer, you will share practical engineering skills such as teamwork, problem-solving, Computer Aided Design (CAD), and applied math and science.

A volunteer engineer will typically spend 18 to 24 hours, as an advisor to a team of students, from mid-October through the end of January. The Detroit Regional Future City Competition will be on Thursday, January 29, 1998, at the Henry Ford Museum in Dearborn, Michigan. The volunteer engineer for the winner of the Detroit Regional Competition will also accompany a three student team and the teacher advisor on a free trip to the national competition in Washington, DC during NEW, February 15-21, 1998.

The role of the volunteer engineer is to serve as a mentor to the students. The engineer may be involved in all phases of the project as an advisor to provide input and technical assistance. The students are to do all of the actual work.

A comprehensive Teacher/Engineer Volunteer Handbook is available, detailing contest specifics and providing answers to the types of questions that volunteer engineers may have. To receive this free handbook or to register as a volunteer engineer, call Maureen Simari of the Engineering Society of Detroit at 248-355-2910x112.



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**1996 Section Meeting  
Keynote Speaker in the News**  
*by Dave Horvath, Past Section Chair*

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Astronaut Mike Bloomfield, who was the keynote speaker at the Spring 1996 Section Meeting, will be the pilot on Shuttle Atlantis for Mission STS-86. Atlantis is scheduled to launch for a ten day mission on September 18, 1997. Highlights of this mission will include a rendezvous with Space Station Mir, delivery of astronaut Wendy Lawrence to the station, and return of Michael Foale to Earth after five months on Mir.

My spouse and I visited with Mike Bloomfield at the Johnson Space Center in Houston on May 30, 1997. He said that he will be responsible for orbiter systems during launch and entry as well as aiding in rendezvous and transfer activities. During our visit, Mike also asked that we pass on his regards to IEEE/SEM Section members and highly recommended that we monitor his crew's website [www.phoenix.net/~shuttle/](http://www.phoenix.net/~shuttle/) for up to date information on STS-86.

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