IEEE/SEM Fall ’00 Section Meeting

by Kimball Williams, IEEE/SEM Vice Chair

The IEEE/SEM Fall 00 Section meeting will be held the evening of October 25, 2000 at the Yazaki North America, Inc. located at 6801 Haggerty Road, 2896W in Canton. Parking is available in the parking lot immediately in front of the building. We are planning several technical sessions plus a student tract session for this meeting. Further details will appear in the registration form since some chapter chairs are still working on arrangements for speakers. The October issue of Wavelengths will contain the final program for this meeting. Advance registration is highly encouraged and to make this process easier for our membership we offer registration by major credit card. See the registration form on page 7 for details.

For many of our members a visit to the Yazaki facility will be a unique opportunity to visit this landmark architectural building. Staff from Yazaki have volunteered to conduct tours of the facility before the chapter presentations. Please contact me for details and to sign up for a tour of the facility.

Following the concurrent technical sessions, attendees will have an opportunity to visit several vendor displays and student branch exhibits. All displays and exhibits will be set up in the central building gathering area. This is adjacent to the social gathering and registration desk. A social break is planned and this year we will offer Hor’D’oeuvres (fruit and cheese) and cash bar (your choice, but tickets must be purchased in the registration area).

Please register to obtain entrance to the dinning room for dinner and the keynote speaker presentation. Registration will close immediately after the social break.

The featured speaker this year is Dr. Ken Laker, 1999 IEEE President. Dr. Laker will celebrate and reflect on the accomplishments of IEEE during 1999. He will also give an IEEE Past President’s view of the challenges and opportunities that lie ahead.

Dr. Laker received his B.E. degree in Electrical Engineering from Manhattan College, and his M.S. and Ph.D. degrees from New York University. In 1999 he received the Honorary Doctorate of Electronics and Computer Engineering from the Technical University of Crete, Chania - Greece. From 1973 to 1977 he served as a USAF officer at the Air Force Cambridge Research Labs. In 1977 he joined AT&T Bell Labs, where he conducted and managed R&D. He was appointed to the University of Pennsylvania faculty in 1984, as Professor and Chair of the Electrical Engineering Department. He served as Department Chair until the end of the 1992 academic year. In 1990 he was appointed the Alfred Fitler Moore Professor of Electrical Engineering. From 1997 - 2000 Dr. Laker was a member of the founding Board of Directors of the Engineering/Computer Science Program at the University of Pennsylvania.

By most accounts this IEEE fiscal year takes me into the 3rd millennium as section chair. This is definitely a privilege I will enjoy and it will be an honor to serve the membership in this capacity. Let us all look forward in anticipation of what should prove to be a very exciting and eventful year. We are now filling out our slate of speakers for the Fall section meeting and we are glad to have as keynote speaker the past president of IEEE. The section will also co-sponsor several conferences this year that will be nearby so I invite all to attend and use these opportunities to keep abreast of developments in your respective specialties. The 43rd Midwest Symposium on Circuits and Systems will be held August 8-11, 2000 at Michigan State University, East Lansing and the 6th Workshop on Power Electronics in Transportation – WPET2000- will be held October 19-20, 2000 at the University of Michigan-Dearborn Campus. The spring section meeting in March 2001 is also being planned as this is written. Mr. Leo Haskell of GM’s legal department is the tentative keynote speaker for that event, plus as many of you are aware, the spring section meeting is our largest event featuring awards presentations for IEEE accomplishments by the members, concurrent technical sessions and keynote address. Our planning in fact reaches out to 2005. Let me take this opportunity to again thank all the volunteers who give so much of their time willingly to make these events so successful, especially the student branch volunteers who make organizing and running our section meetings go so smoothly.

We should get to know each other better during this coming year.

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Directors of AANetcom, Allentown, PA until its sale to PMC Sierra. Dr. Laker is also an External Examiner for the Electrical Engineering graduate programs at the National University of Singapore and a member of the Advisory Board of the Communications Group for Safeguard Sciences, Inc., Wayne, PA.

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

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

Please help us manage this meeting effectively by registering early. Contact Kimball Williams at k.williams@ieee.org, 248-354-2845 for information, to volunteer, or to offer suggestions.

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IEEE Southeastern Michigan

Calendar of Events

<table>
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<tr>
<th>Day</th>
<th>Event</th>
<th>Location</th>
<th>Contacts</th>
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<tr>
<td>Friday - Monday</td>
<td>IEEE-USA Slates Professional Development Conference</td>
<td>Marriott’s Camelback Inn Golf Resort and Spa in Scottsdale, Arizona</td>
<td>Pender M. McCarter at 202-785-0017, ext. 8353 or email: <a href="mailto:p.mccarter@ieee.org">p.mccarter@ieee.org</a>; Linda S. Hall at 202-785-0017 ext. 8325 (voice), or 202-785-0835 (fax) or email: <a href="mailto:l.hall@ieee.org">l.hall@ieee.org</a></td>
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<tr>
<td>Sept. 1 – 4th</td>
<td>Location:</td>
<td>Overseas: Marriot, 500 Concord Blvd., Scottsdale, Arizona</td>
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<tr>
<td>Wednesday - Friday</td>
<td>PCM’ 2000 - the Sixth Annual International Pacific Conference on Manufacturing</td>
<td>The Westin, 1500 Town Center, Southfield</td>
<td>Lisa A. Anneberg; LTU; or email at <a href="mailto:ANNEBERG@ltu.edu">ANNEBERG@ltu.edu</a></td>
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<tr>
<td>Sept. 6-8th</td>
<td>Location:</td>
<td>Pacific Congress on Manufacturing Management</td>
<td>Pacific Congress on Manufacturing Management</td>
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<tr>
<td>Monday</td>
<td>SEM Executive Committee Meeting</td>
<td>Location: Eaton Corporation, 26201 Northwestern Hwy, Southfield</td>
<td>Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<tr>
<td>Sept. 11th</td>
<td>Time: Dinner at 6:00 pm, Meeting 6:30 pm</td>
<td>Contact: Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<tr>
<td>Tuesday</td>
<td>EMC Society Meeting 1 – “Visteon/Ford Specifications”</td>
<td>Location: Eaton Innovation Center, 26201 Northwestern Hwy, Southfield</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<tr>
<td>Sept. 12th</td>
<td>Time: 5:30 – 6:00pm refreshments 6:00 pm – 8:00 pm</td>
<td>Speaker: Mr. Mike Bosley of Ford/Visteon EMC Laboratory</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<td>Tuesday</td>
<td>EMC Society Meeting 2 – “EMC Requirements at Daimler Chrysler North America and EMC Test Requirements”</td>
<td>Time: 5:30 – 6:00pm refreshments 6:00 pm – 8:00 pm</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<td>Sept. 19th</td>
<td>Location: Eaton Innovation Center, 26201 Northwestern Hwy, Southfield</td>
<td>Speakers: Mr. Paul Anderson and Mr. Terry North of Daimler Chrysler Corporation</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<td>Tuesday</td>
<td>EMC Society Meeting 3 - “GM Specifications”</td>
<td>Time: 5:30 – 6:00pm refreshments 6:00 pm – 8:00 pm</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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<td>Sept. 26th</td>
<td>Location: Eaton Innovation Center, 26201 Northwestern Highway, Southfield</td>
<td>Speakers: Mr. Victor Lau , Mr. Donald R. Seyerle and Mr. Mark Steffika of GM EMC Department, Milford, Michigan</td>
<td>Graeme Rogerson, <a href="mailto:GraemeRogerson@Defiance-Inc.com">GraemeRogerson@Defiance-Inc.com</a>, 734-455-6352 or Kimball Williams, <a href="mailto:k.williams@ieee.org">k.williams@ieee.org</a>, 248-354-2845</td>
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IEEE Members Can Save Money

With This Membership Benefit

Citizens Insurance Company, headquartered in Howell, Michigan, is providing special group discounts for auto and homeowners insurance to IEEE members through a special affiliation with ESD The Engineering Society of Detroit. Since the inception of this member benefit program in 1971, over 19,000 policies have been written, which clearly shows the great success of the program!

Here is a summary of some of the special discounts that are available:

- **IEEE Group Discounts**: Auto discount - 10%
- **Homeowners Discount**: - 20%
- **Multi-Policy Discount**: Take an additional 10% discount off both policies
- **New Home Discount**: Save up to 30%
  If certain qualifications are met as much as an additional 25% may be available!

For IEEE members who own engineering/architectural businesses where the governing workers’ compensation classification is 8601, **Engineers and Architects**, Citizens offers a dividend paying program where the dividend history has averaged 38% over the past 4 years. We also have access to special programs for business owners insurance and professional liability insurance.

This program is administered by Hartland Insurance Group of Auburn Hills. Call **Hartland Insurance Group** at 1-800-682-6881, or call your local Citizens agent, for a free, no-obligation quote. When calling, be sure to mention that you are a member of IEEE so that your quotes will reflect the special offerings available through these programs.

ADVERTISING RATES

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Chapter III
Chapter IV
Chapter V
Chapter VI
Chapter VII
Chapter VIII
Chapter IX
Chapter X

September 2000 Wavelengths
IEEE/SEM Special Award Judges Needed
by Don C. Bramlett, PE, IEEE/SEM Section Advisor

This is the third year IEEE/SEM will provide a dedicated team of judges and a special professional organization award for the project having the most innovative application of electro-technology in the design of a city in the future. Judging for the 2001 Michigan Regional Future City Competition will be conducted in January 2001, probably again at the Spirit of Ford Museum in Dearborn. Judging will be from 8:00 a.m. to 11:00 a.m., followed by lunch. Free parking, coffee, juice, sweet rolls, and lunch are available for the judges. This pleasurable and fulfilling task only takes half a day.

Please volunteer to be among those to comprise the team of IEEE/SEM special award judges.

I encourage anyone who has an interest in the science and math education of our youth or an interest in pre-college education programs to consider being a judge at the Michigan Regional Future City Competition. As a judge myself in previous years, I have found the experience of talking with the students, finding out their interests and observing their projects/presentations to be very rewarding. So come out and spend the morning with us as we meet with some of the potential engineers, scientists and city planners of the future.

If you are interested in more information about being a judge for the Michigan Regional Future City Competition, contact Don Bramlett at 313-235-7549 during normal business hours, home at 313-525-5422 or email at d.bramlett@ieee.org or bramlettd@dteenergy.com.

Point of Information! I am happy to say that because of the example the IEEE/SEM Section and a few other US IEEE Sections have set, IEEE-USA is planning to award a special professional organization award at the National Future City Competition in Washington DC during National Engineers Week (NEW) in February 2001.

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

IEEE/SEM Section members are invited to participate in the Eighth Annual National Engineers Week (NEW) Michigan Regional Future City Competition. For this competition, a team of three middle school students along with a teacher and an engineer as advisors, will take part in a hands-on educational design experience as they design a “future city” by computer. The regional competition is open to all middle schools in Michigan.

You can be a part of the Michigan Regional Competition, one of the most stimulating and rewarding pre-college educational programs with which I have had a privilege to become involved. Volunteer engineers are needed to help teams of seventh and eighth grade students and their teachers use a computer to design and model a city of tomorrow. As a volunteer advisor, you will share practical engineering skills such as teamwork, problem-solving, Computer Aided Design (CAD) and applied math and science.

A volunteer will typically spend 18 to 24 hours, as an advisor to a team of students, from mid-October 2000 through the date of the Michigan Regional Future City Competition, during the third week of January 2001 at a location to be announced. The volunteer engineering advisor for the winning team of the Michigan Regional Competition will also accompany the three member student team and the teacher advisor on a free trip to the national competition in Washington DC during NEW, February 18-24, 2001.

If you should not be able to devote the time to be a volunteer engineering mentor, engineers are also needed as judges on the day of the Michigan Regional Competition in late January 2001. You may serve on one of the overall general judging teams or on the IEEE/SEM Section Special Professional Award judging team.

The volunteer’s role 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. It is important to tie in real life engineering experiences as students on the project. However, the students are to do all of the actual work. The project each team of students works on consists of five phases:

1. Design a future city using SimCity 2000 software by Maxis.

Please volunteer to be among those to comprise the team of IEEE/SEM special award judges.

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1. Design a future city using SimCity 2000 software by Maxis.
2. Produce a color CAD aerial view drawing presentation of the future city using Urban Renewal Kit, add-on software.
3. Build a scale model of one section of the city; 30”(w) X 60” (l) X 24” (h) maximum.
4. A 500-word essay on a subject related to city planning.
5. Give an oral presentation at the Detroit Regional Competition.

ESD-The Engineering Society will serve as the primary sponsor of the 2001 Michigan Regional Future City Competition. As a member organization of the ESD Affiliate Council, composed of representatives of the local sections or chapters of some 40 engineering, technical and professional societies, the IEEE/SEM Section strongly encourages members to participate in this worthwhile endeavor.

A comprehensive Teacher/Engineer Volunteer Handbook is available, detailing contest specifics and providing answers to the types of questions that you as a volunteer engineer may have. To receive this free handbook or to register as a volunteer engineer, call ESD-The Engineering Society at 248-355-2910.
Good Software Processes versus busywork. What really works and what is merely ritual?

A virtual meeting on virtual meetings. The initial venue would be NetMeeting which is a free product that is easy to use.

Technical Sessions: 
(Indicate selection by #):

1. Chapter I Circuits & Signal Processing
   "AFRL/Rome ...."
2. Chapter II Vehicular Technology
   "Fuzzy Systems as Tools for Intelligent Control"
3. Chapter III Comm. & Aero. Engineering
   " EMC - New Techniques for Reducing Printed Circuit Board Common Mode Radiation"
   "Power & Ind. Electronics"
5. Chapter V Computers
   "Engineering Management"
6. Chapter VI Geoscience & Remote Sensing
   "Geoscience & Remote Sensing"
7. Chapter VIII Power Eng & Ind. Appl.
   "Power Eng & Ind. Appl."
8. Chapter IX "Optimizing Computer Hardware/Field Programmable Gate Arrays"
9. Chapter X Engineering Management
   "Leveraging Product Development for Competitive Advantage"
10. Chapter XI 
11. Student Track 

Chapter X Visit TACOM and Plans for 2000-2001

Chapter X sponsored a tour of TACOM on June 6th. This was a fascinating tour that pointed out the similarities between the work at this laboratory and in the automotive industry. Simulation, emphasis on fuel economy including hybrid vehicles, passenger safety including advanced restraints, and increasing reliance on software were a few of the similarities. The differences were fewer than expected. While tanks get the most attention, the army runs more on trucks than armor. Software and sophisticated simulation to improve handling, safety, and life cycle were very impressive. Further, open opportunities to collaborate and share costs in these endeavors became apparent. We will plan another tour if there is interest which will takes place during business hours to allow interaction TACOM personnel.

The tour followed the IEEE/SEM Section planning event. The planning was to develop ideas for the chapter to better serve you. At the meeting and in subsequent correspondence, we developed an outstanding list of topics for meetings including:

- A virtual meeting on virtual meetings. The initial venue would be NetMeeting which is a free product that is easy to use.
- Good Software Processes versus busywork. What really works and adds value and what is merely ritual?

IEEE/SEM 2000 Fall Section Meeting Registration Form

Complete and mail form with an early registration fee of $30 per person. The registration fee includes technical session attendance and dinner. If this form is for multiple people, you must provide full contact information for each additional registrant. Please make check payable to IEEE/SEM and forward along with a completed registration form to: Dr Ece Yaprak, Wayne State Univ., College of Engineering, 4855 Fourth Street, Rm.1152 Detroit, MI 48202.

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

Please type or print:

Name: ___________________________ Company: ___________________________
Address: ___________________________ City/State/Zip: ___________________________
Phone #: ___________________________ [ ] H [ ] W

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

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

Total amount enclosed: $_____ Registration ( $30 per person ) [ ] Check enclosed in US dollars [ ] Visa [ ] Master Card

Credit Card Number __________________________ Expiration Date _________________

Signature

Credit card registrations are non-refundable after Oct. 25

* Tech. Meal Selection (one only) Fee

Chapter X Visits TACOM and Plans for 2000-2001

by Marty Biancalana, Chair

- Good project management processes; which add value; which only cost? Management fads. How to tell the wheat from the chaff?
- Project case study of a successful project. How did this miracle actually occur from proposal to final product?
- Tours of interesting places that have management challenges.
- How to use IEEE resources to find employees.
- Earned value management. What is it, how to set it up, how to manage with it?

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GRADUATE ENGINEERING PROGRAMS

- AUTOMOTIVE ENGINEERING
- CIVIL ENGINEERING
- ELECTRICAL/COMPUTER ENGINEERING
- ENGINEERING IN MANUFACTURING SYSTEMS

Lawrence Tech’s graduate Engineering Programs, offered in the evening, are designed for practising engineers. Most feature cross-disciplinary programs for mechanical, electrical, and civil engineers. Classes begin in May, August, and January. Graduate in two years attending classes twice a week.
year so I’ll start by introducing myself. I became interested in electrical systems in elementary school (called that up to eight grade back then) when I read of the exploits of G. Marconi and the early days of wireless. I actually built and operated a spark gap transmitter and “coherer” detector. By the time I was nineteen I had obtained a first class FCC license, later general class, which I held for some twenty years. I recall spending a great deal of time making vacuum tube oscillators and amplifiers for radio experiments and I still have some of the original 200 series triodes. It was only near the end of my military stint that transistorized radio and navigation systems were out and that led me into obtaining three university degrees. That was nearly twenty years ago and up to now I have had the opportunity to work in aerospace/defense, consumer appliance and automotive systems. I look back with pride on having been on the development teams for some radar and laser systems used during desert storm, on getting to know some obstinate individuals at UL laboratories and in being involved in the early hybrid vehicle days. It has been an odyssey of sorts.

I’m very pleased to chair this international section of IEEE and I look forward to working with such a talented and spirited group of officers and my resolution is to meet their expectations in leadership. We have some issues to deal with during this year and I’ll address those. Our budget, as we have pointed out for several years now, is somewhat precarious and we really need conference and workshop co-sponsorship to keep this section vital. Speaking of budget, our section meetings are major drains on the budget so we need to continue to solicit corporate co-sponsorship and meeting hosting to minimize these costs. I would like to make a resolution to use technology for communicating with the membership. A Wavelengths committee has been established and a great deal of information on section activities is on the web site so take advantage of it at www.ieee.org/regional/section/se_michigan.

Chapter X

Continued from page 7

- Managing project managers managing multiple projects
- The wireless project manager (it can be done today!)
- Career development investments in staff - a two edged sword?
- Motivation. What motivates and what doesn’t.
- Personality types and how to put the right person in the right job OR how to deal with the mess you just inherited.
- Predict the fallout of some current event then revisit the prediction later. We did this for the DC merger and it was fun and enlightening.

We also seized the opportunity to have a joint meeting with the EMC chapter at the Fall Section Meeting. The speaker, Dan Hoolihan, will discuss his two years of planning and subsequent two years of running the EMC society. As the main speaker will be the former President of the IEEE, Dr. Ken Laker, this will be a stellar all management night. It will be a real opportunity to learn about hands-on managing of organizations where you are dealing with volunteers and therefore have less direct control, a real tough mission.

Join us at the Fall Section Meeting and check the web site for information on our meetings or contact biancalana@ieee.org.

Defiance Testing & Engineering Services, Inc.
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