



IEEE 2008 Sections Congress and GOLD Summit



Aisha Yousuf
IEEE Region 4 2008 GOLD Summit Leader

IEEE Sections Congress is held every three years and is the largest gathering of the IEEE Leadership. [The 2008 IEEE Sections Congress >>](#) was held in Quebec City, Canada September 19-22, 2008. The theme of this sections congress was 'Celebrating Volunteer Achievements World-Wide'.

The 2008 sections Congress was the largest sections congress to date with 1,072 attendees from 89 countries representing 293 IEEE sections. The outcome of the collective opinion of the attendees resulted in 10 recommendations for changes in IEEE that will be implemented in 2009. In addition, many individual sessions at the congress helped **Inspire, Enable, Empower, and Engage** attending leaders to develop plans to provide more value to the members in their

local sections. In addition, all IEEE services and benefits were introduced to the attendees so they can educate members in their respective sections.

The [IEEE 2008 Honors Award Ceremony>>](#) was also hosted on September 20, 2008 along with the sections congress, where 17 institute-level awards were presented. The most prominent award, the IEEE Medal of Honor, was presented to Gordon E. Moore, for pioneering technical roles in integrated-circuit

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processing, and leadership in the development of MOS memory, the microprocessor computer, and the semiconductor industry. Eta Kappa Nu, the Electrical and Computer Engineering Honor Society, also recognized its eminent members at the IEEE Honor Ceremony. For the first time, the IEEE honor ceremony and some other sessions at the sections congress were broadcasted live on [IEEE.tv >>](#).



Gordon Moore Receives the 2008 IEEE Medal of Honor



2008 IEEE GOLD Summit Attendees

In addition to the sections congress, the IEEE 2008 **Graduates of the Last Decade (GOLD) >> Summit** was also held in Quebec City, Canada, September 18-19, 2008. This was the first GOLD Summit ever held. Approximately 60 members attended the GOLD Summit, representing each of the 10 Regions in IEEE. The focus of the GOLD Summit was to develop strong programs to help graduating students with their transition into the professional world. Another strong emphasis of the GOLD Summit was on forging stronger connections between different regions and sections in IEEE. Following the theme for the sections congress, the GOLD Summit celebrated the GOLD achievements word-wide. It provided an interactive forum that allowed leaders from all regions to highlight successes in their GOLD programs and to learn from the successes of other regions. Having a GOLD Summit also emphasized the importance of GOLD as an IEEE entity.

Special Award Judges Needed for January 2009 Future City Competition



Don Bramlett, P.E.
Section Advisor

This is the eleventh year that 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 2009 Michigan Regional Future City Competition will be on Wednesday, January 14, 2009 at the Rock Financial Showplace in Novi, just off I-96 on Grand River between Novi Road and Beck Road. Judging will be from 8:00 AM to 11:00 AM, followed by lunch. A complimentary continental breakfast and lunch are provided that day 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. IEEE Student Branch members as well as regular IEEE members have found this to be a fulfilling experience in past years. 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 interested in more information concerning being a member of the team of judges for the IEEE-SEM professional award at the Michigan Regional Future City Competition, contact Don Bramlett at (313) 235-7549 during normal weekday business hours, or at home at (734) 591-1452 or by email at d.bramlett@ieee.org **AT ieee DOT org.**

Call for IEEE Fellow Nominations



IEEE Fellow Nominations
Committee

Nominations are being accepted for the IEEE Fellows class of 2010. The rank of IEEE Fellow is the institute's highest member grade, bestowed on an IEEE Senior Member who has had an extraordinary record of accomplishments in any of the IEEE fields of interest. The deadline for nominations is 1 March 2009.

Senior Members can be nominated in one of four categories: application engineer/practitioner, research engineer/scientist, educator, or technical leader.

The Fellows Web pages contain information regarding the history of the IEEE Fellows program, the nomination process, access to the Fellows Nomination Kit, lists of Fellows who are eligible to be references and more about the Fellow program. Please visit the [Fellows website >>](#).

Countdown: 10 Months to the World Solar Challenge



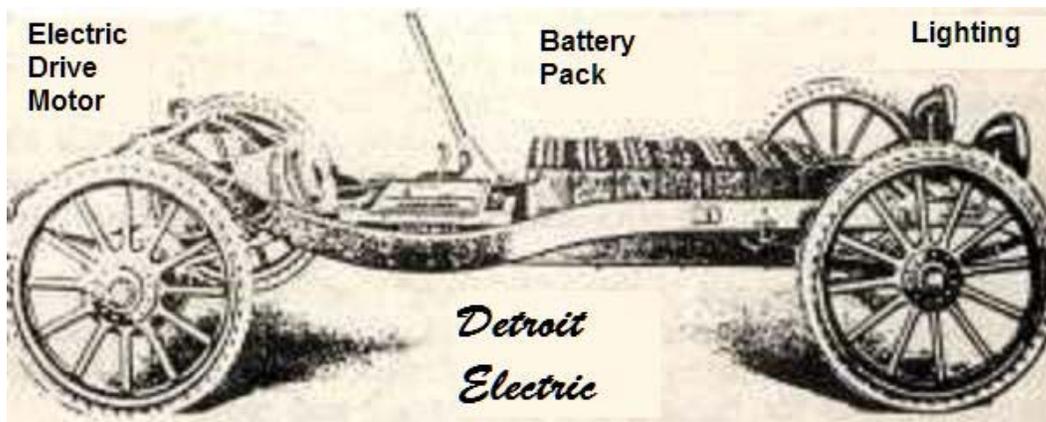
Dean Wisniewski, P.E.
University of Michigan –
Ann Arbor IEEE Student
Branch Mentor

The next solar car race across Australia's Outback, a biennial event, takes place in October 2009. Over several issues of Wavelengths, I will give information on the basics of solar car race vehicles to enhance your enjoyment of the "rayce".

As featured in the [February 2008 edition of IEEE Spectrum >>](#), a Solar Car is an Electric Drive Vehicle with onboard photovoltaic cells charging the batteries for extended driving range. It is possible to power an active

electric motor directly from photovoltaics, however, there are load leveling benefits from a battery.

Since it is the foundation, let's begin by examining the basics of an electric drive vehicle. One hundred years ago, the Detroit Electric (rolling chassis pictured below) featured an extensive battery of voltaic cells connected to an electric motor by electrical cabling. In addition, there were control devices and exterior lighting.



Pictured here are the University of Michigan students and mentor at the IEEE-SEM 2006 Spring Conference with the Solar Car named Momentum. Team Momentum took 1st place in the 2005 North American race and 3rd place in the 2005 World Championship.

The basic components of an "Electric Vehicle" are the same today:

- Rechargeable Energy Storage System
- Electric Drive Motor and Gearing
- Electrical Distribution System
- Controls (now extensive electronics)
- Exterior Lighting
- Frame, Driveline, Body, etc.

Additional components to become a "Solar Car":

- Photovoltaic cells
- Maximum Power Point Trackers

To find out more, visit [umsolar website >>](#). The next installment will examine the batteries and electric motors used by solar racers.

Go Fast, Go Smooth, Go Blue!

Embedded Systems Workshop Report



Subra Ganesan, Ph.D.
Chair
Computer Chapter

One-day free Embedded System workshop sponsored by IEEE SEM computer Chapter was held at Oakland University on October 11, 2008 from 9 AM to 5 PM. Nearly 70 IEEE members and 40 non-IEEE members from local Industries and universities attended. Dr. Subra Ganesan, Computer chapter Chair was the main organizer and he introduced the 8 presenters from Industry. Dr. Virendir Moudgil, Provost and vice president of Oakland University inaugurated the workshop. Dr. Satwant kaur from Intel, California gave the keynote speech. There were

door prizes and free lunch and snacks. Mathworks, National Instruments, Xilinx, Dearborn Group, and Kugler Maag industries organized vendor table and demos. They also co-sponsored the event. Ford engineers held a demo of their latest "SYNC" unit. GLSPIN association and Oakland University were the main sponsors. The presentations were on the latest hardware, software and development tools for embedded system. This is the 3rd workshop. Embedded system one-day workshop is held in September or October of every year.

IEEE 2009 Vehicle Power and Propulsion Conference (VPPC'09)



Aisha Yousuf
VPPC'09 Publicity Chair

The 5th International IEEE Vehicle Power and Propulsion Conference (VPPC'09) comes to Dearborn, Michigan, the heartland of automotive industry, from September 7-11, 2009. The theme for this conference is 'Sustainability: Hybrid, Plug-in, Fuel Cell and Battery Technology'. This conference is co-sponsored by the IEEE Power Electronics Society and the IEEE Vehicular Technology Society. More details about the conference can be found on the [VPPC'09 website >>](#).

VPPC'09 will feature keynote speakers from top executives of major automotive companies. The venue for the conference includes the Ritz-Carlton Hotel and the University of Michigan - Dearborn in Dearborn, MI. In addition, a special banquet will be held at the Henry Ford Museum. A Ride-n-Drive will be provided for the convenience of the attendees.

VPPC'09 will feature five technical tracks, special sessions, technical forum for authors who would like to present their work without contributing full papers, tutorials, and an exhibit. Regular papers and abstracts for technical forums must be submitted through the conference website by March 1, 2009. The proposal for tutorials, however, must be submitted directly to the tutorials chair. Similarly, companies wishing to display their products at the exhibit and sponsoring the conference should contact the exhibit chair directly. More information is available in the [call for papers >>](#).

The organizing committee is working very hard to make this a successful conference, as well as, the conference of choice for people in this field. Please show your support by participating and promoting this event. In addition, the conference will also be

looking for volunteers that will be allowed free admission to parts of the conference. For more information about the conference, please contact Aisha Yousuf at

[ayousuf AT ieee DOT org](mailto:ayousuf@ieee.org) or Chris Mi at [mi AT ieee DOT org](mailto:mi@ieee.org). Also, please refer the conference website and the wavelengths for further updates.

Robotics Workshop for Teachers, Educators, Parents, and Students



C. J. Chung, Ph.D.
Treasurer
Robotics & Automation
Chapter

IEEE SEM Chapter XIV Robotics and Automation Society provided free LEGO NXT robotics programming workshops for teachers, educators, parents, and students last fall at Lawrence Technological University as a part of Robofest program. The programming platform was that of the NXTG language with an emphasis on mission goals for Robotic Sumo game matches.

The workshops conducted by Doug Czinder, SEM Robotics & Automation Society Chair, featured hands on programming and applications with Lego NXT brick and various sensors. The program is directed towards using STEM (science, technology, engineering and math) with students in the 5-12th grades. Developing skills that will last and inspire for a lifetime of progress and learning for both the young participants and their

sponsoring adults is a primary goal for developing tomorrow's engineers and decision makers. The program also has benefits in the areas of problem solving, teamwork and critical thinking.

Many participants remarked at the challenges of autonomous robotics and that is what creates the challenges. One must think in advance of the outcomes to be successful!

The workshops were well attended by parents, teachers, professors and students! One of the workshops in November actually geared the students to come to LTU during the school day as a field trip, which was very successful. Doug was able to communicate the joy of robotics to all the students while effectively reaching them on their level.



Teachers, educators, and parents taking NXT programming class conducted by Doug Czinder

Making Right Choices



Bala Prasanna
Past Chair
IEEE New Jersey Coast
Section

Does the title sound corny? Maybe it is. Maybe not.

To limit our scope, we are not talking about right choice when picking colleges, employers, a television set. We are talking about simpler, yet profoundly important everyday life decisions.

Consider having at your disposal the means to make the “right choices” about your time, your friendships, your emotions, and criticisms from others.

If I made an error in judgment, or a mistake, I could be given a dress down by my boss, or I could be a story among peers at the break room. For how long and how far would I moan and groan about it? That is a choice to make, and as for the right choice, consider this: *I am neither a victim nor a product of the past.* Thus, I will have an honest and objective analysis of the situation, accept the mistake, vow not to repeat it and move on without getting sagged down by the negativity of choices open to me.

I recently read about someone who was persuaded by a friend to get an “experience” by spending time with a prostitute. This person ended up with testing positive for HIV after heeding that friendly advice. No matter how persuasive your friends are, do you have the wherewithal to make judgment calls on your own when faced with temptations like this? In the bigger picture, what does it say

about your choice of friends? Was it the right choice? Surely not!

When it comes to criticism, some of us are thin-skinned. Consider the ability to discern to see if the criticism came from someone who derives pleasure in simply being negative, à la Schadenfreude, or if a person is holding a mirror to uncover your own blind spots. Wouldn't you want to have Simon Cowell or Dr. House as your critic if learning and performing better is your objective? While not easy, we need to develop our abilities to see beyond the immediate and make the right choice of how we accept criticism or feedback.

There are plenty of go-to or how-to guides to make right choices about your television sets, internet carriers, and the like. But when it comes to making right choices in everyday life, we must depend on some simple yet powerful thoughts and exercises that we subject ourselves to based on our life experiences, our circumstances, the durability of our decisions, the people with whom we surround ourselves, and a strong conviction about what constitutes a right choice when we are uncertain.

The author wishes his readers with the faculties above to help make the “right choices”. After all, we are always either the victims, or the winners with the choices we make. Developing the temper and temperament to make the “right choice” usually makes winners out of us.

Acknowledgements:

1. Bala Prasanna – Career & Life Management Skills for Success, slide presentation
2. <http://www.thepracticeofleadership.net/2005/03/12/developing-a-leadership-philosophy/> - Developing a leadership Philosophy

IEEE-USA Student Professional Awareness Workshop



Aisha Yousuf
Section Director of Student
Activities

The IEEE-USA [Student Professional Awareness Committee \(SPAC\) >>](#) presented a Student Professional Awareness Workshop (S-PAW) at the Wayne State University on October 18, 2008. It was a free full-day workshop open to all students (graduate and undergraduates) as well as young professionals.

The workshop was designed to be fun, informative, and interactive. It contained information on various aspects of growing personally in the area of professional awareness and developing leadership skills that students could apply in personal, academic, career, and IEEE Student Branch areas. Some specific topics covered included vision and team building, communications skills, effective meetings, time management, and what is professional awareness. The speakers were IEEE leaders from regions 1-6 who shared their collective experiences from their personal, professional, and IEEE Leadership areas.

68 students attended the workshop, representing 4 universities in the Southeastern Michigan section: Wayne State University, University of Michigan – Dearborn, University of Windsor, and University of Detroit – Mercy. The workshop provided students with great networking opportunities to interact with student from other schools, as well as IEEE leaders. Other distinguished guests included Don Bramlett, IEEE Region 4 Director-Elect.

This workshop would not have been a success without outstanding efforts of the following [Wayne State University IEEE Student Branch >>](#) members: Priyanka Gupta, Kazim Yakub, Vanda Ametlli, Vukasin Denic, Vladimir Dzhambazov, and Krystle Laja. Kevin Taylor, the student branch mentor, and Dr. Nabil Sarhan, the student branch adviser, also assisted the students in helping make the event successful. Thanks is also due to the IEEE-USA Student Professional Awareness Committee for sponsoring the event.



Students at the IEEE S-PAW held at Wayne State University



Members of the IEEE-USA Student Professional Awareness Committee with the students from Wayne State University that organized the event

Robofest 2008 Report



C. J. Chung, Ph.D.
Treasurer
Robotics & Automation
Chapter

A total of 1,647 students, 560 teams from five countries (Canada, England, France, Korea, and the USA) participated in the 9th Annual Robofest, student robotics competition, sponsored by 19 companies and organizations including IEEE Southeastern Michigan (SEM) and IEEE Region 4. Robofest 2008 featured a warm-up competition, 40 qualifying competitions, and one World Championship. Robofest focuses on STEM (Science, Technology Engineering, and Mathematics) education and has grown rapidly since its inception in 2000, as shown in the figure 1 on the next page.

participants of Robofest 2008 during the qualifying competitions.



IEEE Region 4 Professional Activities Committee for Engineers (PACE) and SEM sponsored IEEE medals of achievement (seen on the right) that were awarded to all the registered

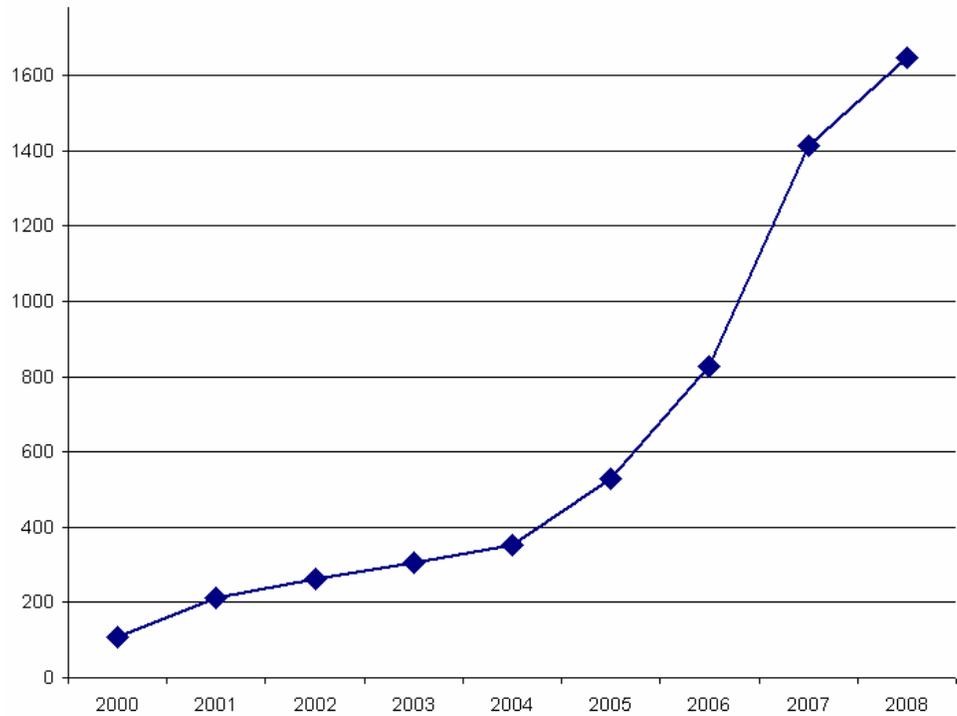


Figure 1. Number of Robofest Student Participants Since 2000

We are proud that Robofest is still very low-cost, while providing high quality environment for STEM education. I would deeply thank everyone including several IEEE

members who supported and volunteered for Robofest 2008. Detailed Robofest 2008 report can be accessed [online >>](#).



Some of world Robofest Championship Participants with trophies at Lawrence Technological University

DLS EMC Press Release

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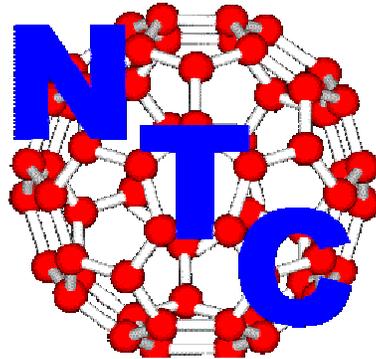
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Announcements

Nano Technology Council Forming



Interested in Nanotechnology?
A local chapter of the IEEE
Nanotechnology Council (NTC) is now
forming!

Dr. Dean Aslam of Michigan State
University is leading the call for
members to join us in forming this
new chapter.

From the NTC [website >>](#):
“The IEEE Nanotechnology Council is
a multi-disciplinary group
whose purpose is to advance and
coordinate work in the field of
Nanotechnology carried out
throughout the IEEE in scientific,
literary and educational areas. The
Council supports the theory, design,
and development of nanotechnology
and its scientific, engineering, and
industrial applications.”

If you are a member of one of the
associated societies listed on [Nanotech
council website >>](#) and are interested
in joining this chapter, please email
Doug Czinder, chapter organizer, at
[chair AT semrobotics DOT org](#). We need
12 signatures on the formal petition to
be submitted to IEEE for approval of
this chapter.

New SEM Senior Member Elevation

IEEE Southeastern Michigan Section
would like to recognize our local
member **Tongtong Li** on getting
elevated to the IEEE Senior member
level. Congratulations Tongtong!

Awards

IEEE Southeastern Michigan Outstanding Professional Awards

Mahta Moghaddam, Ph.D.
**IEEE Fellow, University of
Michigan**

IEEE SEM Outstanding Professional



Mahta Moghaddam received the B.S. degree (with highest distinction) from the University of Kansas, Lawrence, in 1986 and the M.S. and Ph.D. degrees from the University of Illinois, Urbana-Champaign, in 1989 and 1991, respectively, all in electrical and computer engineering. From 1991 to 2003, she was with the Radar Science and Engineering Section, Jet Propulsion Laboratory (JPL), California Institute of Technology, Pasadena, before joining the faculty of the Radiation Laboratory in the EECS department at Michigan.

She has introduced innovative approaches and algorithms for quantitative interpretation of

multichannel SAR imagery based on analytical inverse scattering techniques applied to complex and random media. She has also introduced a quantitative approach for data fusion by combining SAR and optical remote sensing data for nonlinear estimation of vegetation and surface parameters. She has led the development of novel radar instrument and measurement technologies for subsurface and subcanopy characterization. Her other responsibilities have included being a Systems Engineer for the Cassini Radar and the Science Chair of the JPL Team X (Advanced Mission Studies Team).

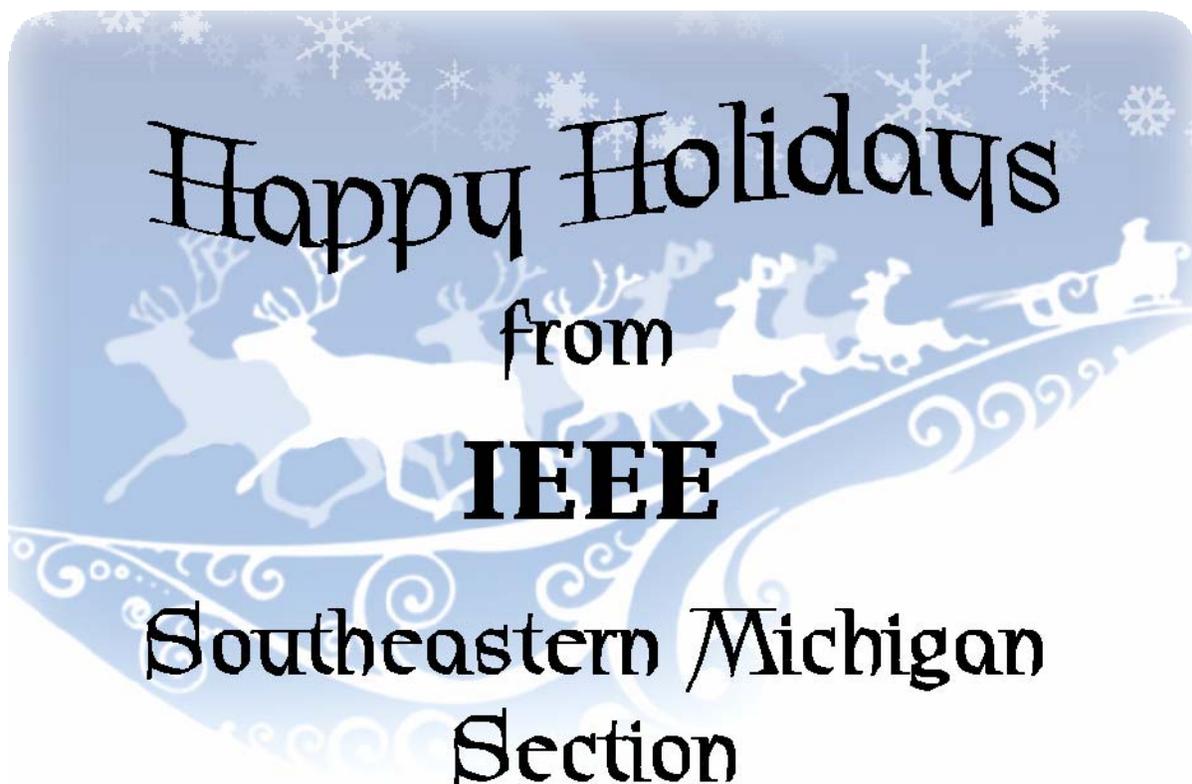
Dr. Moghaddam's research group is engaged in a variety of research topics related to applied electromagnetics, including the development of advanced radar systems for subsurface characterization, mixed-mode high resolution medical imaging techniques, and smart sensor webs for remote sensing data collection and validation. She has been the Principal and Coinvestigator on numerous research projects, and has authored or coauthored over 160 publications. Dr. Moghaddam is a member of URSI Commission B, the Electromagnetics Academy, Phi Kappa Phi, Tau Beta Pi, and Eta Kappa Nu. She is a Fellow of IEEE.

Myron Ginsberg, Ph.D.
**IEEE Fellow, HPC Research &
Education**
IEEE SEM Outstanding Professional



Dr. Myron Ginsberg is an HPC Consultant for HPC Research & Education. He has scientific/engineering computational expertise in private industry, government research labs, and academia. He assesses hardware and software performance for large-scale industrial applications. Myron is both an ACM and IEEE Fellow honored for his pioneering and sustained contributions to supercomputing

research and its applications to the automotive industry and teaching/service in computational science education. He has been a national lecturer for six professional societies for over 35 years and a member of The Councils of Advisors in the HPC area for the Gerson Lehrman Group that provides collaborative research and consulting to the financial community. Dr. Ginsberg has a B.A. and M.A. in Math and a Ph.D. in Computer Science. He had held a variety of positions in academia (U of Michigan, U of Iowa, Southern Methodist U), government research labs (U.S. Army Research lab, NASA Electronics Research Center, NASA Langley Research Center), and in private industry (General Motors Research, EDS HPC Group, HPC Research & Education). In addition, he has served on several occasions as a National Science Foundation research grant panel reviewer.



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Contact Information for the officers can be found on the [section website >>](#)