

## Track I Organizers

**Chair: Cristian A. Linte, PhD and Co-Chair: John Dentler**



**Bio: Cristian A. Linte** is a Research Scientist and Assistant Professor of Biomedical Engineering at Mayo Clinic in Rochester, MN. He joined the Mayo Clinic in January 2011, with a career investigator grant co-funded by the Natural Sciences and Engineering Research Council of Canada, the Canadian Institutes of Health Research, and the Heart & Stroke Foundation of Canada to investigate novel paradigms for visualization and surgical navigation for minimally invasive therapy. Cristian pursued his PhD in Biomedical Engineering at the University of Western Ontario (London, ON, Canada) during 2006–2010 on the development, evaluation and pre-clinical integration of image guidance techniques for surgical navigation of minimally invasive cardiac interventions. His research has been

disseminated in more than 50 journal articles and peer-reviewed conference proceedings and has been recognized with several distinctions at international congresses. Cristian has served on the scientific review boards of several journals and conferences and has organized several international workshops. In 2011, Cristian was recognized with the IEEE MGA GOLD Achievement Award for his leadership and contribution to the IEEE Engineering in Medicine and Biology Society.



**Bio: John Dentler** is currently Vice President of Berry Engineering Inc. John has a B.S. Physics, U.S. Naval Academy and an MS EE, Naval Post Graduate School.

His IEEE Experience includes: Active member since 1991; Held positions in Annapolis Subsection, Baltimore Section, and Region 2. Served as Region 2 Director from 2007-2008. Currently volunteers in Baltimore Section. Active in the administration of the Baltimore Robot Challenge and other local precollege science and engineering competitions.

John's key goals are to make organizations financially sound and provide service to members, particularly to our youngest and future members.

John's professional experience includes:

- 20 year career as a Nuclear Engineer for the US Navy
- 20 year career as a consultant to the US Navy, developing waste processing systems, pulsed power systems, and currently helping to design the non propulsion control systems for the navy's newest Aircraft Carrier.



## Track I Session Details

Fri, Aug. 2<sup>nd</sup>, 2013

**2:30 – 3:15 PM → Building Tomorrow's Leaders via Professional Awareness Activities**

**Session Synopsis:** Today's graduating students have proven themselves to be technically proficient but lack the adequate communication and organizational skills that can help them advance quickly in the workplace. In this interactive workshop the leaders of IEEE-USA's Student Professional Awareness Committee (SPAC) will give attendees an overview of the numerous resources available to help all students elevate their soft skills and become more productive members of the engineering profession. Additionally Jim Watson, one of the original members of the committee, will demonstrate to section leaders the tangible benefits of devoting time to working with student branches to organize both conferences and ventures. Attendees are asked to bring personal business cards (if possible) as well as a notebook to the session.

**Session Organizers/Speakers: Jim Watson and Guru Madhavan**



**Bio: Jim Watson** received a Bachelor's Degree in Electrical Engineering from Purdue University, completed post graduate engineering courses at Youngstown State University, and is a graduate of the Executive Management Program at the University of Michigan. He is a Registered Professional Engineer in the State of Ohio, a Life Senior Member of IEEE, and a national S-PAC and S-PAVe speaker. Following a 36-year career with Ohio Edison Company (First Energy Corporation), an electric utility in which he held numerous engineering and management positions, Jim took early retirement to devote full-time to his consulting activities associated with non-technical skill development within engineering technical classes. He is co-author, with Dr. Charles Alexander, of "Engineering Skills for Career Success" published by McGraw-Hill. Jim received many awards from IEEE for his contributions to professional activities including the 2011 Robert S. Walleigh Distinguished Contributions to Engineering Professionalism, the highest IEEE-USA award for volunteer activities. In 2011, IEEE-USA established the "IEEE-USA Jim Watson Student Professional Awareness Award" to recognize key individuals for their contributions to Student Professional Awareness Achievement Activities in the United States. As an international speaker, Jim has delivered more than 2,000 presentations in the United States, Canada, Europe, and Asia to a total audience of over 100,000. This includes presentations at 332 Student Professional Awareness Conferences (S-PACs), 18 Student Professional Awareness Ventures (S-PAVs), and 900 other student meetings involving more than 56,000 students at 163 universities.



**Bio: Guru Madhavan** is a senior program officer at the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council—collectively called the National Academies. His current work involves the development of a decision-support software system for prioritizing new vaccines of domestic and global importance. Madhavan received his M.S. and Ph.D. in biomedical engineering and an M.B.A. from the State University of New York. Among various awards, Madhavan has received IEEE–USA Professional Achievement Award and was selected as one among 14 people as the "New Faces of Engineering"

in the *USA Today*. He is an IEEE ambassador, and the incoming chair of the IEEE-USA Student Professional Awareness Committee. Madhavan has co-edited four books, including “Pathological Altruism” and “Practicing Sustainability,” and is currently working on a character-driven nonfiction book on engineers.

**3:35 – 4:20 PM → How to Develop and Benefit from Industry Relations**

**Session Synopsis:** A strong Industry Relations and Corporate Outreach program provides section leadership an ideal way to create or grow an essential element of section operations and vitality. Corporations quickly learn the value of IEEE involvement, the impact IEEE makes on the technical and professional development of their employees and the vast resources IEEE has available to corporation. The session will include a discussion of how to make the initial contact to key executives, host event(s) for selected individuals, train volunteers to serve as hosts, the creation of a Value Statement and developing a continuing communication channel between the section and corporations.

**Session Organizer/Speaker: Michael R. Andrews**



**Bio: Michael Andrews** is Managing Partner of Andrews & Associates, a consulting firm specializing in new product R&D, business and management development, Emergency Planning, Continuity of Operations, Business Resumption Planning and Operational Readiness for business, schools and government entities. Mike is also a managing partner of ActionCOACH – Phoenix, a company specializing in business coaching. Mr. Andrews is a Senior Member of IEEE and is currently serving IEEE members as the 2013-14 Region 6 Director, an IEEE Ambassador, member of several IEEE committees including Audit, Awards & Recognition, Employment and Career Services, Individual Benefits, Public Visibility, Smart Grid, IEEE-USA E-Week 2014 Planning and Phoenix Section Intersociety Liaison. He is also the Arizona Regional Coordinator for the National Engineers Week Future City Competition and the originator of the SMART Competition. Mr. Andrews’ commitment to the community includes the Future City Competition, the Smart Education Foundation (host to the SMART Competition), Salvation Army and Arizona LeaderForce. He was awarded an IEEE Millennium Medal for outstanding achievements and contributions to IEEE and the IEEE-USA Robert S. Walleigh Award for Distinguished Contributions to Engineering Professionalism Award. He is a Hon Kachina Award (Excellence in Volunteerism, State of Arizona and AIA – Arizona Award of Distinction award winner.

**4:30 – 5:15 PM → Consultants & Employment Networks & Update on PE Licensure/Registration**

**Session Synopsis:** The IEEE-USA Consultants Networks have resulted in opportunities and the development of careers for our members. Similarly, the newly formed IEEE-USA Employment Networks have resulted in employment for our members. This session will explain how these Networks are created and what has been done to make them effective, and why every Section should have them. An update on the latest developments in PE Licensure and Registration will be presented.



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Session Speakers: Gary Blank and Davy McDowell, P.E.



**Bio:** Dr. Gary Blank is IEEE-USA President-Elect 2013. Dr. Blank has successfully divided his professional career between industry and academia. He worked for Honeywell, Litton, and Unisys in the areas of controls and electronics. He was a professor of Electrical and Computer Engineering at Illinois Institute of Technology (I.I.T.), Northern Illinois University, Marquette University, and U.C.L.A. He has published dozens of technical papers, and earned grants for his universities. He is a full-time consultant and has provided consulting services for over 40 industrial corporate clients. He was chosen by the U.S. Department of Energy and I.I.T. to create and conduct courses in renewable energy, smart grid, and electric vehicles. He teaches review courses for the FE/EIT and PE exams. Dr. Blank received his Ph.D. from the University of Wisconsin, Madison (Ford Foundation Fellow), M.S. from the University of Idaho (Kaiser Corp. Fellow), and B.S. from Illinois Institute of Technology (Ingersoll Foundation Scholar). All degrees are in Electrical Engineering.



**Bio:** Davy McDowell, P.E., is associate executive director of NCEES, the organization composed of the nation's licensing boards for engineers and surveyors. In this role, he provides support to the executive director as NCEES implements the decisions of its board of directors and is leading the transition of NCEES examinations to a computer based testing format.

McDowell, who is a licensed engineer in South Carolina, earned bachelor's and master's degrees in agricultural engineering from Clemson University.



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Sat, Aug. 3<sup>rd</sup>, 2013

### 8:00 – 8:45 AM → Government Fellowships (Congressional, State, US-AID) and WISE

**Session Synopsis:** Each year IEEE-USA awards Fellowships to 3 IEEE members to serve as science advisors on the Hill and in the Dept. of State. This coming year, a 4th Fellowship will be awarded to an IEEE member to serve at USAID as an Engineering & International Development Fellow. In addition, the WISE program will continue to award summer internships to selected student members.

**Session Speakers:** Sherry Gillespie, Ph.D., Dr. Patrick Meyer and Elizabeth Johnston



**Bio:** Sherry Gillespie, Ph.D. is past chair of the IEEE-USA Government Fellows Committee and presently serves on the selection committee for new Government Fellows. Sherry was the IEEE-USA Congressional Fellow for 2008, serving as science advisor for Senator Joe Lieberman. Sherry spent her career in the semiconductor industry at IBM and then Motorola, where she was Director of Materials Research and Strategic Technology. She holds a Ph.D. in solid state physics and is a Senior Member of IEEE.



**Bio:** Dr. Patrick Meyer is the Energy Efficiency & Conservation Adviser at the U.S. Department of State's Bureau of Energy Resources, where he furthers the U.S. government's energy policy goals to facilitate clean, smart, and secure energy systems abroad. Patrick served as the 2012 IEEE-USA Engineering & Diplomacy Fellow at the Department of State and the 2011 IEEE-USA Congressional Fellow with Congressman Jay Inslee. He holds a Ph.D. in Energy & Environmental Policy from the University of Delaware and a Masters in Science, Technology & Public Policy and Bachelors in Public Policy from the Rochester Institute of Technology.



**Bio:** Mrs. Elizabeth Johnston received her Bachelors of Science in Electrical Engineering in December 2006 and her Bachelor of Arts in Russian Studies degree in May 2007, both from the University of Alaska, Fairbanks. Elizabeth is a registered professional engineer. Currently she works as an architectural electrical engineer for a firm in Fairbanks, Alaska and is pursuing a Masters Degree in Engineering Science Management.

### 8:55 – 9:40 AM → unConference-style PACE Projects: Session I

**Session Synopsis:** Come and learn about PACE projects from around the country in a free-flowing participative format. In this "unConference" session, the charts will be kept to a minimum and we need you to maximize collaborative discussion. Learn about what works and what doesn't for PACE projects. Take away tips for your Sections. Come and try this new format.

**Session Speakers:** Murty Polavarapu, Doug Askegard and Mike Fallenstein



**Murty Polavarapu – Introductory remarks**



**Bio: Murty Polavarapu** is the Chapters PACE Coordinator on IEEE-USA PACE Committee and has previously served as the Region 2 PACE Coordinator. He is also the Chair of the Program Committee for the 2014 IEEE Sections Congress. He also serves the Region 2 Vitality Coordinator. He is a senior principal engineer at BAE Systems focusing on development of radiation-hardened electronic devices for space applications.

**Doug Askegard: Organizing a Symposium: half to full day**

R6 PACE has helped sponsor symposia involving the community, and has also helped sponsor symposiums to help students define their engineering careers. I haven't decided which yet (my decision will depend on how accessible the backup information is).

**Bio: Doug Askegard** is currently a member of the IEEE-USA PACE Committee and Region 6 PACE Coordinator, He is a Technical Program Manager with engineering, product management & marketing experience, who successfully proposed, negotiated, won and led programs up to \$9M in value to build systems for the Navy and Coast Guard at his previous employer, ITT Force Protection Systems. Doug's leadership of the cross functional teams, coupled with his attention to the details of the complex programs and the highly technical products, yielded on-time delivery of the systems & upgrades. Earlier in his career, Doug's product management & marketing skills helped him guide several start-up companies to get launched with products that their customers really needed resulting in early sales. Previous to that, he held project engineer positions in domestic and international telecommunication manufacturers, including companies like Alcatel & Ericsson. Doug is very proud of one family of fiber optic products that he led the development of which had \$100M plus in sales over a five year period.



**Mike Fallenstein – Southern MN IEEE Community Outreach/Engagement**

What are the ways to do community engagement as part of IEEE outreach in your community? What are the reasons and best practices for community engagement? What are the benefits for IEEE members and the community? The presentation will cover these items and techniques that can be used to successfully engage your section in community outreach.



**Bio: Mike Fallenstein** is currently the Professional Activities Chair and Webmaster for the IEEE Southern Minneapolis Section, Region 4. He worked at IBM for 32 years covering a broad spectrum of technologies and organizations. Over his 32 years Mike was involved in hard drive manufacturing and development, manager of instrumentation and standards, semiconductor build and manufacturing, marketing of low end systems, image and video technology integration and marketing, wireless I/O adapter development and marketing, I/O adapter business contacts and project management. Mike has published an I/O adapter guide as part of the IBM Redbooks publications and holds two patents in wireless communications.

10:00 – 10:45 AM → unConference-style PACE Projects: Session II

Session Speakers: John Dentler, Joseph Burns, and Emilio Salgueiro

John Dentler – Introductory Remarks



**Bio: John Dentler** is currently Vice President of Berry Engineering Inc. John has a B.S. Physics, U.S. Naval Academy and an MS EE, Naval Post Graduate School.

His IEEE Experience includes: Active member since 1991; Held positions in Annapolis Subsection, Baltimore Section, and Region 2. Served as Region 2 Director from 2007-2008. Currently volunteers in Baltimore Section. Active in the administration of the Baltimore Robot Challenge and other local precollege science and engineering competitions.

Joseph Burns: Ocean City High School Observatory Project

Initiated as a PACE Project when I served as Past Section Chair of Southern NJ in 2005. The concept is to introduce science and engineering lesson plans into the classroom lecture and follow that up with experiments/observing sessions in the observatory. This would reinforce the lesson and provide the instant gratification today's students crave. The topics are wide ranging but include: Astronomy, Physics, Optics, Math, Computer Science, Signal Processing, Satellite Navigation, Aeronautics, Electrical, Mechanical, and Aeronautical engineering. The Observatory was completed and dedicated in Sep 2012 and has been in use since that time in class room projects and is open to the public routinely.



**Bio: Joseph Burns** is currently IEEE Region 2 Pre-college Education representative. He has over 35 years of engineering and technical management experience in areas including: Avionics (33 years), Calibration/standards (7 years), Telecommunications (7 years) and R&D/Explosives Detection Systems (6 years). His management experience includes oversight of technical programs and tasks orders for the FAA and Department of Homeland Security that deal with Airport Security. He served 33 years in the USAF before retiring in the grade of Chief Master Sergeant. He is currently assigned to the Test Standards Board at the William J. Hughes technical Center/FAA supporting a wide array of satellite based and weather programs, such

as: ADS-B, ADS-B Ground Vehicle, GIM-S and IDSR.

Emilio Salgueiro: Philadelphia Employment PACE Project --- Description TBA



**Bio: Emilio Salgueiro** received the BS in Electrical and Mechanical Engineering from National University of Mexico and the Master degree in Engineering Science from The Pennsylvania State University. He is a computer performance architect with over twenty years of experience in the private industry as well as academia. His technical interests include Computer Architecture with emphasis on Performance Measurement, commercial workload characterization and Performance Modeling. E. Salgueiro has been an IEEE member since 1978 and has served on the Philadelphia



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Section Executive Committee in various leadership roles: SECTION: Philadelphia Section: Chair, 2011; Vice Chair, 2010; Treasurer, 2009; Secretary 2008.

### 10:55 – 11:50 AM → A Novel Approach to Engaging IEEE Members in Community Activities

**Session Synopsis:** In 2012, The Chicago Section received a grant of \$40,000 from the IEEE Foundation and Life members Committee to support Public Libraries in the creation of circulating science kit collections. Twenty six Public Libraries participated in the grant program Hear about the lessons learned and how your Section can go about starting up a similar activity. Objectives: 1. Gain an understanding of the role public libraries can play in STEM education initiatives by awakening pre-university students to the wonders of science; 2. Learn best practices and lessons learned from Sections who have pioneered the support of public libraries in the creation and management of circulating science kit collections; 3. Hear ideas for local funding of science-themed library programs 4. Learn a great way to gain positive public awareness of IEEE and your Section at no cost.

**Session Speakers: John A Zulaski, Bernard Sander**



**Bio: John A Zulaski** is Past Chair IEEE-Chicago Section, Current Chicago Section Member Communications Chair and Director of the IEEE-Chicago Section Science Kits for Public Libraries project.



**Bio: Bernard Sander** is current Region 4 Treasurer, Past chair IEEE-Chicago Section, Member of Science Kits for Public Libraries Advisory Committee, and Retired Bell Labs Technical manager.

### 1:25 – 2:10 PM → Managing Your Career as a Business

**Session Synopsis:** You are the CEO of You, Inc.! Evidence shows that most engineers spend more time planning their vacations than they do managing their careers. The goal of this session is to heighten awareness of the role that active career management has in ensuring the practicing engineer has a rewarding, satisfying career. The session will introduce the mindset that we must take charge of our careers, and introduce specific actions that can be taken immediately to help ensure success. Special emphasis will be placed on the tools and resources that IEEE-USA has available to members.

**Session Speaker:**

**Ed Kirchner** - Chair, IEEE-USA Employment and Career Services committee





**Bio: Ed Kirchner** is a Senior IEEE member with 29 years of experience, including 17 years in senior technical and management positions. He is currently a Senior Systems Engineer at Harris Corporation, assigned as a Project Engineer and Group Leader. He has also worked at Northrop Grumman and United Technologies. He is an iNARTE certified Electromagnetic Compatibility engineer, and holds BS in Electrical Engineering from Syracuse University, an MBA in Management from New York University, and a MS in Systems Engineering from the Florida Institute of Technology. He has facilitated career workshops, and been a speaker on career management topics, at numerous IEEE events spanning all IEEE-USA regions.

**2:20 – 3:05 PM → Are Professional / Technical Organizations Sustainable or Relevant Anymore?**

**Session Synopsis:** IEEE-USA's Associate Managing Director Scott D. Grayson will moderate a discussion among engineering and computer science students, some of whom are IEEE members and others who are not. Hear why some students join IEEE and others do not. Will they retain their membership after graduation? Will the non-members join IEEE after graduation? Find out why or why not? Learn from them. What can we do to better engage our members of the future? What can you do in your local section?

**Session Speakers: Scott Grayson and Panel of Students**



**Bio: Scott Grayson** As IEEE-USA's associate managing director, Scott Grayson is responsible for programs relating to employment, career, professional issues, and member engagement. These include, among others, the IEEE-USA Employment Navigator, Webinar series, E-books, Consultants Database, Entrepreneurs Village and Salary Service. He also supports the IEEE-USA Board of Directors.

Grayson joined IEEE-USA in 1990 and was previously responsible for state and federal legislative programs in areas of career policy, high technology, Internet policy and intellectual property. He built a number of coalitions focused on technology and the law and also served as IEEE-USA's liaison to numerous scientific, engineering and legal organizations.

Grayson took a one-year hiatus from IEEE-USA in 1998 to serve as executive director of the American-Israel Chamber of Commerce and Industry of Minnesota, an organization that links the high-tech business communities of the Upper Midwest and Israel. He holds a Bachelor of Arts degree in political science from the University of Wisconsin and a master's in international affairs from New York University.

**Panel of Students:** Several local students, both IEEE Student Members and non-members will discuss joining vs not joining a professional association:

- **Karen Day** wanted to study EE, but is majoring in Project Management with a minor in IT Management at George Fox University.

- **Nicole Gruber** is a student member at the Colorado School of Mines.
- **Erik Johnson** is a student at the Colorado School of Mines (CSM), IEEE S-PAC Region 5 Support Coordinator, IEEE Denver Section Young Professionals Chair, and CSM IEEE Webmaster.
- **James Schiffer** will be a student at Portland Community College who recently found out that IEEE exists – from one of his textbooks!
- **David Silver** is a renewable energy major at the Oregon Institute of Technology.

**3:35 – 4:20 PM → K-12 STEM Activities Workshop**

**Session Synopsis:** Join the IEEE Region 6 Representative on the IEEE-USA K-12 STEM Literacy Committee for an interactive discussion of STEM Outreach activities and opportunities. Obtain ideas for K-12 STEM outreach programs for your section. Discuss Outreach programs IEEE has. Brag about an Outreach program your section does. The content of the session will be determined by the requests of the audience; so bring your questions, wants, and needs for your section’s Outreach program. Find out more about the IEEE-USA Educator-Engineer Partnership Award. Plan to leave the session with some great ideas for Outreach programs and how to successfully implement them.

**Session Organizer/Speaker: Coral Jean Cotterell**



**Bio:** Coral Jean Cotterell is a senior member of IEEE. She has been involved with STEM Outreach activities in IEEE and the Society of Women Engineers (SWE) since 1983. She is currently the Region 6 K-12 STEM Literacy representative for IEEE-USA. She has a BSEE from Oregon State University and a BS-Biology from Portland State University.

**4:30 – 5:15 PM → IEEE USA Policy Activities and 2013 Legislative Overview**

**Session Synopsis:** We have a new Congress in 2013. What can IEEE members expect from it? By August, we should have a good idea what the priorities will be in Washington, and what we can do about them.

**Session Speakers: Chris Brantley and Russell Harrison**



**Bio:** Chris J. Brantley is managing director of IEEE-USA and acting director of IEEE-USA's government relations programs. Prior to joining IEEE as a government relations manager in 1989, Brantley worked for the American Association of Engineering Societies. He holds a juris doctorate in law and master’s degree in international affairs from the American University’s Washington College of Law and School of International Service, respectively. He is also an adjunct Professor at the Washington College of Law, where he teaches graduate seminars on international courts.



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**Bio:** Russ Harrison is the Senior Legislative Representative for Grassroots Activities with IEEE-USA, where he helps IEEE members in the United States interact with their elected representatives. Russ has spoken to over 180 local IEEE groups in his ten years with IEEE, focusing on the interaction between engineers and our political leaders.