



IEEE NEWS FOR MARCH 2012

Jacob Z. Schanker, P.E., Newsletter Chair
Rochester IEEE home page at: <http://rochester.r1.ieee.org>

Rochester Section Meeting – Tuesday, March 6, 2012 at 12 Noon

Bringing in the New Year is the next Rochester Section business meeting on Tuesday, March 6, 2012 at 12:00pm, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road.

Any IEEE member is welcome to attend and to participate, or just to observe. Lunch is \$3 for IEEE members. No reservation or RSVP is needed, just show up.

IEEE Joint Chapters Meeting - April 4

One of our major spring events is the annual Joint Chapters Meeting (JCM). This year, it will be held on Wednesday, April 4 at the RIT Inn and Conference Center. The full details and program of this event will be found in the full-page announcement in this issue of the newsletter.

The keynote speaker will be Mark Gabriel - well known author and speaker on issues in the energy industry. His book, *Visions for a Sustainable Energy Future* (Fairmont Press) won the Indie Award for Excellence in Environmental writing. Mark is a Senior Vice President with Halcrow Inc., and consults with leading utilities and energy companies in both the water and power business. He is a frequent speaker and management consultant.

Speaker Biography:

Mark Gabriel is the Senior Vice President of Strategy and Business Process for Black and Veatch, working with global clients in the development and execution of strategic initiatives. He leads Black and Veatch's Pathfinder group as well as industry verticals in electricity, water, oil and gas and manages its Business Process Group of professionals whose activities include rates and regulatory, resource planning, transmission, natural gas and water. In addition, he leads the company cyber security practice.

Mark has worked across a broad set of industry issues from advanced metering and intelligent infrastructure to advanced generation, gas and oil technology deployments. He has developed several proprietary analytic techniques in mergers and acquisitions, technology roadmapping and strategic messaging. His clients include some of the

nation's largest investor-owned utilities as well as a number of co-ops, G&Ts, municipal entities, NASA, DOE, the State of Maryland and Lawrence Berkeley National Lab. In addition he has worked with a number of water agencies and natural gas companies.

Prior to joining Black and Veatch Mark headed up the North American expansion into the power business for Halcrow, a 158-year-old British firm. He built the company's North American energy practice. Mark also was a Senior Vice President for Energy as well as an executive management consultant and principal with R.W. Beck, a national engineering-based consulting firm. He is a well known speaker and writer and his book, Visions for a Sustainable Energy Future won the 2009 Indie Excellence Book Award for environmental writing.

Mark was the Chief Executive Officer of Positive Energy Directions, which was acquired by R.W. Beck in 2006. Prior to founding Positive Energy Directions, Mark spent eight years as the Electric Power Research Institute's Acting President and was Chief Marketing and Sales Officer. On behalf of the EPRI Board, Mark led the Electricity Sector Framework for the Future, a collaborative effort to shape the technical, economic and regulatory future of the U.S. electricity industry.

Mark serves on the Board of Directors of Argos Utilities Inc. and is a former Director of Plexus Research (acquired by R.W. Beck in 2007), PEAC and Primen, two former subsidiaries of the Electric Power Research Institute.

PACE Meeting on Effective Problem Solving – Wednesday, March 7

Topic: Effective Problem Solving

Speaker: Mike Ponomarev

Date: Wednesday March 7, 2012

Time: 6:00 PM

Location: Spiegel Community Center, Room 101,
35 Lincoln Avenue, Pittsford NY 14534

Abstract: An overview of the best practices on how to maximize effectiveness in solving problems both in business and life. We all routinely face problems and adapting the most effective techniques is essential to your success.

Agenda:

6:00 – 6:30	Networking and Refreshments
6:30 – 7:30	Presentation
7:30 – 8:00	Discussions

Speaker Biography:

Mike Ponomarev is an experienced professional with 18 years of diversified cross-functional and cross-organizational portfolio of roles in the fields of technology/software development and business operations. Mike's strong expertise is to identify business needs and craft solutions that meet an organization's goals and budget. He passionately improves business processes and systems for competitive advantage. Mike is a Certified Lean Six Sigma Green Belt and holds MS in Strategic Leadership from Roberts

Wesleyan College. He is a member of International Institute of Business Analysis (IIBA) currently pursuing Certified Business Analysis Professional (CBAP) designation. Mike is an avid outdoors man enjoying hiking, camping, skiing, swimming, and scuba diving. Mike lives in Pittsford, NY with his wife and two beautiful daughters Lisa and Natalie.

Registration: Registration is requested to provide a headcount for refreshments. This can be done using Vtools: https://meetings.vtools.ieee.org/meeting_view/list_meeting/10607 or by email to – J.DeVita@ieee.org (PACE Chair, IEEE ROC Section)

This meeting is free and open to the public.

Leadership skills tutorial – March 20

Learn the skills you will need to be successful early in your career by becoming a strategic innovative leader. Help your organizations succeed in the 21st century as they face volatile change, manage diverse work cultures and increasing levels of customer requirements.

Speaker: Sherri McArdle, Co-CEO, McArdle Ramerman Center for Strategy, Leadership, Innovation and Operational Excellence

Date: Tuesday, March 20

Time: 6:00 – 7:00pm

RSVP at <http://goo.gl/Y68Th>

Light refreshments will be provided. Sponsored by RIT International Business Group. Co-Sponsored by IEEE Computer Society RIT Branch and by IEEE GOLD.

TMC Meeting – March 20

The Technology Management Council, Rochester Section Chapter, is co-sponsoring a panel discussion of experts from the think tanks on Immigration Policy.

Daniel Costa, immigration policy analyst, Economic Policy Institute; Jerry Kammer, senior research fellow, Center for Immigration Studies; and also expected, but not confirmed is Audrey Singer, senior fellow, Brookings Institution.

Date: Tuesday, March 20, 2012

Time: 2:00pm – 3:30pm

Location: Rochester Institute of Technology – room to be announced.

For further information and updates:

https://meetings.vtools.ieee.org/meeting_view/list_meeting/10705

Microwave Theory and Techniques at the JCM, April 4

Title: A New Frontier for Microwave Engineers: Terahertz Systems on Chip

Speaker: Ehsan Afshari, Assistant Professor, Cornell University, Ithaca, NY

Abstract: There is a growing interest in terahertz and mm-wave systems for compact, low cost and energy efficient imaging, spectroscopy, and high data rate communication. In this talk, the recent advances in the realization of various building blocks for a complete THz system will be presented. First we show different high power sources at 480 GHz and 300 GHz on standard low cost CMOS. We also introduce a design using GaN HEMT devices that can generate and radiate 0.5 W at 500 GHz. Next, we show a novel high gain amplifier at around 300 GHz on 65 nm CMOS. We also show tunable high power signal sources between 300 GHz and 500 GHz based on the theory of coupled oscillators. Finally, we conclude with a terahertz imaging system with excellent noise performance in standard CMOS.

Biography: Ehsan Afshari was born in 1979. He received the B.Sc. degree in Electronics Engineering from the Sharif University of Technology and the M.S. and Ph.D. degree in electrical engineering from the California Institute of Technology, Pasadena, in 2003, and 2006, respectively. In August 2006, he joined the faculty in Electrical and Computer Engineering at Cornell University. His research interests are mm-wave and terahertz electronics and low-noise integrated circuits for applications in communication systems, sensing, and biomedical devices.

Prof. Afshari serves as the chair of the IEEE Ithaca section, as the chair of Cornell Highly Integrated Physical Systems (CHIPS), as a member of International Technical Committee of the IEEE Solid-State Circuit Conference (ISSCC), as a member of the Analog Signal Processing Technical Committee of the IEEE Circuits and Systems Society, as a member of the Technical Program Committee of the IEEE Custom Integrated Circuits Conference (CICC), and as a member of Technical Program Committee of the IEEE International Conference on Ultra-Wideband (ICUWB).

He was awarded National Science Foundation CAREER award in 2010, Cornell College of Engineering Michael Tien excellence in teaching award in 2010, Defense Advanced Research Projects Agency (DARPA) Young Faculty Award in 2008, and Iran's Best Engineering Student award by the President of Iran in 2001. He is also the recipient of the best paper award in the Custom Integrated Circuits Conference (CICC), September 2003, the first place at Stanford-Berkeley-Caltech Inventors Challenge, March 2005, the best undergraduate paper award in Iranian Conference on Electrical Engineering, 1999, the recipient of the Silver Medal in the Physics Olympiad in 1997, and the recipient of the Award of Excellence in Engineering Education from Association of Professors and Scholars of Iranian Heritage (APSIH), May 2004.

NEWS from IEEE-USA

IEEE-USA E-Books are available free as special benefit to IEEE members.

As a special benefit of IEEE membership for February, IEEE-USA is offering a free e-book, "Guidelines for Professional Employment -- A Framework for Communication."

The e-book, prepared by the IEEE-USA Employment and Career Services Committee, is designed to help employers and employees understand workplace conditions fully and clearly and provide guidance toward behavior beneficial to the country and the engineering profession. Regular discussion of these guidelines among employers, managers, human resources personnel and engineers helps to provide a basis for enhancing their working relationships, and should lead to good workplace communication and cooperation.

IEEE members can get their free download of "Guidelines for Professional Employment -- A Framework for Communication" now through 29 February at: <http://www.ieeeusa.org/communications/ebooks/default.asp>. The nonmember price is \$5.99.

In March, IEEE-USA will offer the e-book, "Engineering the Art of Negotiation Part 1: How to Handle Your Boss" free to IEEE members. It will be available at:
<http://www.ieeeusa.org/communications/ebooks/default.asp>

Other IEEE-USA links you may find useful:

Web: <http://www.ieeeusa.org>

Facebook: <http://www.facebook.com/ieeeusa>

Twitter: <http://www.twitter.com/ieeeusa>



2012 Rochester Section Joint Chapters Meeting

April 4, 2012

RIT Inn & Conference Center, 5257 W. Henrietta Road

Registration and refreshment: 4:30 – 5:30 PM
 Chapter Technical Presentations: 5:30 – 6:30 PM (please see presenters/titles below)
 Networking (cash bar): 6:30 – 7:00 PM
 Dinner & Keynote Presentation: 7:00 – 9.30 PM



Keynote Speaker: Mark Gabriel

Senior Vice President, Strategy and Business Process, Black and Veatch

Visions for a Sustainable Energy Future

Much has been made of the “smart grid” for utilities with promises of significant customer benefits, reduced carbon emissions, improved reliability and the freedom to include renewable energy. While the concept of intelligent infrastructure is indeed real, there is significant hype and misunderstanding. Black & Veatch is the world’s leading company assisting electric, gas and water utilities in developing their smart grid projects. Mark Gabriel will discuss the reality of intelligent infrastructure and critically, how it plays a key role as one of the six Megatrends facing society in the U.S. as outlined in his award winning book, Visions for a Sustainable Energy Future.

Parallel Technical Presentations (5:30 – 6:30 PM)*

<i>Electromagnet Compatibility / Product Safety Engineering & Electron Devices Societies</i>	James Herrmann	Managing Partner and Principal Engineer at Applied Logix, LLC	Proven PWBA Design Techniques To Eradicate The Common Mode Noise-Induced EMI That Is The Bane Of Many Modern Electronic Designs
<i>Microwave Theory & Techniques Society</i>	Dr. Ehsan Afshari	Professor Cornell University	A New Frontier for Microwave Engineers: Terahertz Systems on Chip
<i>Power & Energy Society</i>	Daniel O’Connell	Director, GM’s Fuel Cell Commercialization	Electrification of the Automotive Industry - General Motors Plan with the VOLT and Fuel Cell Vehicles
<i>Technology Management Council</i>	Paul Tolley	CEO of Smart Systems Technology & Commercialization Center - Canandaigua	Smart Sensors – Technology Bringing Jobs to Upstate New York
<i>Geoscience and Remote Sensing Society</i>	Dr. Bea Csatho	University at Buffalo	Our dynamic planet: NASA’s ICESat laser altimetry missions to measure ice sheet and vegetation changes
<i>Signal Processing Society</i>	Robert T. Collins	Professor CSE Penn State University	Computer Vision Analysis of Crowded Scenes
<i>Communications, Aerospace and Electronic Systems Societies</i>	George L. Heron	Product Management, CyberPoint International	Cyber Safe? An unconventional view from the behind the lines in today’s unconventional (cyber) war

*No charge for attending technical presentations. Reservation / registration not required.

Dinner Selections

Prime Rib of Beef

Ten Ounces, slow-roasted with Natural Juices

Or Lobster, Fra Diavolo

Linguine tossed with Lobster in a Spicy Tomato Sauce

Or Eggplant Napoleon

Breaded Eggplant, roasted Red Pepper, Parmesan Cheese and Baby Spinach, Toasted Walnuts and Amaretto Cream Sauce

Reservations (required for dinner):

Register on-line (pay-pal accepted) or contact Gene Saltzberg at gene.saltzberg@ieee.org

Dinner: \$25.00 (IEEE members), \$35.00 (Non-members), and \$15 for Student members.

Further details and on-line registration at: https://meetings.vtools.ieee.org/meeting_view/list_meeting/10885