



## IEEE NEWS FOR APRIL 2013

**Jacob Z. Schanker, P.E., Newsletter Chair**

The new Rochester section web site is at: <http://rochester.ieee.org/>

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### **Rochester Section Meeting – Tuesday, April 2, 2013 at 12 Noon**

The next Rochester Section business meeting is on Tuesday, April 2, 2013 at 12:00pm, at the **Hibachi Sushi Buffet Restaurant** in South Town Plaza on Jefferson Road (Route 252) just west of West Henrietta Rd. (Route 15). Any IEEE member is invited to attend. Lunch is only \$3 for IEEE members. No reservation or RSVP is needed, just show up.

### **IEEE Joint Chapters Meeting – April 17**

The annual IEEE Rochester Section Joint Chapters Meeting is on Wednesday, April 17, at the RIT Inn and Conference Center on West Henrietta Road, beginning at 4:00pm. The meeting will focus on the economic forecast for technology-driven companies and will highlight startup companies and new technologies being developed regionally in the Rochester area. The meeting will feature a keynote presentation by Dr. Kent Gardner and two parallel sessions with technical presentations from several IEEE society chapters.

Don't miss this great opportunity to meet and network with people from all engineering disciplines and to learn more about the activities of the different IEEE society chapters in the Rochester area. The technical sessions are free to attend, and non-members are also welcome. Reservations *are* required to attend the dinner and keynote presentation (\$30 for IEEE members, \$40 for non-members, and \$15 for IEEE student members).

See the full page announcement in this issue for further details.

### **IEEE GRSS Chapter presentation at the JCM April 17**

The GRSS speaker will be Dr. Michael Gartley. His talk is titled, "Physics based modeling of imagery for remote sensing applications."

Michael Gartley received the B.S. degree in physics from Binghamton University, the M.S. degree in materials science from Rochester Institute of Technology (RIT), and the Ph.D. degree in imaging science from RIT. He is an Associate Scientist in the Digital Imaging and Remote Sensing Laboratory at the Rochester Institute of Technology. His

current research interests focus on modeling and simulation of target phenomenology across modalities, with an emphasis on bi-directional reflectance distribution function and polarization effects. Prior to joining RIT, he was employed by ITT Space Systems where he was involved in modeling and performance analysis of air and space-borne remote sensing platforms.

## **IEEE MTTS-AP Joint Chapter presentation at the JCM April 17**

Rochester Section Joint Microwave Theory and Techniques and Antennas and Propagation Society Chapter speaker will be C. J. Reddy, President, Applied EM, Inc. His talk is titled, "Advanced Computational Tools for Antenna Design and Placement Studies."

**Abstract:** Recent advances in computational electromagnetic tools have made possible the design and integration of antennas on various electrically large ground, sea and air platforms. Numerical computations can be performed to evaluate the effects of antenna placement, radiation hazard, EMC/EMI, etc. The typical numerical approaches include full wave techniques such as Method of Moments (MoM), Multilevel Fast Multipole Method (MLFMM), and asymptotic techniques such as Physical Optics (PO) and Uniform Theory of Diffraction (UTD). For many practical applications, sometimes it is necessary to study the electromagnetic behavior on a specific structure over a broad frequency band, and, therefore, it is important to have some benchmark data on computational resources needed for some commonly used numerical techniques. In this talk, representative full-size air, ground and sea platforms are considered, and the frequency limit is pushed at different bands using several numerical techniques. The accuracy and computational resources are compared.

**Biography:** C. J. Reddy received B.Tech. degree in Electronics and Communications Engineering from Regional Engineering College (now National Institute of Technology), Warangal, India in 1983. He received his M.Tech. degree in Microwave and Optical Communication Engineering and Ph.D. degree in Electrical Engineering, both from Indian Institute of Technology, Kharagpur, India, in 1986 and 1988 respectively. From 1987 to 1991, he worked as a Scientific Officer at SAMEER (India) and participated in radar system design and development. In 1991, he was awarded NSERC Visiting Fellowship to conduct research at Communications Research Center, Ottawa, Canada. Later in 1993, he was awarded a National Research Council (USA)'s Research Associateship to conduct research in computational electromagnetics at NASA Langley Research Center, Hampton, Virginia. Dr. Reddy worked as a Research Professor at Hampton University from 1995 to 2000, while conducting research at NASA Langley Research Center. During this time, he developed various FEM codes for electromagnetics. He also worked on design and simulation of antennas for automobiles and aircraft structures. Particularly, development of his hybrid Finite Element Method/Method of Moments/Geometrical Theory of Diffraction code for cavity backed aperture antenna analysis received a Certificate of Recognition from NASA.

Currently, Dr. Reddy is the President and Chief Technical Officer of Applied EM Inc., a small company specializing in computational electromagnetics, antenna design and development. At Applied EM, Dr. Reddy successfully led many Small Business Innovative Research (SBIR) projects from the US Department of Defense (DoD). Some of the technologies developed under these projects are being considered for transition to the DoD. Dr. Reddy also serves as the President of EM Software & Systems (USA) Inc. At EMSS (USA), he is leading the marketing and support of commercial 3D electromagnetic software, FEKO in North America.

Dr. Reddy is a Senior Member of Institute of Electrical and Electronics Engineers (IEEE) and also a Senior Member of Antenna Measurement Techniques Association (AMTA). He has been elected Fellow of the Applied Computational Electromagnetic Society (ACES) in 2012 and served on ACES Board of Directors. He has published numerous journal papers, conference papers, and NASA Technical Reports. Dr. Reddy was the General Chair of ACES 2011 Conference held in Williamsburg, VA. He is currently serving as the General co-Chair of ACES 2013 conference, Monterey CA.

### **IEEE EMC – PSE Joint Chapter Officers**

The Rochester joint chapter of the Electromagnetic Compatibility and the Product Safety Engineering societies recently elected officers for 2013. They are:

Chair: James Shipkowski  
Vice-chair: Jacob Schanker

### **Join us at the IEEE Table at the RES Annual Gala April 20**

The Rochester Section traditionally has one or two tables (of ten or twelve) at the annual RES Gala, which this year will be on Saturday, April 20, 2013. This where the entire Rochester engineering community comes to have fun and celebrate. The IEEE awards two scholarships at the gala and the winners will likely be sitting with us at our tables.

IEEE members are invited to the Rochester Engineering Society 111th Annual Gala at the Riverside Convention Center on April 20. You may bring a guest; the cost for IEEE members or their guest is \$40 per person. Reception starts at 5:15, with entertainment, dinner and program from 6:15 to 9:15pm. Further details are in this issue and on the RES web site, [www.roceng.org](http://www.roceng.org).

To make a reservation, call Harold Paschal at 585-385-5898 or cell 585-643-9266, or call Bill Fowlkes at 585-588-9424 or cell 585-298-7820. Payment must be received by April 2nd. Make checks out to *IEEE Rochester Section*. Checks may be brought to the March or April Rochester Section Meetings or mailed to: Harold Paschal, 276 Dale Road, Rochester, NY 14625



## 2013 Rochester Section Joint Chapters Meeting

The Rochester IEEE Society will be hosting a joint meeting for all IEEE chapters on April 17, 2013 that is open to the general public. The meeting will focus on the economic forecast for technology-driven companies and will highlight startup companies and new technologies being developed regionally in the Rochester area. The meeting will feature a keynote presentation by Dr. Kent Gardner and two parallel sessions with technical presentations from different chapters and societies. Don't miss this great opportunity to meet and network with people from all engineering disciplines and to learn more about the activities of the different IEEE chapters and societies in the Rochester area. The technical sessions are free to attend. Reservations are required to attend the dinner and keynote presentation (\$30 for IEEE members, \$40 for nonmembers, and \$15 for student members).

*April 17, 2013*

***RIT Inn & Conference Center, 5257 W. Henrietta Road***

Registration and refreshment:	4:00 – 4:30 PM
Technical Presentations Session I:	4:30 – 5:30 PM
Technical Presentations Session II:	5:30 – 6:30 PM
Networking (cash bar):	6:30 – 7:00 PM
Dinner & Keynote Presentation:	7:00 – 9.30 PM



**Keynote Speaker  
Dr. Kent Gardner**

Chief Economist and Chief Research Officer  
Center for Governmental Research

### Prospects for Technology-Driven Business in Rochester

Dr. Gardner joined CGR in 1991 as Director of Economic Analysis and served as President from 2005 to 2012. He is immediate past president of the national Governmental Research Association and currently serves as Secretary. Previously he was Associate Professor of Economics at Potsdam College of the State University of New York, where he also founded the North Country Economic Research Center. His previous experience includes serving as senior economist for a Saratoga Springs NY-based consulting group. Dr. Gardner holds B.A., M.A. and Ph.D. degrees from the University of Wisconsin at Madison.

**Reservations (required for dinner):**

**[Register on-line](#)** (pay-pal accepted) or contact Greg Gdowski at [Greg\\_Gdowski@urmc.rochester.edu](mailto:Greg_Gdowski@urmc.rochester.edu)

Dinner: \$30.00 (IEEE members), \$40.00 (Non-members), and \$15 for Student members.

Further details and on-line registration at: [https://meetings.vtools.ieee.org/meeting\\_view/list\\_meeting/17093](https://meetings.vtools.ieee.org/meeting_view/list_meeting/17093)

## Parallel Technical Presentations

### Session I (4:30-5:30PM)

**Technology Management Council** -- Dr. Mark Bocko, Center for Emerging and Innovative Sciences, Director, University of Rochester, Department of Electrical and Computer Engineering

**Electron Devices and Circuits and Systems Joint Chapter** – TBA

**Engineering in Medicine & Biology Society** – TBA

**EMC/PSE** – TBA

### Session II (5:30-6:30PM)

**Microwave Theory & Techniques/AP** -- Advanced Computational Tools for Antenna Design and Placement Studies, Dr. C. J. Reddy. President, Applied EM, Inc. EM Software & Systems (USA) Inc., Hampton, Virginia.

**Signal Processing Society** – Biomedical Signal Processing Applications to Enhance Diagnostic and Treatment Technologies. Dr. Behnaz Ghoraani, Rochester Institute of Technology, Biomedical Engineering.

**PACE** -- Panel Discussion - Innovation and Entrepreneurship – Taking Ideas to the Next Level, Bill Jones, RIT Venture Creations, Bob Kot, High Tech Rochester, Brian Kane, Rochester Professional Consultants Network, Mark Gibson, Xelic Inc

**Computer Society** -- TBA

**Geoscience & Remote Sensing** -- Dr. Michael Gartley – Physics-based modeling of imagery for remote sensing applications.

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

## Dinner Selections

### Prime Rib of Beef

Ten Ounces, slow-roasted with Natural Juices

### Or Seared Salmon

Prosecco Cream Sauce

### Or Spicy Orecchiette

Pasta with Mixed Vegetables in Arrabiata Sauce

*All dinners include salad, dinner roll basket, coffee, tea, and dessert*

Reservations (required for dinner):

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