IEEE NEWS FOR April 2009

Jacob Z. Schanker, P.E., Newsletter Chair
Rochester IEEE home page at: http://www.r1.ieee.org/~roch

Rochester Section Meeting - Tuesday, April 7, 2009

The next Rochester Section business meeting is on Tuesday, April 7, 2009 at Noon, at the Shanghai Restaurant, 2920 West Henrietta Road, just south of the intersection with Brighton-Henrietta Town Line Road. All IEEE members are welcome to attend this meeting, meet your officers and have lunch for just $3.00.

Congratulations New Senior Member

Congratulations to Andre Souza on his recent elevation to Senior Member.

RES Representative for the Rochester Section – open position

The Rochester Section of the IEEE has been a very long-time affiliate member of the Rochester Eningeering Society. As such, we send a representative to participate in the governance of the RES by attending RES board meetings. I have been serving in this position, and have found it very rewarding. Because my teaching duties at RIT have lately had me in class when the RES board is meeting, I felt that I should step down and open the position to someone who can attend the meetings, which are held each month on the third Wednesday at Noon. Although I, and my immediate predecessor Mac Drummond, are both RES members and Professional Engineers, there is no requirement that the IEEE representative be other than a full member of the IEEE.

This is a great opportunity to serve, to network, and to grow in the profession. If you are interested in possibly putting yourself forward for this appointment, you can contact the Rochester Section Chair, Paul Lee, at section-chair@ieee.rochester.ny.us. If you have questions about what is involved in the position, you may contact me at j.schanker@ieee.org.

IEEE Joint Chapters Meeting April 15

The IEEE Rochester Section Joint Chapters Meeting (JCM) will be held on Wednesday, April 15 at the RIT Inn and Conference Center on West Henrietta Rd. The JCM will consist of parallel Chapter-sponsored technical seminars followed by a dinner and keynote presentation. See the full-page announcement in this issue for more information. And, read the abstracts of some of the presentations here.

Electromagnetic Compatibility/Product Safety Engineering at JCM

Topic: Fundamentals of EMI Simulation
Speaker: Isaac Waldron, Ansoft, Burlington, MA.
Abstract: EMI continues to be a challenging problem for electronics systems but preventing it is no longer the trial and error process it once was. Proper signal and power integrity are crucial to first pass chamber success, and simulation tools that can solve these problems are now in common use. This presentation will provide an introduction to EMC and the root causes of EMI related to package and PCB design. Capacitor placement, plane impedance, current return path and common mode conversion will be discussed. Various simulation and measurement results from real world designs will be shown.
Speaker Biography: Isaac Waldron received the B.S. (2004) in Electrical Engineering and M.S. (2006) in Electrical and Computer Engineering from Worcester Polytechnic Institute. He has been an Applications Engineer with Ansoft since August 2006 with a focus on Signal Integrity, Power Integrity, and Electromagnetic Interference.

Engineering in Medicine and Biology at the JCM

Topic: The Time is Now: Engineering opportunities in biology, medicine and economics.
Speaker: Ted Farrell, Ortho-Clinical Diagnostics
Speaker Biography: Ted Farrell is Group Director, Systems R&D at Ortho-Clinical Diagnostics (a Johnson & Johnson company), responsible for development of new in-vitro diagnostic analyzers. OCD's analyzers are used in clinical laboratories and transfusion medicine centers throughout the world. Before coming to J&J, Ted was technical director and senior program manager at BBN and General Electric for a variety of defense-related R&D programs including real-time signal processing and system performance modeling for sonar, radar, speech detection, nuclear test monitoring and com

Video Coding Tutorial Presentation – April 16

The tutorial is sponsored by the IEEE Computer Society Rochester Chapter and the RIT IEEE Computer Society Student Branch.

Topic: Video Coding: Standards, Implementation and Adaptation.
Speaker: Professor Iain Richardson, Centre for Video Communications, The Robert Gordon University, Aberdeen, UK
Outline: •Video coding standards. •Overview of current standards (with particular emphasis on H.264/AVC). •Coding tools and processes. •Performance comparisons.

•Implementing and optimizing video codecs. •Rate, distortion and complexity. •Analysis of coding tools. •Optimizing the rate-distortion-complexity trade-off. •Adaptive and reconfigurable coding. •Adaptive coding techniques and benefits. •MPEG Reconfigurable Video Coding. •Fully Configurable Video Coding – overview, system architecture, configuration mechanisms, open research challenges.
Location: Golisano Auditorium, Thomas Golisano College of Computing & Information Sciences, Rochester Institute of Technology
Date: Thursday, April 16, 2009
Time: 1:00 PM to 5:00 PM
Registration: (including refreshments and dinner following) IEEE Members $25, Non-members $35, Students $20
Dinner: 5:30 PM at restaurant to be announced.
Info: For Further Information, please contact Prof. Ken Hsu 475-2655,or Dr. Howard Brill 256-8424.

Rochester Chapter IEEE-Computer Society – April 18

Please join us at the Rochester BarCamp4 on Saturday, April 18, 2009. It will take place at the Rochester Institute of Technology, GCCIS Building 79, on the third floor.

BarCamp is an informal but intense participative event to discuss, demo and present cool new ideas in computing. The cost is free, but everyone is expected to actively participate. More information may be found at: http://barcamprochester.org

Engineering in Medicine and Biology April 23

The Rochester EMB Society Chapter will be joining forces with the Syracuse and Binghamton EMB chapters at the Spring EMBS HealthTech Symposium at the Welch Allyn Lodge in Skaneateles Falls on April 23, 2009, from 2:00 until 7:00 PM. Come join us for an opportunity to meet some of your regional colleagues from the Upstate area in the Medical Engineering field.

The program will include a tour of Welch Allyn's Automated Blood Pressure Cuff Manufacturing Operations, invited presentations, and a poster session highlighting research from the Upstate NY area.

Cost: $20 for professionals, $10 for IEEE Members, Free for students & EMBS Members. Payment received at the door. For directions and up to the date information, see the EMBS chapter website:
http://www.ewh.ieee.org/r1/syracuse/EMBSWeb/SyracuseEMBS.htm

IEEE Geoscience and Remote Sensing Society – April 29

Date: Wednesday, April 29, 2009
Time: Pizza and soda provided at 5:30 pm. Meeting and Presentation at 6 pm
Location: Carlson Learning Center (Room 1275), Chester F. Carlson Center for Imaging Science (Building 76), Rochester Institute of Technology
Topic: High Performance Multiband Airborne Remote Sensing System
Speaker: Donald McKeown, Laboratory for Imaging Algorithms and Systems, Chester F. Carlson Center for Imaging Science, Rochester Institute of Technology
Abstract: The Chester F. Carlson Center for Imaging Science at the Rochester Institute of Technology operates a unique airborne remote sensing instrument that provides high resolution, georeferenced imagery in each of four spectral bands including three band (RGB) visible, short wave infrared, midwave infrared, and long wave infrared. The thermal infrared sensors also include an innovative in-flight calibration capability allowing thermal images to be rendered in terms of absolute aperture radiance or even target temperature (allowing for atmospheric and target emissivity effects).

A high performance GPS/INS system allows for direct geo-referencing of imagery without the use of ground control. An RIT developed processing workflow can also be applied to generate georeferenced imagery in realtime on board the aircraft for emergency response applications where timeliness of data delivery is vital. Experiments are underway this spring and summer to implement an improved RF data transmission system which will reliably transmit processed image data form the aircraft to the ground.

This sensor system was originally developed with funding from NASA grant NAG13-02051 under the name of Wildfire Airborne Sensor Program (WASP) to develop a new system for detection and mapping of wildfires. It is now available to use in a variety of applications. This presentation will describe the WASP sensor system, its operations and applications.

Speaker Bio: Donald McKeown is a Distinguished Researcher in the Laboratory for Imaging Algorithms and Systems, a laboratory within the Chester F. Carlson Center for Imaging Science at RIT where he is responsible for project management and program development. He has been manager of the WASP program and related projects since its inception in 2002. Prior to joining RIT in 2001, he was manager of advanced sensor development at Eastman Kodak's Government System Division (now ITT's Space Systems Division). There he was in charge of developing next generation focal planes and processing electronics for high performance space based imaging systems. While at Kodak, he was also responsible for system engineering for the IKONOS satellite high resolution imaging payload.