



## **IEEE NEWS FOR OCTOBER 2007**

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

**E-mail: [j.schanker@ieee.org](mailto:j.schanker@ieee.org)**

**Rochester IEEE home page at: <http://www.r1.ieee.org/~roch>**

---

### **Rochester Section Meeting Tuesday, October 2, 2007**

The next Rochester Section business meeting is on Tuesday October 2, 2007 at Noon, 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 only \$3 for IEEE members. No reservations or RSVP is needed, just show up.

### **Nominations for Section Officers in 2008**

The nominations committee, comprised of Ken Arnold, Jim Ziobro, and Joe DeVita, with Jean Kendrick as advisor, is pleased to announce the following slate of candidates for Rochester Section offices in 2008.

Chair: Jayanti Venkataraman

Vice Chair: Paul Lee

Treasurer: Alex Loui

Secretary: open

Development and Awards Chair: Jean Kendrick

These represent the elective offices in the Rochester section. Other Executive Committee positions are filled by appointment of the Chair, with the approval of the Excom.

Our bylaws also allow for nominations for section officer positions to be made by petition, which must be received by November 1, 2007. To be valid, nominating petitions must be signed by twelve or more Rochester Section members of member grade or higher. Petitions may be mailed to the IEEE Rochester Section, c/o RES, 150 State Street, Rochester, NY 14614

If no valid petitions are received, the election will be by voice vote at the December 4, 2007 Section meeting. If any valid petitions are received, the election will be by mailed

ballot sent to all members in the Rochester Section eligible to vote. A ballot included with the Rochester Engineer mailing fulfills this requirement. Officers begin their terms on January 1, 2008.

Society chapters should also be holding their elections for 2008 officers. In the case of chapters, any member of that society interested in running for a position is eligible to be placed on the ballot for that society chapter election. If there is more than one candidate for any elected position, the election must be held by mailed ballot sent to all local members of that society. When there is only one candidate for all offices, the election is held at a society chapter meeting by voice vote.

## **IEEE Geoscience and Remote Sensing Society Chapter Meeting Oct. 17**

The new IEEE Geoscience and Remote Sensing Society Western New York Chapter will present a technical seminar at their October meeting.

**Topic:** R&D Activities at NASA Langley in Support of the Space Shuttle, the Mars Science Laboratory and Atmospheric Science

**Speaker:** Michael J. Gazarik, Ph.D., Remote Sensing Flight Systems Branch, NASA Langley Research Center

**Date:** Wednesday, October 17, 2007

**Time:** Meeting and Presentation at 4:00 PM

**Location:** Carlson Auditorium (Room 1125), Chester F. Carlson Center for Imaging Science (Building 76), Rochester Institute of Technology

**Abstract:** The Remote Sensing Flight Systems Branch (RSFSB) at NASA's Langley Research Center conducts development and research in advanced electro-optical and optical instrument systems leading to state-of-the-art instrument development for both remote sensing and in-situ measurements. The branch supports a concept-to-flight capability, provides conceptual analysis capability in support of advanced electro-optical instruments, develops breadboard and prototype systems to validate conceptual instrument designs, executes instrument field campaigns, and manages space-flight instrument development projects for the Agency.

The branch conducts research and development of electro-optical technologies for remote sensing applications including: atmospheric science; thermography; lunar science; lunar and Martian entry, descent and landing; thermal protection system instrumentation, and acoustic leak detection in space habitats. The branch's areas of expertise include: fundamental physics leading to innovative and one-of-a-kind imaging Fourier transform spectrometers, infrared radiometers, camera systems, multi-wavelength sensitive focal plane arrays, optical system design, data analysis and reduction, and management of large, complex space-flight instrument development projects.

This talk will provide a brief overview of the branch's recent remote sensing projects in thermography-based Orbiter inspection, entry, descent, and landing instrumentation for

the Mars Science Laboratory (MSL) entry vehicle, and processing of interferograms from the Geosynchronous Imaging Fourier Transform Spectrometer (GIFTS) engineering unit.

**Biography:** Dr. Gazarik is the Branch Chief of the Remote Sensing Flight Systems Branch (RSFSB) at the NASA Langley Research Center (LaRC) in Hampton, Virginia. Prior to coming to NASA, Dr. Gazarik held positions at MIT Lincoln Laboratory, Texas Instruments, Aware, Inc., and Xybion Inc.

Dr. Gazarik served as the Project Manager for the Mars Science Laboratory (MSL) Entry, Descent, and Landing Instrumentation (MEDLI) during the project's formulation and early design phases. He is also the Principal Investigator and Development Manager for the Space Shuttle Extravehicular (EVA) Infrared (IR) Camera Project. The EVA IR Camera is the only system available to the Shuttle's flight crew that can detect subsurface damage in the Orbiter's wing-leading edge. He also serves as the Program Manager and lead Systems Engineer for the National Polar-orbiting Operational Environmental Satellite System (NPOESS) Airborne Sounder Testbed-Interferometer (NAST-I).

Dr. Gazarik received his Ph.D. and M.S. in Electrical Engineering from the Georgia Institute of Technology in 1997 and 1989 respectively, and his B.S. in Electrical Engineering from the University of Pittsburgh in 1987.

More information is available at the Western New York Chapter IEEE GRSS Website: [http://ewh.ieee.org/r1/new\\_york/grss/](http://ewh.ieee.org/r1/new_york/grss/).

## **IEEE Engineering in Medicine & Biology Chapter Meeting October 22**

**Topic:** "Engineering Biological Systems: The Application of Intelligent Design"

**Speaker:** Austin Che, Massachusetts Institute of Technology, Cambridge MA

**Date:** October 22, 2007,

**Time:** 1:00 – 2:00 PM

**Location:** Xerox Auditorium, Kate Gleason College of Engineering (Building 9), Rochester Institute of Technology

**Abstract:** Biology is currently at the tip of a revolution similar to that of electricity and magnetism at the beginning of the 20th century. The electrical engineering revolution has allowed non-physicists to build circuits and program computers by distilling classical physics into a set of engineering design principles. Similarly, the emerging field of synthetic biology applies engineering principles to biology. Efforts to bring modularity, interchangeable parts, abstraction and standardization to biology has shown promising results, and it has allowed many non-biologists to quickly and predictably design and build biological systems. Other research groups are engineering tumor-killing bacteria, building microbial chemical factories, reprogramming stem cells and producing bio-fuels with microbes.

In this talk, I will provide an overview of current research directions in the field as well as discuss ongoing projects of the MIT Synthetic Biology Working Group.

**Biography:** Austin Che is completing his PhD at the Electrical Engineering and Computer Science (EECS) Department, Massachusetts Institute of Technology. He is an engineer and experimental biologist. He works with Tom Knight and Drew Endy, two leaders in the field of synthetic biology, and has been part of the MIT Synthetic Biology Working Group even before the field of synthetic biology had its name. He received his MS (2004) from EECS, MIT and BS (2001) in computer science and psychology from Stanford University.

### **31st Annual EDS/CAS Activities in Western New York Conference**

The conference will be on November 7, 2007 at the Xerox Auditorium, Gleason Building, Rochester Institute of Technology.

The focus of this conference is to bring engineers and researchers together to share information on a wide variety of topics related to microelectronic devices and systems, allowing one to become acquainted with others of similar interest in nearby locations.

This year the conference will return to RIT. The conference presentations begin at 11AM, including two invited talks and six contributed talks. There will be a noon lunch and afternoon coffee break, and a poster session reception will follow the contributed talks. See the conference website listed below for the latest updated information.

#### **Invited Speakers:**

Our first invited speaker is Prof. Ioannis Kymissis from the Electrical Engineering Department at Columbia University. His research focuses on thin film devices and systems, and he will be presenting on “Organic Field Effect Transistors: How to make them, and an application which uses them.”

Our second invited speaker is Dr. William McColgin, a Research Fellow in the Image Sensor Solutions division of Eastman Kodak Company. He will be presenting on “Dark Current Spectroscopy: Using Image Sensors for Research.”

#### **Call for Abstracts:**

Abstracts are being solicited for contributed talks and poster presentations, especially those which promote research and development activity in Western New York consisting of the greater Buffalo, Rochester, Ithaca and Syracuse areas. Abstracts must be received by October 19 for contributed talks, and by October 26 for posters. Submission can be done electronically via email to [kdhemc@rit.edu](mailto:kdhemc@rit.edu) using MS-Word or PDF formats.

EDS Conference Chair is Dr. Karl D. Hirschman, Microelectronic Engineering Department, Rochester Institute of Technology. Phone 585 475 5130.

Visit the EDS website for more information: <http://www.microe.rit.edu/eds.html>

## **IEEE Upstate NY Workshop on Communications, Sensors, and Networking '07**

**Date:** Friday, November 9, 2007

**Time:** 8:30am-5:00pm

**Location:** Goldstein Student Center, Syracuse University, Syracuse, NY

**Web site:** <http://www.ecs.syr.edu/research/snw/>

**Workshop Pre-registration Deadline:** November 2, 2007

The IEEE Upstate NY Workshop on Communications, Sensors, and Networking '07 offers an opportunity for engineers and researchers to share ideas in the area of communications, wireless communications, sensors, wireless sensor networks, and networking. This year the workshop combines the 4th IEEE Upstate NY Workshop on Communications and Networking in Rochester with the 5th IEEE Upstate NY Sensor Network Workshop held in Syracuse. Topics of interest include recent advances in all areas of communications, Internet, wireless and sensor networks. The workshop is co-sponsored by the Joint Chapters for Communications and Aerospace of the IEEE Syracuse Section and of the IEEE Rochester Section.

Authors of accepted papers will present their work at the workshop, as either a talk or as a poster presentation. Accepted papers will also be made available to workshop attendees in the workshop proceedings.

Workshop Organizers include: General Chair, Lisa Osadciw (Syracuse University); Technical Program Committee, Azadeh Vosoughi, Gaurav Sharma (University of Rochester), Pramod Varshney, Kevin Du (Syracuse University) and James Minseok Kwon (RIT); Publicity Chair, Sumita Mishra (SUNY Buffalo); Webmaster, Lisa Osadciw (Syracuse University); Local Arrangement, IEEE Syracuse Chapter; Organizing Committee, Mitel Kuliner (Harris Corporation), Yin Pan, Shanchieh Jay Yang, Nirmala Shenoy (RIT).

## **Congratulations to our New Senior Members**

Two Rochester Section members have recently been upgraded to Senior Member and deserve our congratulations. They are:

Kenneth A. Arnold, who is employed at Eastman Kodak Company and is our immediate past Section Chair. Ken is a member of the Computer Society.

Tonya Love, who is employed at Xerox Corporation.