



IEEE NEWS FOR SEPTEMBER 2008

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

Rochester Section Meeting Tuesday, September 2, 2008

The next Rochester Section business meeting is on Tuesday, August 5, 2008 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.

IEEE Signal Processing Society Workshop September 26

The chapter is sponsoring the 2008 Western New York Image Processing Workshop, to be held on Friday, September 26, 2008 at the Rochester Institute of Technology Chester F. Carlson Center for Imaging Science Auditorium, Building 76. Use parking lots G and H after obtaining a visitor's pass at the guard shack south of the circle.

The plenary addresses will be given by Dr. Ed Ashton, VirtualScopics, Inc., and by Edward R. Dougherty, Dept. of Electrical and Computer Engineering, Texas A&M University Computational Biology Division, Translational Genomics Research Institute. The title of Dr. Dougherty's talk is, "Statistical Design of Nonlinear Image Filters."

You are encouraged to visit the Workshop website:

http://ewh.ieee.org/r1/rochester/sp/IP_workshop2008/workshop08.htm for full and current details on schedule and registration.

32nd Annual EDS/CAS Activities in Western NY Conference

The organizers of the EDS/CAS Activities in Western NY Conference, which will be held on November 5, 2008 at RIT, have issued a call for abstracts. Abstracts must be received by October 17 for contributed talks, and by October 24 for posters.

Visit the conference website for current details: <http://www.rit.edu/kgcoe/ue/eds.php>

IEEE NY Workshop on Communications, Sensors, and Networking

The IEEE NY Workshop on Communications, Sensors, and Networking '08 will be held on Friday, November 21, 2008 from 8:30 AM to 5:00 PM in the Golisano Auditorium at the Rochester Institute of Technology.

Workshop pre-registration ends on October 15, so it is not too soon to register. See the workshop web page at http://ewh.ieee.org/r1/rochester/comm_aero/workshop/ for current details and registration information.

A Useful Website

I recently became re-acquainted with the website www.archive.org/ while looking for audio files of old-time radio shows. This site has an enormous variety dating back to the 1920's, and all free for the taking. But there is much more here than I can begin to mention. Just go there and look around. One of the links is to their Wayback Machine. Travel back and see the promises CEOs and politicians made and then failed to deliver on, or check out your company's website from years ago.

Eugene Saltzberg Elected Western Area Chair for Region 1

Gene Saltzberg was elected Western NY Area Chair at the recent Region 1 meeting. He replaces Ken Arnold. Both are Rochester section members. Gene is also the Chair of the EMC and Product Safety Engineering Joint Chapter.

Awards for Gaurav Sharma and Majid Rabbani

Dr. Gaurav Sharma, a past-chair of the Rochester Section, has been recognized with a Region 1 award "For contributions to the theory and practice of color imaging and imaging systems."

Dr. Majid Rabbani has been recognized with a Region 1 award "For pioneering contributions and technical leadership in the field of image compression and digital watermarking."



2008 WESTERN NEW YORK IMAGE PROCESSING WORKSHOP

Friday, September 26, 2008
Rochester Institute of Technology
Chester F. Carlson Center for Imaging Science Auditorium
Building 76
79 Lomb Memorial Drive
Rochester, NY 14623
(Parking Lots G and H)

*Sponsored by the **Rochester Chapter of the IEEE Signal Processing Society** and*



Kodak

 **Leuze electronic**
the **sensor** people

xerox 

Workshop Scope

The aim of this workshop is to promote interaction between image processing researchers in and around Western New York. Researchers from both academia and industry are invited to participate. Interaction will be encouraged by keeping the number of participants to less than one hundred, having a single track of presentations, and providing an informal lunch.

Original manuscripts in (but not limited to) the following areas are solicited:

- Content-Based Image and Video Retrieval
- Color Imaging
- Document Image Processing
- Image and Video Coding
- Image and Video Content Management
- Image Enhancement and Manipulation
- Internet Imaging
- Medical Imaging
- Multimedia Security and Watermarking
- Video Processing

Plenary Talks

In addition to presentations of invited and solicited papers, the workshop will have two plenary talks delivered by renowned experts in their fields: Prof. Edward Dougherty, Texas A&M and Dr. Ed Ashton, VirtualScopics, Inc. See below for titles and abstracts.

Paper Submission

Prospective authors should send an email with the title and an abstract of their presentation and names of authors in **plain ASCII format** by **August 18, 2008** by **electronic mail** to:

Vishal Monga
e-mail: vishalmonga@gmail.com

All submissions should include author's name, affiliation, and e-mail address. Notification of acceptance will be sent by September 5, 2008. Authors are encouraged to send a brief email indicating their intent to participate and the topic of their presentation by August 4, 2008 in order to allow the committee to organize the sessions - though this is not a requirement.

Authors of accepted papers will be requested to send electronically an extended summary (4 pages at most) by September 8, 2008. Preferred formats for the extended summary of accepted presentations are PDF and Postscript (images encapsulated). Summaries will be compiled and distributed at the workshop in paper form and in advance in their on-line form. Final papers will only be published on-line.

In order to encourage participation by students, we will present a best student paper award.

Workshop website: http://ewh.ieee.org/r1/rochester/sp/IP_workshop2008/workshop08.htm

Organizing Committee:

Chair: David Coumou, MKS Instruments, Inc.
John Handley, Xerox Corporation
Vishal Monga, Xerox Corporation
Andrew Gallagher, Eastman Kodak

Statistical Design of Nonlinear Image Filters

Edward R. Dougherty

Department of Electrical and Computer Engineering, Texas A&M University
Computational Biology Division, Translational Genomics Research Institute

Up until around 1990, design of nonlinear filters for image processing was almost entirely *ad hoc*, the exception being in the case of some very simple and unrealistic models. This meant that nonlinear filtering was restricted to using a very small number of humanly designed structuring elements for morphological processing, along with simple order-statistic and stack filters. The situation was entirely different for linear filters, where the classical Wiener theory facilitated the design of optimal linear filters for many useful models. During the 1990s the theory and application of statistically designed optimal nonlinear filters dramatically changed the situation. Using image models and the theory of optimization, it became possible to construct complex filters for realistic image models and then to develop special architectures to implement filters consisting of thousands of structuring elements. But there was a price. Owing to nonlinearity, filter design swiftly ran up against computational limitations and had to address the complexity conflict inherent in pattern recognition: we desire high-complexity filters to more accurately recognize fine detail, such as that represented by high-frequency image structure; on the other hand, we desire low-complexity filters so that the designed filters do not overfit the training data, for instance, by conforming to high-frequency noise. This talk will briefly review the classical operators and then discuss optimal nonlinear filter design for both binary and gray-scale images in the context of general principles of pattern recognition.

Edward R. Dougherty is a Professor in the Department of Electrical and Computer Engineering at Texas A&M University in College Station, TX, where he holds the Robert M. Kennedy '26 Chair in Electrical Engineering and is Director of the Genomic Signal Processing Laboratory. He is also the Director of the Computational Biology Division of the Translational Genomics Research Institute in Phoenix, AZ. He holds a Ph.D. in mathematics from Rutgers University and an M.S. in Computer Science from Stevens Institute of Technology, and has been awarded the *Doctor Honoris Causa* by the Tampere University of Technology in Finland. He is a fellow of SPIE, has received the SPIE President's Award, and served as the editor of the SPIE/IS&T Journal of Electronic Imaging. At Texas A&M he has received the Association of Former Students Distinguished Achievement Award in Research, been named Fellow of the Texas Engineering Experiment Station, and named Halliburton Professor of the Dwight Look College of Engineering. Prof. Dougherty is author of fourteen books, editor of five others, and author of more than two hundred journal papers. He has contributed extensively to the statistical design of nonlinear operators for image processing and the consequent application of pattern recognition theory to nonlinear image processing. In recent years he has helped lead the development of genomic signal processing, which is aimed at diagnosis and prognosis based on genetic signatures and uses gene regulatory networks to develop therapies based on the disruption or mitigation of aberrant gene function contributing to the pathology of a disease.



MEETING ANNOUNCEMENT & CALL FOR ABSTRACTS

*32nd Annual EDS/CAS
Activities in Western New York Conference
November 5, 2008*

*Xerox Auditorium, Gleason Building
Rochester Institute of Technology
Rochester, NY*

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 be held at RIT. The conference begins with a morning workshop at 8AM. Oral 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.

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 17th for contributed talks, and by October 24th for posters. Submission can be done electronically via email to kdhemc@rit.edu using MS-Word or pdf formats.

See the website listed below for the conference registration and the latest agenda updates!

EDS Conference Chair: Dr. Karl D. Hirschman
Microelectronic Engineering Department
Rochester Institute of Technology
Ph. 585-475-5130

Visit our EDS website at: <http://www.rit.edu/kgcoe/ue/eds.php>



IEEE NY Workshop on Communications, Sensors, and Networking '08

Date: Friday, November 21st, 2008

Time: 8:30am-5:00pm

Location: Golisano Auditorium, RIT, Rochester, NY

This workshop aims to provide a forum for discussing recent advances in communications and networking technologies. The workshop will bring together researchers and practitioners in academia and industry in the NY state. Topics of interest include recent advances in ALL areas of communications, Internet, wireless and sensor networks. The workshop is sponsored by the IEEE Chapter for Communications and Aerospace Engineering Society of the Rochester Section.

For more information, visit the workshop Web page at
http://ewh.ieee.org/r1/rochester/comm_aero/workshop/

Workshop Pre-registration Deadline: October 15th, 2008

Workshop Organizers:

General Chair: Nirmala Shenoy (RIT) and Mitel Kuliner (Harris Corporation)

Technical Program Committee: Sumita Mishra (RIT), Yin Pan (RIT), Vishal Anand (SUNY Brockport), Azadeh Vosoughi, (University of Rochester)

Publicity Chair: Sumita Mishra (RIT)

Webmaster: Josh Watts (RIT)

Local Arrangement: IEEE Rochester Joint chapter for Communications and Aerospace

Organizing Committee: Mitel Kuliner , Nirmala Shenoy, Yin Pan, Sumita Mishra, Vishal Anand, Azadeh Vosoughi





IEEE memberNet opt-in preferences via myAccount

MemberNet Opt-In Preferences

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Opt-in preferences defined here are for IEEE's memberNet. Please notice that each entity below has a corresponding save button. Be sure to save each change via its corresponding save button prior to navigating away from the page.

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Memberships ⌵

IEEE Computational Intelligence Society Membership

IEEE Membership

Respecting Member Privacy

- ✓ By default, all members can be found by name and grade.
- ✓ Members have full discretion over what additional profile items may be found through the memberNet search feature.
- ✓ All searchable profile information is managed by each member via memberNet opt-in preferences.
- ✓ Information visible on a members profile page is managed via memberNet opt-in preferences as well.

Efficient Profile Management

- ✓ Management via myAccount eliminates the need to re-type information.
- ✓ Profile information is updated when a member updates their myAccount info.

Frequently Asked Questions

What is IEEE memberNet?

IEEE MemberNet is the official online network and directory of IEEE members. IEEE memberNet is exclusively available to IEEE members with an active account.

As an IEEE member, what information will appear in the memberNet profile?

By default, the name and membership grade of all IEEE members appear in MemberNet. Information beyond name and membership grade must be opted-in by each member.

Where does a member opt-in profile information?

Log into myAccount with your IEEE web account, on the web at www.ieee.org/myaccount. Access "memberNet Opt-In Preferences" located in the left-hand navigation.

Will my profile be listed in all memberNet search results?

No. Opt-in preferences defined by each member manage the information that appears in a profile, and the criteria by which a member can be found.

What is the 'myNetworks' feature of memberNet?

'myNetworks' provides a personalized listing of affiliations and relationships to IEEE from which a search can be launched. When a member adds a society membership, the 'myNetworks' listing is updated.

Can I search for members of any IEEE society through memberNet?

IEEE memberNet users can search for members of Societies to which they belong. The same applies for IEEE Standards Association and Women in Engineering.