Pittsburgh Section

Bulletin

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Editor: Philip Cox, p.e.cox@ieee.org; Contributors: Louis Hart, Andrew Novotny, Ralph Sprang and Matthew Valenti

All announcements for publication in a particular month's bulletin are due to the Editor by the 20th of the previous month. The accuracy of the published material is not guaranteed. If there is any error, please bring it to the Editor's attention. The Section's web site **www.ewh.ieee.org/r2/pittsburgh** *has past issues of the bulletin and lots of other useful information*

• *Lou's Limnings*

Two Chairs Needed: With all the technical societies having chapters in the Pittsburgh section, along with affinity groups like Graduates of the Last Decade and Women in Engineering, I suppose it should not be a surprise to any of us that we always seem to have an open chair or two.

Last month I mentioned the need for a membership development chair, whose primary function is to assist Members who want to apply for Senior Membership status. The job is still open. I estimate it would take 8-10 hours per year to fulfill the duties. If the chair wants to have a ½ day working session to inform and assist multiple applicants for Senior Membership, the annual time required might get into the 15-20 hour range. If the job proves to be too much, you can always gracefully resign. More likely, you will find it satisfying personally and professionally. Contact me and give it a try.

Pittsburgh is in danger of losing recognition of its Robotics Society chapter. We need a chair, to organize the minimum two events per year that will maintain the chapter. The chapter has a budget to pay for speaker expenses, meeting refreshments, and tokens of appreciation for speakers. I have mentioned in an earlier bulletin that the effort required from the chair to conduct the two meetings could well be under 8 hours per year. Robotics Society members, let me know if you want to keep the Pittsburgh chapter active.

Employment Network: The employment network is making progress, albeit slowly. The Google group link for the network is: https://groups.google.com/d/forum/ieee-pittsburgh-employment-network You can request membership there, or send an email: en.ieee.pittsburgh@gmail.com .

If you are looking for employment, sign up. If you need help, post your needs there. We are looking to have another meeting first half of June. If you sign up in the Group, you will get an announcement of the location. Let your friends in Human Resources know about the employment network and invite them to join and use it.

Friend of IEEE: Here is some information chapter chairs, and others, may find useful. Last month, I mentioned the 'Friend of IEEE' award, that it was easy to get for someone who has helped, say, your chapter, and that it would be awarded promptly, in 4-6 weeks. Here is the link describing the nomination process http://www.ieee.org/societies_communities/geo_activities/awards/recipients/friend.html . In turn, it has a link to the nomination form. One thing to note is that individual recipient cannot be eligible for IEEE membership. For example, you could nominate your organization's security officer, but you could not nominate a fellow engineer.

Lou Hart. 2013 Chair

Section

Chair - Dr. Louis Hart, louishart@ieee.org

Vice Chair -- Frank Pietryga, fwp@pitt.edu

Treasurer – Dr. Jim Beck, beckje@westinghouse.com

Secretary – Jim Lagree, JamesLLagree@Eaton.com

Immediate Past Chair – Robert Brooks, rbrooks@ieee.org

Awards Chair - Ralph Sprang, rsprang@ieee.org

Webmaster – Gerry Kumnik, g.kumnik@computer.org

UpperMon Subsection

Chair: Dr. David Graham David.Graham@mail.wvu.edu (304) 293-9692

Chapters

Communications Society – Chair: Phil Cox p.e.cox@ieee.org (724) 443-0566

Computer Society – Chair: Ralph Sprang, rsprang@ieee.org

Components, Packaging, and Manufacturing Technology/Electron Devices Societies – Russell Dudek, rdudek@compunetics.com; Treas.: Dr. Louis Hart

Engineering In Medicine & Biology Society Chair: Dr. Wei Wang, wangwei3@pitt.edu

Electromagnetic Compatibility Society Chair: Michael J. Oliver emi@majr.com (814) 763-3211

Power & Energy & Industry Applications Societies Chair: Dave Vaglia, davevaglia@ieee.org; Past: Mey Sen, senml@ieee.org 412-373-0117

Magnetics Society – Chair: Dr. Jimmy Zhu, jzhu@ece.cmu.edu

Nanotechnology Society - Chair: Dr. MinheeYun yunmh@engr.pitt.edu

Robotics Society – Chair: Dr. Guy Nicoletti Nicolett+@pitt.edu (724) 836-9922

Signal Processing Society – Chair: Dr. Ramana Kumar Vinjamuri;,rkv3@pitt.edu

Society on Social Implications of Technology Chair: Joe Kalasky, P.E., j.kalasky@ieee.org 724-244-1609

Affinity Groups

GOLD – Chair: Mike Hollis, mike.hollis@ieee.org

Life Member – Chair: Rich Haverlack, r.haverlack@comcast.net

Women In Engineering – Chair: Dr. Gabriela Hug ghug@ece.cmu.edu

Committees

Consultants Network

Professional/Career Activities (PACE) Chair: Joe Cioletti, P.E. jcioletti@ieee.org

Student Activities – Rajiv Garg, rajivg@computer.org

Membership Development – Dr. Karl Muller P.E., karl.muller@comcast.net

Publicity – Chair: Thomas Dionise, P.E. ThomasJDionise@eaton.com (724) 779-5864

- ***Efficient heuristics for Maximally SRLG-disjoint Path Pairs Calculation***

Speaker: Dr. Teresa Gomes, University of Coimbra, Portugal
Date: June 5, 2013
Time: Meet the Speaker + Pizza 6-6:30, Talk 6:30 - 7:30
Location: 3rd floor Collaborative Meeting Space, IS Building, University of Pittsburgh, 135 North Bellefield Avenue, Pittsburgh, PA 15260
For Information: contact Philip Cox, p.e.cox@ieee.org or Dr. David Tipper, tipperdavid@gmail.com.

Abstract: The reliability of telecommunication networks is critical to our society. Network service providers, in order to ensure their service level agreements, must ensure the robustness of the network. For that purpose network recovery schemes are set in place, so that when a fault occurs its effects are contained and are not perceived by network users.

A Shared Risk Link Group (SRLG) is a group of links which have a common risk of failure. Although the calculation of an SRLG-disjoint path pair is NP-Complete, some effective heuristics for solving this problem will be pointed out. The focus of this presentation will be the description of two heuristics for solving the min-sum maximally node and SRLG-disjoint path pair problem, formulated as a multi-objective optimization problem. The relative performance of the heuristics will be evaluated using three different networks. The envisaged application scenario is a Path Computation Element (PCE) with limited resources, in a Generalized Multiprotocol Label Switching (GMPLS) network.

Speaker's Bio: Teresa Gomes is Assistant Professor in Telecommunications at the Department of Electrical and Computer Engineering of the Faculty of Sciences and Technology of the University of Coimbra, Portugal, since 1998 and with tenure since 2003. At the University of Coimbra she usually teaches courses in computer programming, communications systems and networks, and network reliability. She was Departmental Coordinator of the Erasmus Program from April 2003 until September 2007. She was Vice-President of the Scientific Committee of the Department of Electrical and Computer Engineering (SC-DECE) from February 2008 until September 2009, and has been an elected member of the SC-DECE since September 2009.Presently she is a visiting researcher at the School of Information Sciences of the University of Pittsburgh. Teresa Gomes is also a researcher at the Research and Development (R&D) Unit INESC-Coimbra, where she was a member of its Board of Directors in 2003-04. She was responsible for three R&D Projects between of INESC Coimbra and PT Inovação, in the area of routing with protection in Wavelength-division multiplexing (WDM) and Generalized Multi-Protocol Label Switching (GMPLS) networks. She has also collaborated as a Researcher in several other R&D or Research Projects at INESC-Coimbra. She is the author/co-author of more than 40 technical publications in international journals and conference proceedings, and one European patent. Her main present interests are routing, protection and reliability analysis models and algorithms for optical, GMPLS and MPLS networks.

- ***Cyber-Physical Simulation and Security Analysis With Incomplete Information***

Speaker: Anurag K Srivastava, Ph.D.
Date: Wednesday, June 5, 2013
Time: 4:00-5:00 PM
Place: 849 Engineering Sciences Building (ESB)
West Virginia University, Morgantown, WV
RSVP: Jignesh Solanki, Jignesh.Solanki@mail.wvu.edu
Organizer: Upper Mon Subsection

Abstract

The major part of the electric grid modernization efforts includes utilizing a number of advanced computing, information, networking and measurement technologies. With these increasing cyber components, controlled synergy between heterogeneous physical power system and cyber components is required to meet the enhanced requirement of resiliency, security, and reliability. Security analysis requires analyzing vulnerability of the electric grid based on attack scenarios. In this work, attack with incomplete information has been analyzed using graph theory based approach. Common attack vectors have been also utilized to operate breakers associated with generating resources to model aurora-like event. Real Time simulations for modified IEEE 14 bus test case system and graph theory analysis for IEEE 118 bus system will be discussed. This talk will also present real time modeling and simulation for cyber-physical system using smart grid test bed at Washington State University.

Speaker Bio

Anurag K. Srivastava received his Ph.D. degree in Electrical Engineering from the Department of Electrical and Computer Engineering, Illinois Institute of Technology, Chicago, USA in 2005 and M.Tech. and B.Tech degree from India. He is working as Assistant Professor at Washington State University since August 2010. In the past, he worked as Assistant Research Professor at Mississippi State University during 2005-2010. Before that, he worked as Research Assistant and Teaching Assistant at Illinois Institute of Technology, Chicago, USA and as Senior Research Associate at the Indian Institute of Technology, Kanpur, India as well as Research Fellow at Asian Institute of Technology, Bangkok, Thailand. His research interest includes power system operation and control, and real time power system simulation. Dr. Srivastava is a senior member of IEEE and member of IET, ASEE, IEEE Power and Energy Society (PES), Sigma Xi and Eta Kappa Nu. He is chair of IEEE PES career promotion subcommittee, vice-chair of IEEE PES student activities and active member of several other PES technical committees. He is the recipient of numerous awards including IEEE best paper award and author of more than hundred technical publications including a book.

- ***Is Biometric Identification a Hollywood Fantasy or Practical Technology?***

Date: Monday June 10, 2013
Time: Light dinner 6:15 PM, Presentation at 7 PM
Location: Westinghouse Headquarters, Cranberry Woods
Cost: Free to IEEE members and guests
Presenter: Ralph Sprang, Ph.D
Sponsor: IEEE Computer Society
RSVP: RSVP by email to ieeersvp@yahoo.com on or before June 5, 2013

Background: Film and television dramas portray use of computer-based biometric identification to quickly identify people from images and video, but we don't hear about law enforcement using these technologies. Is biometric identification technology suitable for practical use, or is it still a research technology?

This presentation will present an overview of the algorithms used to identify an individual from an image of their face, iris, or fingerprint. Challenges in implementing these technologies will be presented, along with discussion of how search problems can be restructured for practical implementation.

The goal of this presentation is to present top accuracy biometric identification algorithms at a conceptual level and to discuss limitations of the technology. The level of the material presented will be introductory and no biometrics or extensive math background will be required.

Speaker: Dr. Sprang earned the Ph.D degree at the University of Pittsburgh for his work to develop real-time face identification methods.

Directions to Westinghouse Headquarters Cranberry Woods
Directions from the South: Take 79 North to the route 228 east exit. Stay in right lane and drive by Marriott Hotel (on right). Turn right into Cranberry Woods facility and stay in left lane. Make first left into Westinghouse Headquarters and drive straight through roundabout. Park in visitors parking places that are located on either side of the entry road.

Directions from the East: Take the PA Turnpike (I-76) West following signs for Ohio / I-76 W. Take Exit 28 and follow I-79 N toward Erie. Stay in the entrance lane (right lane) and immediately take Exit 78, PA-228 Cranberry/Mars. Turn right onto PA-228 E toward Mars. Turn right onto Cranberry Woods Drive. Take immediate left at Westinghouse sign and drive straight through roundabout. Park in visitors parking places that are located on either side of the entry road.

• *An Evening at PNC Park With the Pittsburgh Pirates and Milwaukee Brewers*

Date: Saturday, June 29, 2013
Time: Game starts at 7:05 PM
Place: PNC Park, North Shore, Pittsburgh
Cost: $21.00 per ticket
Sponsors: PES/IAS Chapter
RSVP: **By sending your check payable to "IEEE Pittsburgh Section" to**
Andrew Novotny
514 Price Ave
North Braddock, PA 15104

Come out and enjoy a fun-filled evening with your friends and families of IEEE members as we watch our Pittsburgh Pirates take on the Milwaukee Brewers.

An added bonus is Fireworks and it will be a scratch n' win night.

Deadline to order tickets is May 31, 2013. Get your tickets early. Don't be left out.

LET'S GO BUCS, LET'S GO BUCS, LET'S GO BUCS

• *Computer Society Tutorial*

The Pittsburgh Chapter of the IEEE Computer Society is exploring offering a tutorial. This tutorial would be open to any IEEE member, membership in the Computer Society is not required. If you are potentially interested in the tutorial, please email ieeersvp@yahoo.com with you answers to the questions below. Please email any questions to the ieeersvp@yahoo.com. Thank you.

1. Are you interested in a tutorials on Field Programmable Gate Arrays (FPGAs), microprocessors, and/or Introductory C programming?
a. FPGAs
b. Microcontrollers
c. Introductory C programming

2. When would you prefer to attend the tutorial, assuming 8 hours of instruction are provided?
a. Four evenings, 2 hours on one weekday evening for four weeks
b. Two Saturday mornings
c. One 8 hour session on a Saturday
d. One 8 hour session on a weekday

3. Would you be able to bring your own laptop and install the programming software?
a. Yes
b. No

4. Do you have a basic understanding of and ability to program in C?
a. Yes
B. No

5. To produce a tutorial involves some expense to pay the presenter, pay for the facilities, provide hardware and software, tools, and components, provide food, etc. The cost for the tutorial would include the instruction, any snacks or meals offered, a circuit board and components, and the software tools required for programming. What cost range would make the tuturial most available for you?
a. $200
b. $300
c. $400
d. $500

• *Welcome Our New Senior Members:*

Edward Borgoyn
Joseph Engel
Jose Morales
Brian Withers

2013 Calendar – Meetings of IEEE Pittsburgh Section

	Jan	Feb	Mar	Apr	May	June	July	August	Sept	Oct	Nov	Dec
Executive Committee	17 Panera Oakland	21 Panera Wilkins	21 EatnPark Wexford	18 Cal U	16 Panera Monroeville	20 Panera Wilkins	18 Panera Cranberry	15 Panera Wilkins	19 Panera Oakland	17 WVU	21 Panera Monroeville	19 TBD
Section	24 Senior Members			1 Employment Network	10 History Dinner							
Communications				17 Social Nets		5 heuristics						
Computer						10 biometrics						
EMBS				26 Disease Asses								
EMCS												
PES/IAS	23 Climate Change	27 Energy Logic.	13 Transit Equip. Qual.	4, 11 SMART Controller	15 Robots	29 Pirates						
Magnetics												
Robotics												
Sig. Processing												
CPMT/ED												
Social Impl Technology		18 Ethics	27 Volunteer Engineers									
Upper Mon		18 Facial Recognition 25 SAT COM		1 Opto Apps 5 Components 22 Cyber System		5 Cyber simulation						
Women in Eng'ing				3 Game On				27 talk				
Life Mem.					15 Robots							
GOLD												
PACE												
Student Act												