IEEE VANCOUVER CONTACT

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Message from the Chair

Dear fellow members:

Thank you all for making 2015 successful for my volunteering as Section Chair of IEEE Vancouver.

You are the reason for the following achievements:

- resurrection of Continuing Education with PES chapter initiative
- new Okanagan Student Branch — thanks to Youry for his tenacity and efforts
- new Kwantlen Student Branch — thanks to the efforts of Mandeep and her team
- McNaughton Center at SFU.
- tremendous contributions from local IEEE conferences to contribute funds to scholarship funds
- IEMCON2015 contributed $3000 to IEEE Vancouver after the conference.
- Cloudcom2015 contributed $4500 to the section with 200+ registrants — thank you UBC Prof. Victor Leung for this very successful event
- substantial number of professional development opportunities, technical meetings, seminars, IEEE Conferences in Vancouver, and increased participation by members.

In 2016, I will be serving you as Past Chair and IEEE Canada-West Chair. I thank you for your support and ask for your feedback and wish next year to be another successful term for IEEE Vancouver.

Kind regards,
Bob Gill, Chair, IEEE Vancouver

Current interruption in atmospheric air

David Peelo
DF Peelo & Associates

Tuesday 12 January

Noon to 1:00pm

BC Hydro Edmonds
A01 Auditorium
Southpoint Room
6911 Southpoint Dr Bby

The function of air-break disconnect switches in high voltage power systems is to provide electrical and visible isolation of one part of the system. The isolation can be related to normal day-to-day operation of the system such as de-energizing a shunt reactor circuit breaker after the reactor is switched out or to repair or carry out maintenance on transmission lines and station equipment. In the latter regard, disconnect switches are a major contributor to personnel safety. Because the disconnect switches are operated under energized conditions, they are required to interrupt the currents associated with the switching event. The currents in question are usually of low magnitude and can be inductive (unloaded transformer magnetizing current), capacitive (bus or short line charging currents) or loop currents (current transfer between parallel buses with a substation or between parallel lines). The opening operation results in free burning arcs in air between the fixed and moving disconnect switch contacts and rules with respect to current interruption capability are empirical.

Practice, particularly in North America, has been based on the 'classic' AIEE 1950 paper by Andrews, Janes and Anderson which related magnetizing and loop current magnitudes to the reach of the extreme point of the arc, all based on actual field tests. Later studies at BC Hydro and the Eindhoven University of Technology showed that the work of Andrew's et al, however well-intentioned, was greatly flawed. Quite apart the lack of statistical treatment of the field test results, access to original field test material showed that the arcs generally persisted after the switch moving contact had reached its fully open position. On this basis, the test switch initiated the arc but did not contribute to its interruption, i.e. for the switch to contribute the current must be interrupted while the moving contact is still in motion. The above-noted later studies starting in 1999 showed that very distinctive and unique features exist for each of the three current type arcs in terms how they evolve and interact with the circuit.

The presentation will use mainly video material to explain the nature of the switching event when switching out unloaded transformers, breaking small capacitive currents and for loop switching. The use of auxiliary interrupting devices will also be discussed.

Speaker: Dr. David Peelo is a consultant and former switching specialist at BC Hydro. He is a graduate of University College Dublin and Eindhoven University of Technology. He worked first at the ASEA Power Transmission Products Division in Ludvika, Sweden and then for BC Hydro for 28 years rising to the position of Specialist Engineer. As a consultant, he has clients worldwide and in particular teaches continuing professional development courses on current interruption transients and surge arrester application.

He is an active IEEE and Cigre member and is a past Convenor of IEC MT32 (Inductive load switching), the Convener of IEC PT42 (Current interrupting capability of air break disconnectors) and a member of IEC MT57 (Application guide for IEC 62271 100 and other circuit breaker related standards). He is an IEC 1906 Award recipient and a Distinguished Member of Cigre. He has authored or co-authored over 70 publications on circuit breakers and surge arrester application, is the author of a textbook on current interruption transients calculation and a co-author of a textbook on switching in transmission and distribution networks.

Information
Joint Power & Energy
Chair
Rama Vinnakota
Rama.Vinnakota@bchydro.com

IEEE PES Power & Energy Society®

DEIS

Cross-layer data aggregation in a cognitive radio wireless mesh sensor network

Chen-Khong Tham
National U of Singapore

Tuesday 12 January

11:00 am

Rm 418, Macleod Bldg
2356 Main Mall, UBC

IEEE / UBC ECE Communications Seminar sponsored by the IEEE Vancouver Joint Communications Chapter

Everyone is welcome!

Information
Joint Communications Chair Vincent Wong
vincentw@ece.ubc.ca

Backbone networks, such as wireless mesh networks, provide a more suitable topology for data aggregation compared to a flat topology. Nonetheless, the performance of a mesh topology may be adversely affected if the spectrum is overcrowded. Incorporating cognition can help relieve the issues caused by the scarcity of transmission opportunities by leveraging on dynamic spectrum access. Hence, a suitable data aggregation architecture for cognitive radio wireless mesh sensor networks (CR-WMSN) is required.

In this talk, a framework for data aggregation in a CR-WMSN will be presented. We address the energy, transmission latency and data accuracy trade-offs by proposing a cross-layer optimization framework that controls the power, link access, routing and rate parameters such that the optimum balance between network lifetime and other quality of information (QoI) and quality of service (QoS) metrics are obtained. Our simulation and comparative results show that network lifetime and data accuracy can be controlled by adjusting the cross-layer parameters, and that the proposed cross layer scheme outperforms existing data aggregation schemes.

Speaker: Chen-Khong Tham is an Associate Professor at the Department of Electrical and Computer Engineering (ECE) of the National University of Singapore (NUS). His current research focuses on sensor network infrastructures and real-time sensor data analytics involving cyber-physical systems, wireless sensor networks, mobile cloud computing and participatory sensing. He obtained his Ph.D. and M.A. degrees in Electrical and Information Sciences Engineering from the University of Cambridge, United Kingdom. From 2007-10, he was on secondment at the A*STAR Institute for Infocomm Research (I2R) Singapore. He is an associate editor of the IEEE Internet of Things Journal (IoT-J) and is in the editorial board of the International Journal of Network Management, and was the general chair of the IEEE SECON 2014, IEEE AINA 2011 and IEEE APSCC 2009 conferences. He is a member of the Technical Standards Advisory Committee (TSAC) convened by the Infocomm Development Authority (iDA) of Singapore.

IEEE COMMUNICATIONS SOCIETY · IEEE Information Theory Society · IEEE photonics SOCIETY · BTS IEEE Broadcast Technology Society · VTS · ITSS

Jt. Chapter BT-02/COM-19/IT-12/ITS-38/PHO-36/VT-06

IEEE youngprofessionals

The IEEE Young Professionals affinity group of IEEE Vancouver is hosting a networking social in downtown Vancouver to kick-off 2016. This event is an excellent opportunity to connect with your IEEE Young Professionals community in a casual environment.

Thursday
07 January

6:00 — 8:30 pm

Elephant & Castle
385 Burrard Street
Vancouver

Registration is limited so sign-up early.
Registration Link: https://www.eventbrite.ca/e/networking-social-tickets-20130085628

Information
Sean Garrity
IEEE youngprofessionals
sean.garrity.ca@ieee.org

Coming soon..

Jeff Bloemink, the chapter chair for the joint Industry Applications and Electronics societies is organizing a 'meet and learn' event scheduled for Tuesday 12 January at BC Hydro Emonds in one of the auditoriums, but hasn't confirmed the speakers and topics at press time.

So keep a watch on the online January 2016 Contact at www.ieeecontact.org for details as available.

Information
Jeff Bloemink
JointIAS/IES Chair
j.m.bloemink@ieee.org

Accepted nominations for IEEE Vancouver 2016 elected positions

The Nominations Committee is pleased to announce a slate of candidates for the elected positions within the Vancouver Section. You will note that there are three positions that are listed as vacant. These positions have not yet received confirmation that someone is willing to stand for office. If any of these positions interests you please contact Steven McClain (nominations committee chair) at StevenMcClain@ieee.org to state your interest.

Also, if you are interested in a position that is listed as having a nominee you are free to run for that position. We will hold an election for any positions that are contested as is our usual practice.

The Section bylaws call for petitions as follows:

Following this announcement, a minimum of twenty eight (28) days shall be allowed for additional nominations by petition. A valid petition must be signed by twelve (12) or more voting members or 1% of the Section's voting membership, whichever is fewer.

Steven McClain,
Chair Nominations Committee

Lee Vishloff	Chair	Vancouver	Section
Rama Vinnakota	Vice-Chair	Vancouver	Section
Steven McClain	Treasurer	Vancouver	Section
Ernie Kenward	Secretary	Vancouver	Section
Youry Khmelevsky	Chair	Okanagan	Sub-Section
Matthew Reid	Chair	Northern BC	Sub-Section

Ivan Bajic	Chapter Chair	Signal Processing	(SP01)
Jeff Bloemink	Chapter Chair	Joint Industry Applications and Electronics	(IE13/IA34)
Ahmed Hussein	Chapter Chair	Joint Applied Physics	(IM09/MAG33/NPS05/UFFC20)
Sara Khosravi	Chapter Chair	Engineering in Medicine and Biology	(EMB18)
Darrell Koskinen	Chapter Chair	Joint Management	(TM14/PC26/E25/SIT30)
Stephen Makonin	Chapter Chair	Joint Computing	(C16/CIS11)
Dave Michelson	Chapter Chair	Joint Aerospace & Electromagnetics	(AES10/GRS29/RL07/PSE43)
Shahriar Mirabbasi	Chapter Chair	Joint Solid State Circuits & Technology	(SSC37/CE08/CPMT21)
Ryozo Nagamune	Chapter Chair	Joint Control, Robotics, and Cybernetics*	(CS23/RA24/SMC28)
Martin Ordonez	Chapter Chair	Power Electronics	(PEL35)
Dipendra Rai	Chapter Chair	Joint Power & Energy	(PE31/DEI32)
Serdar Soylu	Chapter Chair	Oceans, Geoscience & Remote Sensing	(OE22)
Ljiljana Trajkovic	Chapter Chair	Joint Section Circuits and Systems**	(CAS04)
Vincent Wong	Chapter Chair	Joint Communications	(VT06/COM19/PHO36/BT02/IT12/ITS38)
VACANT	Chapter Chair	Electron Devices	(ED15)

Parastoo Kheirkhah Dehkordi	Chair	Women In Engineering	Affinity Group
Sean Garrity	Chair	Young Professionals	Affinity Group
Scott Tully	Chair	Consultants Network	Affinity Group
VACANT	Chair	Life Membership	Affinity Group

Formal IEEE nomenclature
*IEEE Joint Chapter of Control Systems Society, Robotics and Automation Society, and Systems, Man, and Cybernetics Society
**IEEE CAS Society joint Chapter of the Vancouver/Victoria Sections

CCECE 2016

THE 29TH ANNUAL IEEE CANADIAN CONFERENCE ON ELECTRICAL AND COMPUTER ENGINEERING

15—18 MAY, 2016 / VANCOUVER, CANADA

Advancing Society Through Electrical and Computer Engineering

NEW Important Dates

Tutorial proposals:	**December 13, 2015**
Invited sessions proposals:	**January 8, 2016**
Regular paper submission:	**January 13, 2016**
Acceptance notifications:	**February 14, 2016**
Camera-ready papers:	**March 6, 2016**

— CALL FOR PAPERS —

The 29th Annual IEEE Canadian Conference on Electrical and Computer Engineering (CCECE 2016) will be held in Vancouver, British Columbia, Canada from May 15 to 18, 2016. CCECE is the flagship conference for researchers, students, and professionals in the area of Electrical and Computer Engineering from Canada and around the world to meet annually in a Canadian city to disseminate their research advancements and discoveries, to network and exchange ideas in order to strengthen existing partnerships and foster new collaborations. CCECE 2016 general theme, Advancing Society Through Electrical and Computer Engineering reflects the profound impact of ECE research on our daily lives. CCECE 2016 will address the following many themes which are listed and described to the right. CCECE 2016 will address the following themes:

- Bioengineering
- Communications and Networks
- Computer and Software Techniques
- Control and Robotics
- Devices, Circuits, and Systems
- Power and Energy Circuits and Systems
- Signal Theory and Signal Processing

Paper submission guidelines and be found on the conference website: http://ccece2016.ieee.ca**.**

— CALL FOR INVITED SESSIONS —

The CCECE 2016 Technical Program will include Invited Sessions. Their objective is to complement the regular program with new and/or emerging topics of particular interest. Invited Sessions may also cut across and beyond disciplines traditionally represented at CCECE. Typically, each Invited Session consists of 4 to 5 presentations. The first paper in an Invited Session serves as an introduction to the theme. Organizers of Invited Sessions should submit proposals indicating:

1. Title of the session
2. Rationale of the need for the Invited Session at CCECE
3. Contact information and short biography of the organizers
4. List four or five perspective contributed papers

Submit the proposal, please **send via email a PDF document containing the required information** by **January 8, 2016**, to the Invited Sessions Co-Chairs:

Fabio Campi (fcampi@sfu.ca) and Jernej Polajnar (jernej.polajnar@unbc.ca)

CALL FOR PAPERS

Please read the following paper submission guidelines before submitting your papers:

- Paper submission deadline is on **January 15, 2016**.
- All papers must be submitted through the IEEE WCCI 2016 online submission system. For special session papers, please select the respective special session title under the list of research topics in the submission system. For papers submitted to the cross-disciplinary and CI applications special sessions track, please click on the IEEE CEC 2016 paper submission link, and in the “Main Research Topic”, select the respective special session title under "Section 8. Cross-Disciplinary and CI Applications". Any paper submitted to the cross-disciplinary and CI applications special sessions track (if accepted and presented) will be published in one of the three conference proceedings (IJCNN, Fuzzy-IEEE or IEEE CEC) that is most fitting. Such decision will be made by the Special Session Organizers in consultation with the Special Session Chair and one of the three Conference Chairs.
- In order for your papers to be included in the congress program and the proceedings, final accepted papers must be submitted and the corresponding registration fees must be paid by April 15, 2016.
- IEEE WCCI 2016 will present the Best Overall Paper Awards and the Best Student Paper Awards to recognize outstanding papers published in each of the three conference proceedings (IJCNN 2016, FUZZ-IEEE 2016, IEEE CEC 2016). The awards will be judged by an Awards Committee and the recipient of each award will be given a certificate of the award and a cash prize to be presented during the conference banquet at IEEE WCCI 2016.

If you encounter any problems with the submission of your papers, please contact the Paper Submission Chair Dr. Ke Tang.

- Submit papers to IJCNN 2016: http://ieee-cis.org/conferences/ijcnn2016/upload.php
- Submit papers to FUZZ-IEEE 2016: http://ieee-cis.org/conferences/fuzzieee2016/upload.php
- Submit papers to IEEE CEC 2016*: http://ieee-cis.org/conferences/cec2016/upload.php

** For papers submitted to the cross-disciplinary and CI applications special sessions track, please click on the IEEE CEC 2016 paper submission link.*

LaTeX and Word Templates. To help ensure correct formatting, please use the style files for U.S. Letter as template for your submission. These include LaTeX and Word. Violations of any of the above paper specifications may result in rejection of your paper.

Manuscript Style Information. Only papers prepared in PDF format will be accepted. Paper Length: Up to 8 pages, including figures, tables and references. At maximum, two additional pages are permitted with overlength page charge of US$125/page, to be paid during author registration. Paper Formatting: double column, single spaced, #10 point Times Roman font. Margins: Left, Right, and Bottom: 0.75" (19mm). The top margin must be 0.75" (19 mm), except for the title page where it must be 1" (25 mm). No page numbers please. We will insert the page numbers for you.

Note: Violations of any of the above specifications may result in rejection of your paper.

http://www.wcci2016.org