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36th International Communications Energy Conference

Resilient Communications Energy for our Connected World

In 2014, the 36th annual INTELEC conference is being held September 28 - October 2 in the Vancouver Convention Center in Vancouver. This years' program will focus on communication power systems, energy storage, power conversion equipment and site support. From batteries to power supplies, disaster recovery to renewable energy, INTELEC 2014 is the place to see where the industry is heading, what new products are being introduced and will be the place to personally interact with the key suppliers and decision makers in the industry.

A compelling technical program, expansive trade show as well as daily key note presentations and workshops from industry leaders will propel this event to the top of the must do this in 2014.

CALL FOR PAPERS

Please note the following deadlines

Last date for submitting the abstracts: March 14, 2014

Notifications of the accepted papers: May 2, 2014

Last date for submitting manuscripts of the final papers: June 16, 2014

www.intelec2014.org

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Emerging concepts and technologies towards 5G wireless networks

Halim Yanikomeroglu
Carleton University

Distinguished Lecturer

Monday 24 February
400 pm

Room 418, Macleod Bldg
2356 Main Mall, UBC

Despite the recent advances in wireless technologies, the wireless community faces the challenge of enabling a further traffic increase of up to 1,000 times in the next 10-15 years, while no customer is willing to pay more for the wireless pipe itself: the so called "traffic-revenue decoupling". Moreover, many experts warn that the low-hanging fruits in wireless research (especially in information theory, communications theory, and signal processing) have already been collected. While the research community is full of ideas (as usual), many of these ideas are either not-too-relevant (i.e., not in the bottleneck areas) or they are in areas in which progress toward a tangible implementation is too slow.

In the first part of this talk, the following topics will be covered:

- Fundamental dynamics of cellular communications
- 3GPP operation
- Key technologies in LTE and LTE-Advanced
- Emerging challenges and opportunities in beyond-2020 wireless networks
- Bottleneck problems in beyond-2020 wireless networks

In the second part of the talk, the potential research directions towards coping with the bottleneck problems, especially in the context of radio access network (RAN), resource allocation, layers 1, 2, and 3, will be discussed; the underlying mathematical tools will also be highlighted:

- Thoughts on 5G PHY
- Non-coherent communications
- New frontiers in resource allocation and quality of experience
- Steerable beamforming at the terminal with resource allocation
- Uplink of massive machine-type communications
- Heterogeneous traffic modeling in space and time
- Inter-cell load coordination (ICLC) for non-uniform traffic
- Interdisciplinary approaches in decision making
- Cell switching off in dense small cell deployment
- Robust algorithms and protocols
- Layer 8 – User-in-the-loop (demand shaping in space and time)
- Millimeter wave communications
- Advanced antenna technologies

In the absence of a clear technology roadmap towards 5G, the talk has, to a certain extent, an exploratory view point to stimulate further thinking and creativity. We are certainly at the dawn of a new era in wireless research and innovation; the next twenty years will be very interesting.

Speaker Halim Yanikomeroglu is a professor at the Department of Systems and Computer Engineering at Carleton University, Ottawa. His research interests cover many aspects of wireless technologies with a special emphasis on cellular networks. Dr. Yanikomeroglu has coauthored about 60 IEEE journal papers; his papers have received more than 5,000 citations. In recent years, Dr. Yanikomeroglu has been involved in several collaborative research projects with the Canadian and international industry; this collaborative research has resulted in 15 patents (applied and granted). Dr. Yanikomeroglu is currently leading the Project 5G funded by the Ontario Ministry of Economic Development & Innovation, Huawei Technologies, and Telus.

Dr. Yanikomeroglu has been involved in the organization of the IEEE Wireless Communications and Networking Conference (WCNC) since its inception in 1999 in various capacities, including serving as the Steering Committee member, and the Technical Program Chair or Co-Chair in 2004, 2008, and 2014. He was the General Co-Chair of the IEEE Vehicular Technology Conference Fall 2010. Dr. Yanikomeroglu has served in the editor boards of IEEE Transactions on Communications, IEEE Transactions on Wireless Communications, and IEEE Communications Surveys and Tutorials. He is a former chair of the IEEE's Technical Committee on Personal Communications (now called, Wireless Technical Committee). Dr. Yanikomeroglu is a recipient of several teaching and research excellence awards. He is a Distinguished Lecturer for the IEEE Vehicular Technology Society.

http://www.sce.carleton.ca/faculty/yanikomeroglu.html

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

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

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Phase noise reduction in electrical oscillators and semiconductor lasers: nonlinear, feedback, and feed-forward techniques

Hossein Hashemi
Univ of Southern California

Distinguished Lecturer

Thursday 06 March

14:30 to 16:00

Rm 2020 Kaiser Bldg

2332 Main Mall

UBC

Oscillators with high spectral purity, or equivalently low timing jitter, are key blocks in many engineered systems including those used in timekeeping, synchronous communication, computation, navigation, sensing, and fundamental research. There has been a continued effort towards realizing compact energy-efficient oscillators with high spectral purity at radio and optical frequencies. This talk will review recent research towards realization of compact electrical oscillators and lasers with low phase noise. Motivated by the application benefits of miniature engineered systems, and enabled by advancements in fabrication, high-quality nano-resonators have become mainstream. Miniature resonators have nonlinear dependency on the incident power at modest power levels. This resonator nonlinearity affects the nonlinear dynamics and stochastics of self-sustained oscillators.

In the first part of the talk, problem formulation and analysis of oscillators with nonlinear resonators will be presented. Case studies, including theoretical and experimental results of an extremely low phase-noise CMOS oscillator that leverages nonlinear characteristic of a Film Bulk Acoustic-wave Resonator (FBAR) achieving sub-10fs jitter at 1.5 GHz, enabling extremely high-speed high-resolution data converters, will be presented. In the second part of the talk, feed-back and feed-forward techniques that can reduce the phase-noise of self-sustained oscillators will be introduced. As a case study, an RF-inspired electro-optical feed-forward approach that reduces the phase-noise of semiconductor lasers over a wide frequency range will be shown.

Theoretical and experimental results leading to line-width reduction by 4 orders of magnitude in a Distributed Feed-Back (DFB) semiconductor laser, without using external optical cavities, will be presented. By placing the proposed phase noise reduction system after a commercial tunable laser, a tunable coherent light source with kilohertz line-width over a tuning range of 1530–1570 nm is demonstrated. As a second case study, feed-back and feed-forward phase noise reduction in radio-frequency oscillators will also be presented as well.

Speaker: Hossein Hashemi is an Associate Professor of Engineering, Ming Hsieh Faculty Fellow, and the co-director of the Ming Hsieh Institute and the Ultimate Radio Laboratory (UltRa-Lab) at the University of Southern California. He received the B.S. and M.S. degrees in Electronics Engineering from the Sharif University of Technology, Tehran, Iran, in 1997 and 1999, respectively, and the M.S. and Ph.D. degrees in Electrical Engineering from the California Institute of Technology, Pasadena, in 2001 and 2003, respectively. Dr. Hashemi currently serves on the Technical Program Committees of IEEE International Solid-State Circuits Conference (ISSCC), IEEE Radio Frequency Integrated Circuits (RFIC) Symposium, and the IEEE Compound Semiconductor Integrated Circuits Symposium (CSICS). He is also a Distinguished Lecturer of the IEEE Solid-State Circuits Society. He is also an Associate Editor for the Journal of Solid state Circuits (2013 through the present), and Guest Editor of the same journal for October 2013 and December 2013 issues. He was an Associate Editor for the IEEE Transactions on Circuits and Systems, Part I: Regular Papers (2006-2007) and an Associate Editor for the IEEE Transactions on Circuits and Systems Part II: Express Briefs (2004 -2005).

He was the recipient of the 2008 Defense Advanced Research Projects Agency (DARPA) Young Faculty Award and the National Science Foundation (NSF) CAREER Award. He received the USC Viterbi School of Engineering Junior Faculty Research Award in 2008, and was recognized as a Distinguished Scholar for the Outstanding Achievement in Advancement of Engineering by the Association of Professors and Scholars of Iranian Heritage in 2011. He was a co-recipient of the 2004 IEEE Journal of Solid-State Circuits Best Paper Award for A Fully-Integrated 24 GHz 8-Element Phased-Array Receiver in Silicon and the 2007 IEEE International Solid-State Circuits Conference (ISSCC) Lewis Winner Award for Outstanding Paper for A Fully Integrated 24 GHz 4-Channel Phased-Array Transceiver in 0.13um CMOS based on a Variable Phase Ring Oscillator and PLL Architecture. He is the co-editor of the book Millimeter-Wave Silicon Technology: 60 GHz and Beyond published by Springer in 2008

Information
Solid-state Ciruits Chair
Shahriar Mirabbasi
shahriar@ece.ubc.ca

IEEE SOLID-STATE CIRCUITS SOCIETY
Where ICs are in IEEE

IEEE COMPONENTS, PACKAGING, AND MANUFACTURING TECHNOLOGY SOCIETY

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How to fail EMC in consumer product design in 10 easy lessons

Elya B. Joffe
KTM Project Engineering

Distinguished Lecturer

Thursday 27 March

12:30 to 14:00

Room 2020 Kaiser Bldg

2332 Main Mall

UBC

An electromagnetic compatibility (EMC) program is a "phantom program" within the main project: *Success of the EMC Program is not apparent, only its failures*... EMC design is complex, often denoted "black magic". Successful EMC design requires, therefore, resources, know-how, and especially an open minded, innovative approach.

EMC design addresses a wide variety of system considerations, ranging from electrical, materials, mechanical and even software engineering. Keeping this in mind, it may even seem miraculous that EMC design actually succeeds (from time to time, anyhow).

This presentation discusses, in a somewhat humorist manner, how and why EMC designs could fail. Ten key points are presented which, if failure in design is the goal - they should be applied, as shown. Subsequently, an overview of the "correct" design approach is also presented, after the faults in the initial design are clearly explained.

Speaker: Mr. Elya Joffe is the V.P. of Engineering at K.T.M. Project Engineering - an engineering consulting company in Israel. He has been with K.T.M. Project Engineering since 1987 where he also works as a Senior EMC engineering Specialist and consultant. Elya holds a B.ScEE in Electrical Engineering from the Ben Gurion University in Israel, is a Registered Professional Engineer.

Mr. Joffe is also an iNARTE (International Association for Radio, Telecommunications and Electromagnetics Engineers) certified Senior EMC Engineer, ESD Control Engineer and EMC Master Design Engineer. Since the merger of iNARTE with Exemplar Global (RABQSA International), he also serves as member and Chair Elect of the RABQSA BoD and as Chairman of the iNARTE Advisory Committee.

Elya has 30 years of experience in government and industry, in EMC/E3 (Electromagnetic Compatibility/ Electromagnetic Environmental Effects) for electronic systems and platforms (in particular - aircraft and aerospace). He is actively involved, as an EMC/E3 Specialist, in the EMC design of commercial and defense systems, from circuits to full platforms. His work covers various fields in the discipline of EMC, such as NEMP and Lightning Protection design. He is also well known in Israel and abroad for his activities in EMC training and education, and has authored, developed and presents many courses on Electromagnetic Compatibility and related topics. He has authored and co-authored over 30 papers in EMC and EMC-related topics, both in the IEEE Transactions on EMC and Broadcasting, as well as in the proceedings of International EMC and Product Safety Engineering Symposia. He is also the main Author of the Book: "Grounds for Grounding: A Circuit to System Handbook", published by Wiley-IEEE Press, 2009.

Mr. Joffe is a Senior Member of IEEE, and has served as a member of the IEEE EMC Society of the Board of Directors since the year 2000 and is the Past President of the IEEE EMC Society. He is the current President of the IEEE Product Safety Engineering Society. He is also the Immediate Past Chairman of the Israel IEEE EMC Chapter and is a member of the IEEE Education Activities Board (EAB) and Chairs the IEEE Continuing Education Committee (CEC). He is also a member of the Board of Governors of the Society for Social Implications of Technology (SSIT). He s a member of the very prestigious honor societies: IEEE Eta-Kappa-Nu (IEEE-HKN) and the "dB Society". Mr. Joffe also served as a "Distinguished Lecturer" of the IEEE EMC Society, for the years 1999 through 2000 and now serves as a "Distinguished Lecturer" for the Consumer Electronics Society. Mr. Joffe is also the recipient of the very prestigious "2006 IEEE RAB Larry K. Wilson Transnational Award" "For outstanding contribution to enhancement of the transnational character of IEEE through promotion of conferences, membership and chapter development on a regional and global basis".

Information
Solid-state Ciruits Chair
Shahriar Mirabbasi
shahriar@ece.ubc.ca

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Jim McKay
Candoo Systems Inc

TRIUMF Auditorium
TRIUMF main ofice bldg
4004 Wesbrook Mall, Van

Monday 10 March
4:00pm

Information
Joint Applied Physics
Chair
Ahmed Hussein
Ahmed.Hussein@unbc.ca
ED 03Mar

Magnetic field sensors and instrumentation: types, applications, innovations, and local connections

We are all familiar with magnetic fields, having seen their effects and studying at least the basic theory describing them at some point in our education. Sensors for measuring the amplitude and direction of magnetic fields have been in use since 1830's, but many engineers and scientists are not aware of the range and diversity of available magnetic field sensors (a.k.a magnetometers), or the recent developments in this area. It may also come as a surprise that local engineers& scientists have quietly been involved in the development of magnetometer technology for decades. Applications for magnetometers include navigation, non-destructive testing, geological surveying, space exploration, archeology, permanent magnet characterization, and brain functional imaging. This presentation will review the features of popular magnetic field sensors, what applications each is best suited for, and the keys for successful application of these sensors in shielded and unshielded environments. The results of R&D work done in Greater Vancouver will be uncovered. Also several new developments in magnetic field sensing will be described.

S. Cherukupalli
BC Hydro

Monday 24February
Noon to 1:00 PM

BC Hydro - Edmonds A01
Skytrain Auditorium
6911 Southpoint Dr. Bby

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

An overview of BC Hydro's Vancouver city central transmission – 230kV XLPE cable project

This is BC Hydro first 230kV XLPE cable system and the presentation will provide an overview of the project, some of the unique challenges faced during its execution, the installation methods, and some of the novel ac hi voltage partial discharge methods adopted to commission these cable systems. The ability to monitor the real-time cable temperatures using Distributed Temperature Measurement technology and how this information can be used by the Sys Ops to optimally operate the Asset will be presented.

Speaker Dr. Sudhakar Cherukupalli obtained his Master in High Voltage Engineering from the Indian Institute of Science in 1976 and his Ph.D. from the University of British Columbia in 1987.Dr. Sudhakar Cherukupalli is a member of the IEEE – Insulators Conductors Committee , currently serve as IEEE-DEIS Standards Liaison and is a WG member of several IEEE Standards on "Partial Discharge Monitoring Systems for Transmission Cables", "Real-time Ratings for Transmission Cable Circuits", "Thermal cycling of Large Hydro Generators". He served as Vice Chair – Electrical materials Sub Committee (Rotating Machines) and Past-Chair of the IEE-ICC Education Committee. He has served as an Adjunct Professor at the University of British Columbia. He just completed his term as a Canadian National Representative on CIGRE-D1 (Emerging Technologies and Test Techniques).

He has more than 30 years of experience in the Industry in the areas of high voltage testing of power equipment, 420kV switchgear design, developing novel diagnostics tools for the condition assessment of power equipment, transmission cable design, and the application of electro-optical devices for power system applications. He has been a principal investigator on several projects sponsored by the Electric Power Research Institute, Canadian Electricity Association, as well as BC Hydro Strategic R&T. He has also undertaken several projects on hydro generator insulation system assessment for utilities such as Grant County Public Utility District (PUD), the California Department of Water Resources (CDWR), Potomac Electric Power Company (PEPCO) and manufacturers.

He jointly holds a European and US Patent that was awarded for method and apparatus for measuring voltage using electric field sensors. He has published over 35 technical papers in International Conferences and Journals and published several technical research reports for the Canadian Electricity Association, Electric Power Research Institute. Currently he is a Principal Engineer, Team Lead for Transmission Cables Design in T&D Engineering at BC Hydro. He is a Senior Member of the IEEE and registered member of Association of Professional Engineers and Geoscientists of British Columbia (BC), Canada.

Ian Hartley
Univ ersity Northern BC

Friday 28 February
2:30 pm

Library Building 5-174

Information
Matt Reid
IEEE UNBC Chair
mreid@unbc.ca

From NMR to terahertz probing wood-water interactions

The structure of wood is one of the most complex natural biomaterials to study. Many physical properties are modified with the presence of water at the anatomical level that influences its behavior as a building material or as a musical instrument component. Most wood products are in environments of low and/or high humidities, and, therefore, to completely understand the role water plays, it is important to investigate the interaction of water with the wood material at the molecular level. This can be accomplished with several experimental techniques, including proton nuclear magnetic resonance (NMR) and terahertz (THz) spectroscopy among others. In this talk, results will be presented of experiments that use those techniques that help to tell the story of the mechanisms of wood-water interaction, namely of the different types of water present in wood.

Speaker: Dr. Ian Hartley is Professor in the Ecosystem and Science Program, with joint appointment in the Department of Physics. He holds a BSc in Physics and MScF in Wood Science from the University of New Brunswick and a PhD in Wood Physics from the University of British Columbia. Prior to coming to UNBC, he was an Assistant Professor of Forest Products at Mississippi State University. He is a Fellow of the Institute of Materials, Metals and Mining (Britain) and held Adjunct Professor appointment in the Department of Physics at the University of Waterloo. At UNBC, Dr. Hartley teaches forest products and wood science courses, and supervises graduate students in the of wood-water interaction at a molecular level for solid wood and composite materials. Dr. Hartley has published over 50 journal and technical articles and has made over 50 presentations at conferences and other technical sessions. He has research collaborations with UBC, FPInnovations (CT Imaging Centre; Evalutree), University of Waterloo, University of Tennessee, Auburn State University and Louisiana State University. At the UNBC 2007 Convocation, Dr. Hartley was awarded the Excellence in Teaching Award.

UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA

Also this March at UNBC..

CT and X-ray scanning, and NIR spectroscopy

presented by
Zarin Pirouz
FP Innovations

Friday 14 March
2:30 pm

Library Building 5-174
University of Northern BC
Prince George BC

Visit www.ieeecontact.org
for more details as available or contact
IEEE UNBC Chair Matt Ried
for more information
mreid@unbc.ca

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Graph signal processing for image compression and restoration

Gene Cheung
National Institute of Informatics

Friday 07 March

2:00 pm

Applied Sciences Bldg

Room ASB 9705

SFU

In contrast to traditional signal processing that studies signals living on regular kernels (e.g., speech / music on periodically sampled timeline, or image on a regular 2D grid), graph signal processing (GSP) is the processing of signals that live on structured kernels described by graphs. Examples of graph-signals include messages posted on social networks like Facebook, and temperature readings collected on a wireless sensor network.

In this talk, I will focus instead on the processing of images as interpreted as signals on weighted graphs. The key idea is to embed structures of an image into edge weights of the associated graph, so that signal-adaptive graph transform / filtering can be readily applied. In particular, I will demonstrate how GSP techniques can be used for three example image processing applications. First, I will show how using a graph transform (instead of traditional DCT), block-based coding of depth images can become sparser in the transform domain, leading to compression gain. Second, I will show how the same graph transform can be used for denoising of single depth images, outperforming state-of-the-art image denoising techniques such as BM3D. Finally, I will present preliminary results of using variants of graph transform for image interpolation.

Speaker: Gene Cheung received the B.S. degree in electrical engineering from Cornell University in 1995, and the M.S. and Ph.D. degrees in electrical engineering and computer science from the University of California, Berkeley, in 1998 and 2000, respectively. He was a senior researcher in Hewlett-Packard Laboratories Japan, Tokyo, from 2000 till 2009. He is now an Associate Professor in National Institute of Informatics in Tokyo, Japan. His research interests include 3D visual representation and immersive communication.

He has published over 120 international conference and journal publications. He has served as Associate Editor for IEEE Transactions on Multimedia from 2007 to 2011 and currently serves as Associate Editor for DSP Applications Column in IEEE Signal Processing Magazine and APSIPA Journal on Signal & Information Processing, and as Area Editor for EURASIP Signal Processing: Image Communication. He currently serves as member of the Multimedia Signal Processing Technical Committee (MMSP-TC) of the IEEE Signal Processing Society (2012-2014). He has also served as Area Chair in IEEE International Conference on Image Processing (ICIP) 2010, 2012-2013, Technical Program Co-Chair of International Packet Video Workshop (PV) 2010, Track Co-Chair for Multimedia Signal Processing track in IEEE International Conference on Multimedia and Expo (ICME) 2011, symposium Co-Chair for CSSMA Symposium in IEEE GLOBECOM 2012, and Area Chair for ICME 2013. He was invited as plenary speaker for IEEE International Workshop on Multimedia Signal Processing (MMSP) 2013 on the topic “3D visual communication: media representation, transport and rendering”. He is a co-author of best student paper award in IEEE Workshop on Streaming and Media Communications 2011 (in conjunction with ICME 2011), best paper finalists in ICME 2011 and ICIP 2011, best paper runner-up award in ICME 2012, and best student paper award in ICIP 2013.

Information
Signal Processing Chair
Ivan Bajic
ivan_bajic@ieee.org

IEEE Signal Processing Society

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ICICS

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IEEE VANCOUVER SECTION

ICICS-ECE-IEEE Workshop on Future Communications and Multimedia Systems

CONNECTING EVERYTHING UNDER THE CLOUD

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Friday, March 14, 2014
8:00 am – 4:30 pm
UBC Vancouver Campus
Kaiser Building
2020 – 2332 Main Mall

For free registration, technical program and other details, please see

www.icics.ubc.ca/workshops/comm2014

a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

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IEEE Canada IHTC 2014 International Humanitarian Technology Conference

"Humanitarian advancement through technology"

June 1-4, 2014, Montreal, Canada
OMNI Hotel, Mont-Royal, Montreal

Cosponsored by: IEEE Canada, Montreal Section, Ottawa Section, Toronto Section, Vancouver Section, Northern Canada Section, and Newfoundland and Labrador Section

Call for Papers

The 2014 IEEE International Humanitarian Technology Conference (IHTC) will be held in Montreal, Canada from June 1-4, 2014. The conference will focus on humanitarian applications of technology in the general areas of technologies for improving the lives of underserved peoples (including aboriginal/indigenous peoples), technologies for the disabled, health-related technologies, humanitarian engineering educational programs, and technologies to assist in disaster situations. The conference will feature outstanding keynote speakers, workshops, a student paper competition and peer-reviewed papers. Technology-oriented papers and papers describing social and economic factors related to humanitarian technology implementation are welcome for the conference.

The technical program committee for the 2014 IEEE IHTC invites you to submit a 200-300 word abstract of a paper in any of the following track areas:

1. Mobile Health (mHealth), Medical Technology, and Telemedicine
2. Operations, supply chain and logistics in humanitarian aid and disaster response
3. Water and Agricultural Technologies
4. Off-grid Power, Renewable Energy and Resilient Power Grids
5. Connectivity and Communications Technologies
6. Humanitarian and/or Sustainable Engineering Programs, Educational Technologies, Course Materials, and Curricula
7. Data and Personal Security Technologies for Humanitarian Applications
8. Underwater Wireless Communications for Humanitarian Applications
9. Underwater Robotics for Humanitarian Applications
10. Community Engagement and Social and Economic Factors in Humanitarian Engineering

Paper Submission

The format of the paper should follow the IEEE conference papers style. IHTC 2014 will only accept the electronic submission of a full paper in English with maximum six pages on line by uploading the PDF-format file to http://www.bytematters.com/veda/ihtc.aspx. Detailed information on paper format and submission procedure can be found on the conference website. IHTC 2014 proceedings are included in IEEE Xplore.

Technical Co-Chairs Contacts at Emails:
pritpal.singh@villanova.edu
and mohamad.sawan@polymtl.ca

Important Dates

Deadline for Abstract Submission ..... January 20, 2014
Notification of Abstract Acceptance ..... January 31, 2014
4-page IEEE format Full Paper Due ..... February 28, 2014
Reviewer's Feedback to Authors ..... March 31, 2014
Camera-Ready Papers and Copyright Forms Due April 30, 2014

Exhibitions

There will be an exhibition site at the conference. Companies and institutions who are interested are encouraged to contact the exhibition chair for further information.

For more information on IHTC'2014, please contact: Ferial El-Hawary, General Chair c/o Dept of Electrical and Computer Engineering, Dalhousie University Halifax, NS, Canada B3H 4R2
Tel: +1(902) 494-3911 Fax:+1(902) 422-7535
E-mail: F.El-Hawary@ieee.org

For detailed up-to-date information, visit the IHTC2014 Conference Web site: www.ihtc.ieee.ca

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2014 IEEE 15th International Conference on High Performance Switching & Routing
Vancouver, British Columbia, July 1 to July 4, 2014

Vancouver is world renowned for its diversity of many cultures and ethnicities. It is an ideal place for scientists and engineers from around the world to gather and share their ideas.

With the unprecedented growth of the Internet as a backbone for communications and information services, it is essential that researchers gather to share their ideas and progress on solving the future challenges that the Internet faces. They include bridging the digital-divide and providing advantages of the Internet to developing countries; handling the bandwidth and delay requirements of multimedia, P2P, and cloud computing applications; implementing IPv6 and migrating from IPv4; deploying large datacenters and enhancing their switching capabilities; and achieving energy efficiency of switching and routing equipment.

These are only a few of the topics that have demanded switching and routing capabilities that are more intelligent, efficient, and reliable then ever before.

IEEE HPSR 2014 will address the following topics

- Architectures of high-performance switches and routers
- High-speed packet processors
- Address lookup algorithms
- Packet classification, scheduling, and dropping
- Switching, bridging, and routing protocols
- Latency and buffer control
- Multicasting
- P2P routing
- Routing in wireless, mobile and sensor networks
- Optical switching and routing
- Switching, bridging, and routing in data centers and clouds
- Software defined networking
- Data placement and migration
- Multiprocessor networks
- Network management
- Pricing, accounting, and charging
- QoS and scalability of switching, bridging, and routing
- Traffic characterization and engineering
- Power-aware switching, bridging, and routing protocols
- High-speed network security

IMPORTANT DATES (extended deadlines)

Paper registration: February 16, 2014
Full paper submission: February 23, 2014
Tutorial submission: March 2, 2014
Acceptance notifications: April 6, 2014
Camera-ready due: May 4, 2014

General Chairs: Ljiljana Trajkovic (Simon Fraser University), Andrzej Jajszczyk (AGH University of Science and Technology)
http://www.ieee-hpsr.org/

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Ilan Spillinger, CVP, SILICON ENGINEERING,

Architecture & Silicon Management, Microsoft

Ilan is the Corporate Vice President driving XBOX console management. As a member of the Hardware Leadership team, Ilan leads Microsoft's future silicon management and architecture Ilan Spillinger is Corporate Vice President driving XBOX console management. As a member of the Hardware Leadership team, Ilan leads Microsoft's future architecture of devices and sensors. Ilan is widely recognized around the world as one of the leading engineers in the field of computer architecture microprocessor design. He joined Microsoft in 2008 to lead console development for Microsoft's Hardware team. He has 22 years of hardware leadership, both before he came to Microsoft and during his three years in IEB. His focus has been incubation and execution of Kinect. Under Ilan's leadership, Microsoft launched a new, more consumer-appealing, Xbox 360. In addition, he helped drive millions of dollars of hardware cost reductions through new designs and launched Kinect for Xbox 360. Previously, during a six-year tenure with IBM, Spillinger served as a distinguished engineer and vice president for advanced processor design. In that role he was responsible for development of all Power Architecture-based processors at IBM: server processors, embedded processors and client-driven solutions. Prior to that, Spillinger was a principal engineer and manager of the architecture team in Intel Israel, responsible for the definition of x86-based low-cost and low-power microprocessors, specifically the first Intel mobile processor in the Intel Centrino roadmap.

Spillinger holds a D.Sc. and M.Sc. in electrical engineering from the Technion Israel Institute of Technology in Haifa, Israel.