IEEE VANCOUVER CONTACT

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Project Management Basics Workshop

IEEE Young Professionals,
IEEE Women in Engineering, and the
PMI Canadian West Coast Chapter
are proud to present the

Project Management Workshop Series*

Wednesday 05 April
6:00 pm to 8:00 pm,
745 Thurlow St - 25th Floor,Vancouver

Communication and Coordination: Focused on coordination and communication in projects. The workshop will consist of a short presentation by a panel of experts from various Project Management fields, and a question and answer session.

Key questions addressed:

- Effectively managing an interdisciplinary team
- Effectively executing a project
- Effectively running meetings
- Communications with all stakeholders (clients, subcontractors, and vendors)

Tickets are $20 for IEEE Members ($30 general admission).
Find information about the other workshops and buy tickets on our Eventbrite page!
https://www.eventbrite.com/e/ieee-project-management-series-tickets-32076219837?aff=IEEEContact

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Women In Engineering
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IEEE youngprofessionals

IEEE Women in Engineering WIE

Internet-of-Things: challenges and future trends

Jianguo Ma
Guangdong University

Tuesday 04 April

3:30 - 4:30 pm,

Rm 418 - Macleod Bldg

2356 Main Mall

UBC

The talk begins with the hot topic of Internet-of-things (IoT) together with the confused definition of IoT. IoT has been introduced as the results of the informationization. The definition of IoT will be given with the differences from the RFID/Wireless-sensing-networks/Internet perspectives.

We define IoT as TO LET THE THING TALK! The key characteristics of IoT will be discussed followed by the key challenges of IoT. From application point of view IoT has those principles: Prediction, Protection, and Prevention. The privacy issues for IoT will also be discussed.

Speaker: Jianguo Ma received the B. Sc. degree from Lanzhou University, Lanzhou, China, in 1982, and doctoral degree in engineering from Duisburg University, Duisburg, Germany. He was with Technical University of Nova Scotia (TUNS), Halifax, NS, Canada from April 1996 to September 1997 as a postdoctoral fellow. He was with Nanyang Technological University (NTU), Singapore, from October 1997 to November 2005 as a faculty member, where he was also the founding director of the Center for Integrated Circuits and Systems, NTU. From December 2005 to October 2009, he was with University of Electronic Science and Technology of China (UESTC), Chengdu, China. He was the Technical Director for Tianjin IC Design Center from November 2008 to November 2016, and concurrently served as Dean of the School of Electronic Information Engineering of Tianjin University of China from October 2009 and the founding Director of Qingdao Institute of Ocean Engineering of Tianjin University from April 2014. Since November 2016 he is with the School of Computer of Guangdong University of Technology, China.

His research interests are: Microwave Electronics; RFIC Applications to Wireless Infrastructures; Microwave and THz Microelectronic Systems; as well as Industrial Internet-of-Things. In these areas, he has published 300 technical papers in peer-reviewed journals and conferences, 7 U.S. patents granted and 40 filed/granted China patents, and 4 books.

Dr. Ma was awarded the Changjiang Professorship by the Ministry of Education of China. He was also awarded Distinguished Young Scholar by National Natural Science Foundation of China. He was a member for IEEE University Program ad hoc Committee (2011~2013). He served as an Associate Editor of IEEE Microwave and Wireless Components Letters from January 2004 to December 2005. He has been a Member of the Editorial Board of the Proceedings of IEEE since January 2013. He is Fellow of IEEE.

Information
Joint Communications Chair Vincent Wong
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Congratulations to **Zhi Tang** recently elevated to Senior Member status.

IEEE Vancouver encourages all eligible members to apply for upgrade to senior member status.

To learn how to become an IEEE Senior Member, please visit:

http://www.ieee.org/membership_services/membership/senior/

Nirwan Ansari
NJ Institute of Technology

Distinguished Lecturer

EdgetIoT: mobile edge computing for the Internet of Things

In order to overcome the scalability problem of the traditional Internet of Things (IoT) architecture (i.e., data streams generated from distributed IoT devices are transmitted to the remote cloud via the Internet for further analysis), mobile edge computing has been proposed to provision IoT by handling the data streams at the mobile edge. Specifically, each base station is connected to a fog node, which provides computing resources locally. On the top of the fog nodes, the software defined networking (SDN) based cellular core is designed to facilitate packet forwarding among fog nodes.

Meanwhile, we propose a hierarchical fog computing architecture in each fog node to provide flexible IoT services: each user's IoT devices are associated with a proxy VM (located in a fog node), which collects, classifies, and analyzes the devices' raw data streams, converts them into metadata, and transmits the metadata to the corresponding application VMs (which are owned by IoT service providers). Each application VM receives the corresponding metadata from different proxy VMs and provides its service to users. In addition, a novel proxy VM migration scheme is proposed to minimize the traffic in the SDN-based core.

Speaker: Nirwan Ansari is Distinguished Professor of Electrical and Computer Engineering at the New Jersey Institute of Technology (NJIT). He has also been a visiting (chair) professor at several universities such as High-level Visiting Scientist at Beijing University of Posts and Telecommunications. Professor Ansari has authored Green Mobile Networks: A Networking Perspective (IEEE-Wiley, 2017) with T. Han, and co-authored two other books. He has also (co-)authored more than 500 technical publications, over 200 published in widely cited journals/magazines. He has guest-edited a number of special issues covering various emerging topics in communications and networking. He has served on the editorial/advisory board of over ten journals.

His current research focuses on green communications and networking, cloud computing, and various aspects of broadband networks. Professor Ansari was elected to serve in the IEEE Communications Society (ComSoc) Board of Governors as a member-at-large, has chaired ComSoc technical committees, and has been actively organizing numerous IEEE International Conferences/Symposia/Workshops. He has frequently been delivering keynote addresses, distinguished lectures, tutorials, and invited talks. Some of his recognitions include IEEE Fellow, several Excellence in Teaching Awards, a few best paper awards, the NCE Excellence in Research Award, the ComSoc AHSN TC Technical Recognition Award, the NJ Inventors Hall of Fame Inventor of the Year Award, the Thomas Alva Edison Patent Award, Purdue University Outstanding Electrical and Computer Engineer Award, and designation as a COMSOC Distinguished Lecturer. He has also been granted over 30 U.S. patents. Professor Ansari received a Ph.D. from Purdue University in 1988, an MSEE from the University of Michigan in 1983, and a BSEE (summa cum laude with a perfect GPA) from NJIT in 1982.

Wednesday 19 April

3:30 - 4:30 pm,

Rm 418 - Macleod Bldg

2356 Main Mall

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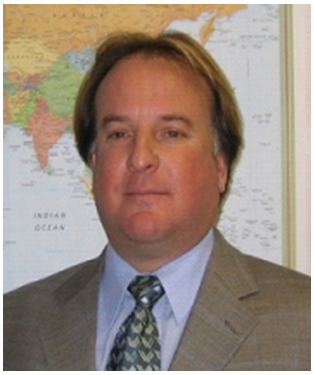
Experience with an on-line hydro generator expert system monitoring system



Blake Lloyd
Iris Power

Distinguished Lecturer

Friday 21 April
4:30pm to 6:00pm

Skytrain Auditorium - BC Hydro's Edmonds Office
6911 Southpoint Drive,
Burnaby, BC

No admission charge - refreshments will be provided.

Please Register here:
https://events.vtools.ieee.org/m/44719

Current technological advances in condition monitoring are employing an increasing number of complex sensors and advanced monitors to diagnose the operating status and condition of hydro generators and turbines. Advanced systems routinely employed may include bearing vibration, air gap, shaft voltage and current monitoring, partial discharge, and flux monitoring. Proper interpretation of this (often complex) information can lower operating and maintenance expenses, in addition to reducing unscheduled outages and catastrophic failures.

However, the volume of available data from these monitors, and the extensive interpretation necessary to evaluate the complex waveforms and spectrums, can overwhelm plant personnel and resources. Sophisticated software and algorithms are often necessary to correlate and interpret this data to establish the overall generator and drive train condition. HydroX™ (for Hydro Expert) is a commercial knowledge-based expert system program for on-line monitoring of hydro-generators. Working with the New York Power Authority, the system was developed over five years by Iris Power and GE -Bently Nevada. After a further two years of prototype evaluation at NYPA's St. Lawrence Power Project on two 60MVA generators, the validated system is now commercially available and will be described.

Speaker: Former Director – Product Development, Qualitrol - Iris Power. Mr. Lloyd is an Electrical Engineer with extensive experience in instrumentation and product development. In past lives, he worked in software development and then in the Electrical Research Department at Ontario Hydro, where he was responsible for conducting research into advanced measurement, testing, and diagnostic monitoring techniques for rotating machines and insulation systems.

Since co-founding Iris Power in 1990, Mr. Lloyd has been one of the principle architects of Iris's line of diagnostic instrumentation and analysis software for rotating machine condition assessment. Products include on-line partial discharge monitoring, air gap flux monitoring, current signature analysis, end-winding vibration, shaft voltage and current monitoring, as well as several off-line test instruments. Mr. Lloyd has two US patents, and has published 25 refereed papers in IEEE and CIGRE, as well as over 40 conference papers.

He has been a Member of IEEE since 1985 serving in the following capacities:

- 1992-1994 - Committee Member – IEEE/PES Hydro-generator Subcommittee
- 2002-2003 – Canadian Expert – IEC Technical Committee 2: Rotating Machines, WG 26
- 2006-2007 - Chairman - IEEE/IAS Pulp and Paper Technical Committee
- 2010 Meritorious Engineering Award Winner of IEEE/IAS Pulp and Paper Technical Committee
- 2013-2014 – President IEEE Industry Application Society

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Joint Power & Energy Chair
Dipendra Rai
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Ilan Spillinger
Microsoft

Friday 12 May
6:00 pm - 8:00 pm

1600 Canfor Policy Room
SFU Harbour Centre
515 West Hastings St
Vancouver

Light refreshments will be served. The event is open to public. We would greatly appreciate if you would please register so that we may more accurately estimate the room size and refreshments.

Sponsored by:
IEEE Circuits and Systems Society joint Chapter of the Vancouver/Victoria Sections and IEEE Joint Communications Chapter of the Vancouver Section

Information
Circuits and Systems Chair Ljiljana Trajkovic
ljilja@cs.sfu.ca

Microsoft HoloLens and mixed reality

The Microsoft HoloLens is an untethered holographic computer that transforms ways we communicate, create, and explore. It creates high-definition, 3D holograms using advanced nano-optics. These become part of the real world through on-board processing of data from an array of sensors continuously sampling the user's environment. HoloLens combines all the processing and components in a form factor that enables interaction with the real and the virtual in a most natural way.

Speaker: Dr. Ilan Spillinger, CVP of Microsoft HoloLens and Silicon, has been with Microsoft since late 2007. He currently leads the HoloLens and Silicon organization, which consists of the HoloLens Hardware engineering team, as well as Silicon and sensor development for HoloLens, Xbox, and accessories.

During his previous six-year tenure with IBM, Ilan was as a Distinguished Engineer and VP of Advanced Processor Design. In that role, he was responsible for development of all Power Architecture-based processors at IBM: server processor; embedded processors; and client-driven solutions (e.g., Xbox 360, Wii). Ilan joined IBM Haifa, Israel development laboratory in 2001, where he managed the IBM Microelectronics Infiniband activity. Prior to that, Ilan was a principal engineer and the 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.

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

Registration is now open.
https://meetings.vtools.ieee.org/meeting_registration/register/44373

CAS
IEEE CIRCUITS AND SYSTEMS SOCIETY
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Tour: General Fusion Research Facility

Tuesday 02 May

3:00PM to 4:45 PM

General Fusion Inc
106 - 3680 Bonneville Pl, Burnaby, BC

PES member Gordon Dobson-Mack has volunteered to organize this tour.

If you are interested, please email him your name, company and position you hold in the company.

Gordon Dobson-Mack
(Dobson-Mack@ieee.org)

Tour Capacity:
15 Participants

General Fusion was founded in 2002 with a goal to transform the world's energy supply by developing the fastest, most practical, and cost-competitive path to commercial fusion power. The company has a team of nearly 50 scientists at its world class laboratories in Burnaby, just outside Vancouver, where it is developing the key components of the world's first fusion power plant.

General Fusion has been recognized globally for its work in clean energy technology, and is a member of the Cleantech Global 100 (2014, 2015) as well as the recipient of numerous Canadian and international cleantech awards. In the media, Dr. Laberge's 2014 TED Talk about fusion energy has attracted over one million viewers, and the company has been featured in publications such as TIME Magazine, Scientific American and BBC Horizons.

Fusion energy has the potential to create a cleaner, safer world, and General Fusion is developing the technology to make it available as soon as possible.

The Fifth IEEE International Conference on Cloud Engineering (IC2E 2017)

April 4-7, 2017

Vancouver

http://conferences.computer.org/IC2E/2017/

The IEEE Vancouver chapter of the Computer Society is involved in organizing this conference enabling ***IEEE Vancouver members to get a special discount of all three tutorials for $250.00.*** Check out the following links for various keynotes, tutorials, workshops.

IC2E is the premier IEEE conference for cloud computing research and development that spans the scope of entire cloud stack, and offers an end-to-end perspective on the challenges and technologies in cloud computing. The main conference of IC2E 2017 offers posters and presentations for papers from both research and industry track.

The conference will feature the following keynotes:

- Amazon Aurora: a look under the hoods (Debanjan Saha, AWS)
- Keeping up with the architects: Software evolution for dense datacenters (Andrew Warfield, UBC)
- Advances in Optimistic Concurrency Control (Johannes Gehrke, Microsoft)

In addition to the main conference, IC2E 2017 will co-host a series of exciting events, including:

- the First IEEE Blockchain Summit (http://blockchain.ieee.org/2017-block chain-summit/);
- the Third International IEEE Workshop on Legal and Technical Issues in Cloud Computing and the Internet of Things (CLaw 2017,http://www.claw-workshop.org/);
- the Third International IEEE Workshop on Container Technologies and Container Clouds (WoC 2017,http://researcher.watson.ibm.com/researcher/view_group.php?id=7476).

Tutorials will be offered on:

- Cloud Computing for Science and Engineering: Scaling Science in the Cloud
- Parallelizing Trajectory Stream Analysis on Cloud Platforms
- Building Secure Cloud Architectures and Ecosystems Using Patterns

A doctoral symposium will also be included within the event.
More details at: http://conferences.computer.org/IC2E/2017/program.htm

Information
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IEEE computer society

IEEE Computational Intelligence Society

Building predictability into cloud distributed systems

Indranil Gupta
University of Illinois

Monday 03 April
10:00 a.m.

Room 2020
Kaiser Building
Department of Electrical
& Computer Engineering
UBC

Today's cloud computing is fueled by distributed software systems for storage (e.g., NoSQL databases), batch processing (e.g., Hadoop), and real-time processing (e.g., Storm). While deployments of these distributed systems are widespread, they lack predictability. Deployers/administrators often have to hand-tune deployments to achieve desired latencies and consistencies, meet critical job deadlines, etc.

We describe some of our work in imbuing these distributed systems with predictability. This includes the ability to support service level agreements/objectives (SLAs/SLOs), to support multiple tenants (thus lowering TCO), and to scale out/in seamlessly. Our work spans and makes contributions to NoSQL databases (Cassandra, Riak), batch processing systems (Hadoop, graph processing systems), and stream processing systems (Storm). These problems are challenging and involve deep research projects, but offer the benefit of being immediately applicable to real world deployments.

Speaker: Indranil Gupta (Indy) is an Associate Professor in the Department of Computer Science at the University of Illinois at Urbana-Champaign. He leads the Distributed Protocols Research Group (http://dprg.cs.uiuc.edu/), which works on large-scale distributed systems with a focus on datacenters and cloud computing systems. Indy received his PhD from Cornell University in 2004, and his Bachelors degree from Indian Institute of Technology Madras (Chennai) in 1998. He has worked at Google, Microsoft Research, and IBM Research. Indy has served as program co-chair for several leading conferences in distributed systems. Indy's work received the NSF CAREER award in 2005, and best paper awards at several venues.

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IEEE VANCOUVER 2017 AGM

Thurb Cushing Scholarship Award — Scott Peverelle

Outstanding Volunteer — Sanjeet Sanghera

Service Award — Lee Vishloff

Outstanding Affinity Group: Young Professionals — Sean Garrity

Outstanding Large Technical Chapter: Joint Power and Energy — Dipendra Rai

John Deane Scholarship Award — Zeyad Tamimi

Hector J. MacLeod Scholarship Award — Parham Pashaei

Outstanding Student Branch: BCIT — Kevin Shu

Outstanding Small Technical Chapter: Tied
Joint Power Electronics — Martin Ordonez
Circuits & Systems — Ljiljana Trajkovic

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