

CONTACT

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Solid State Circuits

Engineering in Medicine and Biology

VLSI Circuits for CT Scanners and SPECT Gamma Cameras

Dr. Kris Iniewski

Redlen Technologies
30 September 2008 200pm
UBC Kaiser Building, Room 2020

Advanced Illumination for Minimally Invasive Surgery and Endoscopy

How closing the circle on digital imaging provides superior images, better information and safer surgical procedures

Becoming a Medical Device Entrepreneur in Vancouver

What does it take and why should a UBC graduate consider joining a start-up or starting their own company?

Nick MacKinnon

OneLight Corporation
Monday 15 September Noon - 100pm
Rm 101-Chemical & Biological Eng UBC

Vancouver entrepreneur Nick MacKinnon will address two aspects of medical device development in his talk. First, he'll describe the innovative work of his company, OneLight Corporation, which has developed an advanced imaging technology based on digital illumination. Next, he'll examine the challenges and rewards a UBC Biomedical Engineering program graduate can expect by founding or working for a start-up medical device development company in Vancouver.



OneLight Corporation is attracting worldwide interest with its innovations in surgical and diagnostic optical imaging for the health care and life science technology markets. OneLight's advanced illumination and imaging systems provide significantly more information to clinicians, while allowing them to work with existing and familiar tools and practices. Better information means better decisions and better treatment outcomes.

These devices also enable health care providers and drug companies to apply their expertise more effectively. The primary technology driver for the past 15 years – advances in digital imaging – is hitting its limit. Digital illumination is the new frontier for better information.

Disposable products for surgical interventions drive the \$9 billion-per-year endoscopy and minimally invasive surgery products industry. Surgical safety is enhanced, as virtually everything invasive is thrown away. Until now, however, no one has been able to develop a disposable endoscope that provides quality images. Using its advanced illumination and imaging technology, OneLight has created a disposable endoscope system that not only provides superior image data to the clinician, but also retains the ability to work with existing reusable endoscopes.

The OneLight technology also provides enhanced stereoscopic imaging for surgical robotics systems via either conventional or disposable endoscopes. OneLight is currently working with gastrointestinal surgeons at Vancouver Hospital and the UBC Faculty of Medicine to develop methods to enhance surgical safety, as well as with teams from NIST and Southwestern Medical Centre in Dallas, Texas.

Speaker: Nick MacKinnon, President, CEO and one of the founders of OneLight Corporation, has been involved with a number of BC technology start-ups. He was a founding shareholder of Vancouver-based LED Medical Diagnostics and one of the inventors of its highly successful product, the VELscope. He provides the vision and entrepreneurial spirit for OneLight Corporation's development and growth.

His background includes six years of experience in sales and marketing and over twenty years in development of clinical and research medical devices while working in both academic research and with medical device companies. He has raised millions of dollars in angel and strategic partner investment for OneLight and has leveraged this to provide additional support from government R&D incentive programs to fund OneLight's product and business development. Nick is a graduate of the University of Waterloo and the BCIT Biomedical Engineering program

Info: Ezra Kwok - ezra@chml.ubc.ca



Continuing Education

IEEE Vancouver Section
PES Continuing Education Course

A Practical Approach to Electric Power System Protection

This 36 hour course will be presented over 12 weeks on Wednesday evenings from September to December. It is intended to give practicing electrical engineers an understanding of the fundamentals of protective relaying applied to electric power systems.

Topics to be covered include:

- role of protection in power systems
- transducers and protection accessories
 - short circuit calculations
- protection measuring elements (including the principles of digital filtering)
- protection of transmission and distribution systems
 - protection of generators and interconnections to power systems
- protection of substation equipment
 - special protection systems
- analysis of real life disturbances
- power system components.

The course is planned to be offered from 4:30-7:30 pm on Wednesday evenings starting from 03 September 2008.

The location will be at the BC Hydro Office, 6911 Southpoint Drive, Burnaby, BC

(Near the Edmonds Skytrain station). *Light refreshments will be provided.*

Registration and Fees: The same course was delivered in 2007 and was oversubscribed. Please register early to be sure of a place. The cost of the course will be \$700 for IEEE members, and \$800 for non members. For registration, please contact PES Chapter Chair Glen Tang at glen.tang@bchydro.com

Instructors

Dr. Mukesh Nagpal, Principal Engineer, BC Hydro and Charlie Henville, President of Henville Consulting Inc. The combined protection engineering experience of the instructors is more than 50 years, and they are well regarded in the relaying community and have given several successful courses on the topic. For detailed information on the course content, please contact Charlie Henville by phone at 604-943-5091 or by email at chenville@dccnet.com

Mukesh Nagpal received the Ph.D. and M.Sc. degrees in electrical engineering from the

Joint Communications

IEEE Joint Communication Vancouver Chapter presents

A DOUBLE HEADER

featuring
Two visiting academics from Germany

Tuesday 16 September
700 - 900pm at BCIT building SW3 room 1710

On the Impact of Sectorization Strategies on Pre-Equalization for the Cellular Multiuser Downlink

Rene Habendorf
Technische Universitaet, Dresden

The talk considers the multiuser downlink from a sectorized multi antenna base station site to non-cooperative single antenna mobile stations. Traditionally, the goal of the base station site setup is user separation.

We compare different deployment setups with respect to their achievable performance for several possible transmission schemes. A shift in strategy from separated sectors to overlapping sectors is proposed.

Info: Email Joint Communications Chair Alon Newton, anewton.ieee@gmail.com

This time we will provide some refreshments as well!!!

University of Saskatchewan, Saskatoon, SK, Canada. Currently, he is a Principal Engineer cum Team Leader with BC Hydro Engineering, Protection and Control Planning Group, Burnaby, BC, Canada. He is also an Adjunct Professor with the University of British Columbia and was a Part-Time Instructor with the British Columbia Institute of Technology. He has more than 20 years of experience in electrical consulting, utility research, and power system protection.

Dr. Nagpal has written more than 20 technical papers on power system relaying. He has also contributed to numerous ANSI/IEEE sponsored standards or guides on relaying practices.

Joint Communications

Resource Allocation for Outage Restricted Distributed MIMO Multi-Hop Networks

Dirk Wübben
University of Bremen

The throughput of multi-hop communication systems can significantly be increased by the application of MIMO concepts. To utilize the physical resources in an efficient way, the development of appropriate power allocation strategies to meet the Quality-of-Service (QoS) is desired.

In this talk the total transmit power of a MIMO multi-hop system is minimized under the constraint of a given end-to-end outage probability. The results are very useful for investigating multi-hop systems analytically

Charlie Henville, is a specialist in electric power system protection. After a thirty year career with BC Hydro, he retired in 2005 from the position of principal engineer. He now runs his own consulting company in power system protection. Charlie is well experienced in training engineers in power systems. He is adjunct faculty at the University of Wisconsin and the University of BC, and has presented training courses to working engineers world wide.

He is a Fellow of the Institute of Electrical and Electronic Engineers, and a past recipient of APEGBC's President's Award for professional service.



YOUR LOCAL IEEE STUDENT BRANCHES
PROUDLY PRESENT

Think Engineering 2008



THE UNIVERSITY OF BRITISH COLUMBIA



SIMON FRASER UNIVERSITY
THINKING OF THE WORLD



BRITISH COLUMBIA
INSTITUTE OF TECHNOLOGY

THE SECOND ANNUAL "THINK ENGINEERING" NETWORKING EVENT

THURSDAY, OCTOBER 9TH

Renaissance Vancouver Hotel Harbourside
1133 West Hastings Street Vancouver, BC V6E 3T3

The IEEE student branches of the University of British Columbia (UBC), British Columbia Institute of Technology (BCIT), and Simon Fraser University (SFU) will be hosting the second Annual "Think Engineering" Networking Event. This event will bring together students, industry leaders and academic researchers for a day of professional development and networking in the luxurious surroundings of Renaissance Vancouver Hotel Harbourside. Keynote speeches will be given by corporate leaders and successful entrepreneurs on their inspirational personal success stories. Attendees will have the opportunities to join the panel discussion that address questions about successful engineering management, career progression and current challenges faced by the engineering industry. More information will be posted on UBC IEEE's website at www.ieeeubc.org. Companies can contact the UBC student branch via email, ieee@ece.ubc.ca, for event details and sponsorship

2008 Electrical Power & Energy Conference

Energy Innovation

October 6 - 7, 2008

Vancouver, BC



Conference Notification — EPEC 2008

A forum for industry experts, business communities and academia to exchange ideas and current information related to energy systems.

2008 Conference Topics

Extending the Limits of Transmission and Distribution

- Physical Asset Condition Monitoring
- Real-time Operational Limits
- Power Flow Control
- Impact of Supply Continuity

Generation and Alternative Energy Expansion

- Large Generation Expansion
- Environmental Impact of Large Generation Expansion
- Small Distributed Generation
- Energy Storage
- Impact of Distributed Generation

Intelligent Grid Technologies

- Data gathering and information flow
- Wide area operation, control, and protection
- Cyber Security in the Automated Grid
- Self-healing networks, islanding, load shedding
- Microgrids operation

Conservation and Energy Efficient Technologies

- Shaping Consumer Habits and Smart Billing
- Power Factor Correction and Power Quality
- Energy Efficient Loads

Energy Policy and Innovation

The topics at this conference will reflect innovations in the social and economic aspects of electric energy policy and initiatives, as well as traditional papers addressing technical issues.



Vancouver's Stanley Park offers a quiet place to relax with a great view of the city's skyline.

IEEE Canada is proud to present the 8th Annual Electrical Power and Energy Conference (EPEC). Attracting a worldwide audience of energy professionals, our theme for 2008 is *Energy Innovation*. The 2008 EPEC will take place in the beautiful city of Vancouver, on the Canadian West Coast in the province of British Columbia. Registration available on-line (see conference URL below).



EPEC 2008 is jointly sponsored by:
BC Hydro PowerSmart, BC Transmission Corporation,
IEEE Canada & PES (technical co-sponsor).



Conference occurs October 6-7th

Building Connections

For details and registration, please visit the conference website: <http://www.ieee.ca/epec08>