



VANCOUVER IEEE FORMS WOMEN IN ENGINEERING AFFINITY GROUP

It is our pleasure to announce that the IEEE Vancouver Section Women in Engineering (WIE) affinity group was established in October 2009. IEEE Women in Engineering is the largest internationally recognized professional



organization dedicated to promoting the involvement of women in different fields of engineering. The mission of IEEE WIE is to inspire, engage, encourage, and empower IEEE women worldwide and work toward a vibrant community of IEEE women and men to innovate the world of tomorrow. The local affinity group will be organizing programs and activities to promote women within our profession and enhance their career opportunities. Although our activities are targeting female engineers, the events are open to everyone and you are encouraged to attend these events and spread the word to your colleagues.



Special thanks are given to Dr. Dave Michelson (Vancouver section chair), Dr. Mazana Armstrong (section vice-chair) and other executive members of the IEEE Vancouver Section, Anja Lanz and the executive members of the Women in Engineering Vancouver region group, for their support in forming the official IEEE affinity group. We are in the process of planning the events for the coming year. Stay tuned for more information on our upcoming events in January.

Please join our mailing list to get up-to-date information about our events and volunteering opportunities by sending an email to Women in Engineering Chair Zahra Ahmadian wie.vancouver@ieee.org

Joint Communications

Ideas for Embedded Antennas Design

Andrey Gleener
Andrey Gleener R&D Services

Monday 07 December 700 - 900pm
BCIT SW3-1750

The transition to embedded Antennas has brought the near field environment of the Antenna to the forefront of the Antenna development process. The area surrounding the Antenna has significant effect on it's behavior.



Hence the antenna developer has to extend the design thought onto the whole mechanical structure surrounding the Antenna.

Speaker: Local R&D practitioner Andrey Gleener is owner of the Company 'R&D Services Ltd'. Andrey specializes in development of Antennas. He holds several patents and helped quite a few local product developers with antenna design. "I consider my antenna designs pieces of art similar to sculpting. I want to create as many different ones as I can."

Andrey has on-going interest in development of low cost methods of antenna characterization and design of innovative low profile antennas. In this presentation Andrey will share some thoughts on development of embedded Antennas resulted from his own work and gleaned from work of others.

Info: Joint Communications Chair, Alon Newton, anewton@ieee.org

Women In Engineering

Mobile UI Design – User Centered Design and UI Best Practices

Selma Zafar
OpenRoad Communications

Monday 11 January 700 - 9pm
BCIT SW3-1750

Want to understand how to make a mobile application easier to use? Want to ensure your mobile site meets the needs of your target audience? This 1.5 hour session is aimed at introducing you to the world of user centered design and its importance in helping you design a better mobile product. User centered design puts your customers at the heart of your product design and development process.



OpenRoad will provide an overview on best practices for mobile user interface design and introduce established mobile design standards. The session will include a basic introduction to human factors principles that helped to formulate these guidelines and best practices.

Speaker: Selma Zafar has over 10 years experience in designing innovative and usable software and hardware. She ensures that the needs of the end-user remain at the heart of the research, design and development process. Selma has lead the usability and overall user experience for products and websites for Nokia, Microsoft, Telus, Tourism British Columbia and Ronald McDonald House Charities.

During her time with Nokia, Selma worked on both Series 60 and Series 90 mobile products as well as the design concepting for the new Nokia online music offering, Ovi. At OpenRoad, Selma contributes to the user centered design practice as Senior User Experience Designer, bringing her breadth of experience and knowledge to OpenRoad's clients. As of Fall 2008, Selma was the latest instructor with the Langara College Communication and Ideation Design Program teaching courses in Human Factors and Information Design

Cosponsor: Joint Communications
Info: Women in Engineering Chair Zahra Ahmadian at wie.vancouver@ieee.org

Circuits and Systems

Surge Impedance of Transmission-Line Towers

Prof. Kohshi Okumura
Kyoto University

Wednesday 02 December 230 - 330pm
ASB 10900 (IRMACS Presentation Studio),
Simon Fraser University, Burnaby, BC
<http://vancouver.ieee.ca/CASS/index.htm>

The surge impedance of transmission-line towers is very important in the design of electric transmission lines. The surge impedance has similar effect as a resistance in direct current circuits. A large surge impedance implies large voltage between the terminals as determined by Ohm's law. When designing transmission lines, engineers need to estimate the surge impedance of the tower in order to estimate voltage of the tower top when the top is struck by lightning carrying huge currents. The large voltage at the tower top causes flash-over phenomena from the tower arm to the transmission lines. Eventually, traveling wave carrying huge electric power penetrates into substations and damages various equipment such as transformers. Finally, there is electric blackout on a large scale.



In 1934, C. A. Jordan proposed a formula to calculate the surge impedance of transmission-line towers. The formula is well known, has been cited even in textbooks, and has been used by many researchers and engineers for over 50 years.

However, the formula is erroneous. Where did C. A. Jordan make a mistake? In this talk, we derive the formula and identify the mistake made. Furthermore, we provide the correction and a slightly better approximation by taking into account the structure of the transmission tower.

Speaker: Kohshi Okumura graduated from the Department of Electrical Engineering, Kyoto University, Japan in 1966. He received the doctoral degree in Electrical Engineering from Kyoto University in 1974.

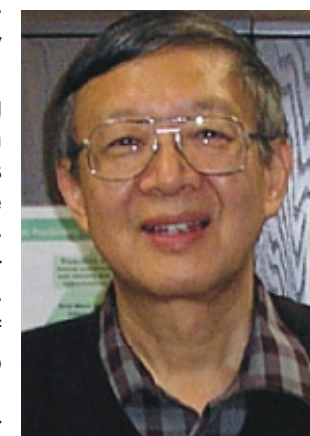
Surge..

Power and Energy

Dr. Wenyuan Li Vancouver IEEE Power and Energy 2009 Outstanding Engineer

The IEEE Power & Energy Society Vancouver Chapter is proud to award Dr. Wenyuan Li with our 2009 Outstanding Engineer Award in recognition of his leadership and contributions to theoretical methods, implementation procedure, practical applications, computing tools and databases in probabilistic power system planning.

Dr. Wenyuan Li is currently a Principal Engineer at British Columbia Transmission Corporation in Vancouver. He is an IEEE Fellow, and has authored more than 80 papers in power system planning, operation, maintenance, optimization and reliability. He has published four books in power system economic operation and power system risk assessment and has also completed more than sixty technical reports in industry applications.



Dr. Li was the recipient of the "Outstanding Engineer Award" by IEEE Canada in 1996, the "Significant Reviewer Award" by IEEE PES in 2006 and two "Technical Committee Working Group Recognition Awards" by IEEE PES in 2007. He has previously presented to the IEEE PES Vancouver Chapter on "Power System Reliability Assessment and its Applications." The PES Vancouver Chapter is very fortunate to have the knowledge and experience of Dr. Li's caliber within our membership.

The presentation of this award took place during the IEEE Vancouver Section Annual Social Event on Tuesday, November 24, 2009 at the Playhouse Theatre.

If you wish to make any nominations for the 2010 Outstanding Engineer Award, they can be sent from now until mid-2010 to glen.tang@powerex.com Previous winners of this award can be viewed at: <http://www.ieee-pes.org/images/pdf/Previous-OEA-Winners-Region-7.pdf>

Details about the award are available at <http://www.ieee-pes.org/chapters/resources/awards/power-and-energy-society-awards/outstanding-engineer-award>

Electron Devices

Professor David Pulfrey 2009 IEEE Electron Devices Society Education Award

Dear Professor Pulfrey:

I am delighted to inform you that you have been selected as the recipient of the 2009 IEEE Electron Devices Society Education Award. This award is intended to recognize distinguished contributions to education within the field of interest of the IEEE Electron Devices Society, and I congratulate you on being awarded one of our Society's highest honors. The citation will read:

"For contributions to the teaching of semiconductor devices at both the undergraduate and graduate levels"

The award will be presented at the 2009 International Electron Devices Meeting (IEDM) on Monday morning, December 7th, at the Baltimore Hilton Hotel, Baltimore, MD. It will consist of a certificate and a check for \$2,500. I hope you will be able to attend and accept in person. Congratulations again on winning this award.

Sincerely, Cor Claey's, EDS President

Institute for Computing, Information & Cognitive Systems Distinguished Lecture Series Computer (and human) perfection at checkers

Jonathan Schaeffer
University of Alberta

Thursday 26 November 330-500pm
Room 110 Hugh Dempster Pavilion

6245 Agronomy Road UBC Vancouver, BC
In 1989, the Chinook project began with the goal of building a computer program capable of winning the human World Checkers Championship. The reigning human champion was almost perfect, having rarely lost a game in over forty years. To do better required the computer to be perfect. In effect, one had to solve checkers. Little did we know that our quest would take 18 years to complete. What started out as a research project quickly became a personal quest and an emotional roller coaster. This talk, by the creator of Chinook, is about the interplay between people and technology, the story of man versus machine for supremacy at checkers. To appreciate this story, no detailed knowledge of computer science or checkers is needed.

Computer..

Message from the Chair

Vancouver Section is moving quickly on several exciting initiatives:

IEEE Continuing Education

Starting in Spring 2010, IEEE members may apply to audit SFU Engineering Science and UBC Electrical and Computer Engineering graduate courses through Vancouver Section. We will collect the tuition fee, forward a bulk tuition payment to each school once per term, and issue a Continuing Education Certificate to the member upon successful completion of the course. Dr. Nikola Stanchev, the Section's new Continuing Education Chair, will administer the program.

This arrangement will allow IEEE members: (1) to satisfy personal or professional interests, (2) to satisfy the Continuing Professional Development requirements of the Association of Professional Engineers and Geoscientists, or (3) to sample campus life and decide whether to seek admission to a full graduate program.

For more information, please contact Dave Michelson, dmichelson@ieee.org or Nikola Stanchev stanchev_n@ieee.org.

Vancouver Section is LinkedIn

If you use the LinkedIn professional networking service, please be sure to join the new IEEE Vancouver Section group. Display an IEEE Vancouver icon on your public profile, get late breaking news concerning Section activities and connect to other members of the Section. To join the group, click the logo



or visit <http://www.linkedin.com/groups?gid=2377330>

For more information, please contact Dave Michelson, dmichelson@ieee.org or Kyle Siversten k.sivertsen@ieee.org.

IEEE Okanagan Subsection

IEEE Vancouver Section has approved a request by 35 members in the Okanagan to form an IEEE Okanagan Subsection. Members of the subsection organizing committee include Prof. Dave Michelson (IEEE Vancouver Section), Prof. Julian Cheng (UBC Okanagan) and Prof. Jonathan Holzman (UBC Okanagan). Final approval by IEEE Canada and IEEE MGA is expected in a few weeks. Rationale: The Okanagan Valley is emerging as a major technology centre within the Province of British Columbia, as demonstrated by the establishment of the Okanagan Campus of the University of British Columbia (UBCO), the Okanagan Research & Innovation Centre

(ORIC), the Okanagan Science & Technology Council (OSTEC), and a nascent technology sector commonly referred to as the Silicon Vineyard. The population of the area is approaching 300,000.

Because the distance from the Okanagan Valley to Vancouver is 400 kms (250 miles), it is difficult for IEEE members in the Okanagan to participate in the majority of activities that are organized by Vancouver Section.

The proposed Subsection will bring together the 90+ IEEE members in and adjacent to the Okanagan Valley to: (1) host IEEE technical presentations, (2) organize IEEE social events, (3) recruit new IEEE members and (4) provide local support to the proposed Student Branch at UBCO.

The proposed territorial limits of the Okanagan Subsection include the areas in and adjacent to the Okanagan Valley including those areas designated by the following postal code prefixes: V0E, V0H, V1B, V1H, V1P, V1T, V1V, V1W, V1X, V1Y, V1Z, V4T, V4V, V2A.

For more information, please contact Dave Michelson, dmichelson@ieee.org, Julian Cheng julian.cheng@ubc.ca or Jonathan Holzman jonathan.holzman@ubc.ca.

Section History Committee

IEEE Vancouver Section is inviting members to join our newly formed History Committee.

The IEEE Global History Network is dedicated to preserving and promoting the history of innovation in the fields of electrical engineering, electronics and computing, and all their related fields. They have invited Vancouver Section to form a History Committee that will prepare contributions for the IEEE Milestones program, IEEE GHN website and the assemble materials to be used in displays or presentations during the Section Centennial in 2011.

If you would like to join the committee or would like more information, please contact Dave Michelson, dmichelson@ieee.org

IEEE Milestones Program

IEEE Vancouver Section has been invited to submit full nominations for two British Columbia sites for possible recognition as IEEE

Milestones. If the nominations are successful, IEEE will install commemorative bronze plaques at each site in Fall 2010. Here are the proposed milestones and the corresponding citations.

First Television Broadcast in Western Canada, 1953

On 16 December 1953, the first television broadcast in Western Canada was transmitted from this site by the Canadian Broadcasting Corporation's CBUT Channel two. The engineering experience gained here was instrumental in the subsequent establishment of the over 1000 public and private television broadcasting sites that serve Western Canada today. (CBC Broadcasting Site, Mount Seymour, North Vancouver, BC)

First Radio Astronomical Observations Using VLBI, 1967

In the early morning of 17 April 1967, radio astronomers at this site collaborated with the Algonquin radio observatory located 3074 km away to make the first successful radio astronomical observations using Very Long Baseline Interferometry. Today, VLBI networks span the globe, extend into space and are routinely used for both radio astronomy and geodesy. (Dominion Radio Astrophysical Observatory, near Penticton, BC)

For more information, please contact Dave Michelson, dmichelson@ieee.org



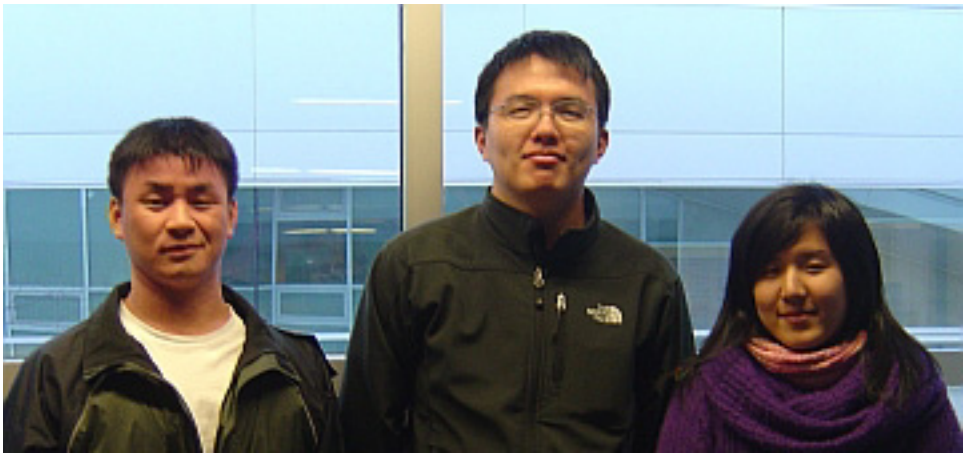
..Computer

Speaker: Jonathan Schaefer is a professor of Computing Science at the University of Alberta, and is currently the Vice Provost and Associate Vice President for Information Technology. He is the iCORE Chair in High-Performance Artificial Intelligence Systems. His research in artificial intelligence is best known for his work on computer games, including classic games and commercial video games. He is the creator of the checkers program Chinook, the first program to win a human world championship in any game. In 2007, he announced that he had solved checkers. He is a co-founder of BioTools (bioinformatics software and the popular Poker Academy).

ICICS Distinguished Lectures are free



IEEE Xtreme 3.0 was held on 24 October 2009. An amazing 700 teams registered for this exciting event. Teams from universities in 40 countries and the ten Regions of IEEE participated. It was the positive energy and enthusiasm of the competitors that truly made this an IEEE Xtreme event to remember.



Team Fizz - Wesley Chan, Qijin Zhou, Myrrh Luckanachai ranked 2nd in Region 7 and 20th world wide

HIGHEST SCORING 25 TEAMS

Points	Team	Student Branch	Country	Region
22693	Mora Seekers	U of Moratuwa	Sri Lanka	R10
22641	Citrus Celebration	U of Auckland	New Zealand	R10
22235	Amobear	Chulalongkorn U	Thailand	R10
20125	Powerhouse	Politech U of Bucharest	Romania	R8
19904	Konohanasakuya	Tokyo Institute of Tech	Japan	R10
19718	Brain Eating Mellon	Carnegie Mellon U	United States	R2
19615	Vehicle of Puzzle	U of Florida	United States	R3
17747	Texas Codeboys	U of North Texas	United States	R5
13906	Cursed Grapes	Princess Sumaya U Tech	Jordan	R8
13841	Sapientia et Doctrina Stabilitas	Queen's U Computing	Canada	R7
13735	AUB	American U of Beirut	Lebanon	R8
13635	Bar Code	Bilkent U	Turkey	R8
13476	Team 1/0	U of Florida	United States	R3
13154	Sarajevo Dragons D	U of Sarajevo	Bosnia & Herzegovina	R8
13086	Crowbar	Binghamton U	United States	R1
12916	The Bagpipe Lubricators	U of Cal -San Diego	United States	R6
12629	AlgoJobs	National Tech U of Athens	Greece	R8
12211	Emertxe	Chulalongkorn U	Thailand	R10
12136	XYZZY	U of Cal -San Diego	United States	R6
11420	Fizz	U of British Columbia	Canada	R7
11018	Lorem Ipsum	James Cook U N. Queens	Australia	R10
10874	Shocklate	U of Miami	United States	R3
10834	SegaMegaDrive	Tartu U	Estonia	R8
10579	Upgrade	U of Passau	Germany	R8
10234	Quit pro Code	U of Klagenfurt	Austria	R8

UBC IEEE Student Branch teams included:

Team Awesome

Oliver Zheng ; Shang Cai ; Zev Weiss

Team Fizz

Wesley Chan; Qijin Zhou;

Myrrh Luckanachai

Team Hello, World

Ghasem Naddafzadeh Shirazi; Trung

Thanh Nguyen; Dana Hoffmann

Team Fizz ranked 2nd in Canada and 20th world wide

Wesley Chan of team Fizz described how solving each problem, given with a scenario, required knowledge that ranged from simple text processing and basic mathematical knowledge, to dynamic programming, search, and other more complex algorithms. In the beginning of the competition, we were given 12 problems to solve, and we had 24 hours to submit a program for each problem. A solution was accepted if it passed all hidden test cases. Points were awarded according to the time spent and the number of attempts taken for each of the 12 problems. About halfway through the 24 hours, 4 more problems were released. Points were awarded based on how optimized your solutions were for these 4 problems. Wesley summed it up - the overall experience was tiring but very enjoyable.

..Surge

He held Assistant Professor, Lecturer, and Associate Professor positions in the Department of Electrical Engineering at Kyoto University. He has been Full Professor since April 1992. In April 2004, he became Full Professor at Hiroshima Institute of Technology and Professor Emeritus at Kyoto University. From 1989 to 1990, he was a guest researcher at University of London (Queen Mary College), United Kingdom and at Ulm University, West Germany.

He is a Fellow of the Institute of Electronics, Information and Communication Engineers (IEICE) and a Senior Member of the IEEE Circuits and Systems Society. He served a Vice President of the Institute of Electrical Engineers of Japan (IEEJ).

His areas of research are the analysis of nonlinear circuits as well as the surge phenomena of transmission systems. He is interested in the application of mathematics to nonlinear circuit analysis, such as interval analysis and homotopy and multi-scale methods

Cosponsor: IEEE Victoria Chapter of Circuits & Systems
Info: Ljiljana Trajkovic - ljilja@cs.sfu.ca