IEEE Southern Alberta Section

Upcoming Events 2-4

Contact Mahmoud (Maz) Mazadi (mmazadi@ucalgary.ca) for feedback and submissions for future newsletters.

Technical Seminar on HVDC Electrical Energy Transmission

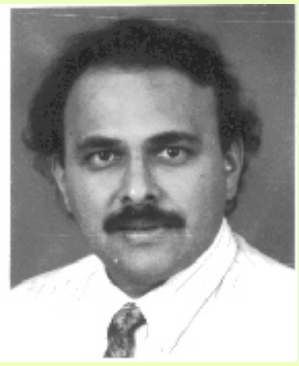
By: Prof. A.M. Gole, University of Manitoba

September 12th 2011

Public and professional interests in High Voltage Direct Current (HVDC) Electrical Energy Transmission have significantly increased since the announcement by the Alberta Electrical System Operator (AESO) to add new North-South, HVDC transmission lines as a part of plans for enhancements to the overall system performance and its capacity to move electrical power generated in the North to the South parts of Alberta.

The Power Energy/ Industry Applications (PE/IA) joint Chapter of the IEEE in Southern Alberta is hosting a technical event about the HVDC on September 12th 2011. The technical seminar will feature Professor A.M. Gole of the University of Manitoba. For this event, Professor Gole will be visiting from Manitoba where HV DC transmission applications have been successfully implemented for years and where worldwide skills were developed. The technical seminar is entitled "New Converter Topologies for High Voltage DC Transmission" and will be held in Calgary, in the evening of September 12th.

The seminar will discuss recent advances in HVDC converters and their emerging developments. It will point out the benefits, drawbacks and practical aspects of the applications of these emerging technologies. It will also present some examples of existing and planned installations worldwide outlining their selected technologies and considerations. One of the aspects of the Seminar will be around the use of the Capacitor Commutated Converter (CCC) and the Voltage-sourced Converter (VSC), two topologies that can reduce converter's dependence on the ac system voltage and are thereby practical when the sending or receiving end ac systems are weak. The Seminar will also discuss the pros and cons of these new topologies and their applications in lieu of the traditionally used technologies such as the Graetz Bridges.



Prof. Ani Gole is Distinguished Professor of Electrical and Computer Engineering, at the University of Manitoba. He has over 30 years experience in the development of modeling tools for power networks incorporating power-electronic equipment. He is one of the original developers of the PSCAD/EMTDC simulation program which now has over 32, 000 licenses worldwide. Dr. Gole has also made important contributions to the development of one of the world's most widely used Power Systems Transients Simulator, the RTDS from RTDS Technologies of Winnipeg, Canada. Earlier, Dr. Gole worked with Hydro Quebec and Manitoba Hydro as an HVDC Studies Engineer.
For his contributions to the modeling of Flexible Ac Transmission System (FACTS) devices, Dr. Gole was named the year 2007 recipient of the IEEE PES Nari Hingorani FACTS Award,
Dr. Gole is a Fellow of the IEEE and is a Registered Professional Engineer in the Province of Manitoba, Canada.

For more details or reservation for the event please consult the PE/IA Chapter Web Site http://sas.ieee.ca/pesias/ or contact the event coordinator at Ebrahim.Rahimi@aeso.ca or the PE/IA Chapter Secretary Patrick.wong@jacobs.com

PE/IA Chapter Presents:

Protection of Medium Voltage Transformers at Utility and Industrial Facilities

Charles (Chuck) Mozina, IEEE Fellow, Consultant to Beckwith Electric

November 14th, 2011- 6:00 PM

Abstract: The seminar will cover the basics of protecting medium voltage utility and industrial transformers as discussed in IEEE/ANSI standard C37.91 (Guide for Protective Relay Applications for Power Transformers) and the IAS Buff Book (IEEE Standard 242-2001). It will also address new protection techniques made possible by modern digital transformer relays. Topics covered will include: transformer basics, why transformers fail, polarity and phasing standards (ANSI and IEC), IEEE through fault withstand capability standards, de-mystifying wye-delta and delta-wye phase shifts, fuse/overcurrent/ differential protection, CT requirements, slope, harmonic restraint, over excitation limits and protection methods, commissioning and relay testing, application of fault pressure relays. The seminar highlights the protection of transformers grounded through 200-400A grounding resistors – a common practice at industrial facilities requiring sensitive ground differential protection as well as solidly grounded transformer generally installed at utilities. Case studies of actual in-service events will also be discussed.

Charles (Chuck) J. Mozina is a Consultant for Beckwith Electric Co. Inc., specializing in transformer, power plant and generator protection. He is an active 25-year member of the IEEE PES Power System Relay Committee and was the past chairman of the Rotating Machinery Subcommittee. Chuck is active in the IEEE IAS I&CPS, PCIC and PPIC Committees, which address industrial protection systems. Chuck is the 1993 recipient of the Power System Relay Committee's Career Service Award and the 2002 IAS I&CPS Ralph Lee Prize Paper Award. His papers have been republished in the IAS Industrial Applications Magazine. He is the past U.S. representative to CIGRE Study Committee 34 (now B-5) on System Protection. Chuck has a BSEE from Purdue University and is a graduate of the eight-month GE Power System Engineering Course. He has over 25 years of experience as a protective engineer at Centerior Energy, a major utility in Ohio, where he was Manager of System Protection. For 10 years, Chuck was employed by Beckwith Electric as the Manager of Application Engineering for Protection and Protection Systems. He is a registered Professional Engineer in the state of Ohio. He is a Life Fellow of the IEEE.

Registration: See PE/IA Chapter Web Site http://sas.ieee.ca/pesias/

The Seminar will be held in DT Calgary (exact location to be later confirmed). For more details, please check the PE/IA Chapter Web Site http://sas.ieee.ca/pesias/ or contact seminar coordinator Rasheek.rifaat@jacobs.com or PE/IA Chapter Secretary Patrick.wong@jacobs.com

PAINTBALL!

Saturday, July 9, 2011 @1pm

Bragg Creek Paintball

Only $20 per person!

Event open to EVERYONE aged 18+

Refreshments will be provided

To sign up or for questions email Farheen at:

farheenakbar@yahoo.com

Cash or cheque (payable to "IEEE Southern Alberta Section") on game day

NO PAY—NO PLAY!

Please indicate any food allergies in your email. Sign-up deadline: JUNE 29, 2011

For facility info: www.braggcreekpaintball.com

Sponsored by IEEE Southern Alberta Section and IEEE Women in Engineering

TISP (Teacher In-Service Program) School Programs

In May 2011 TISP had a total of 9 hours hands-on classroom activities in elementary schools. These programs were conducted by Dr. Anis Haque, Chair, TISP Southern Alberta Section.

Program Summary:

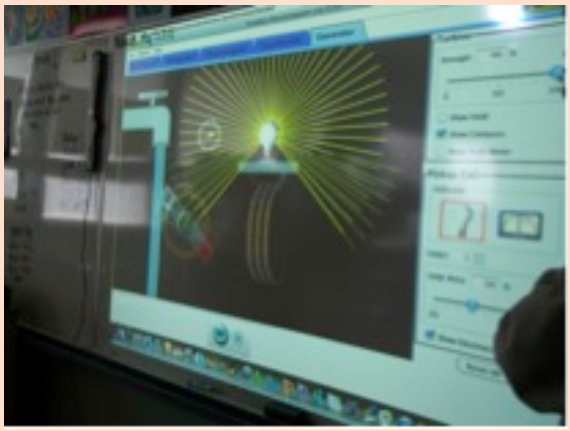
	Program - I	Program - II	Program - III
Date	May 03, 2011	May 03, 2011	May 05, 2011
Grade	3/4 (Sec-01)	3/4 (Sec-02)	5
School	Banded Peak School	Banded Peak School	Indus School
Location	Banded Peak	Banded Peak	Indus
No of Students	27	27	28
Activities	Let's Have Fun With Buoyancy	Let's Have Fun With Buoyancy	Making Shaking Flashlight Using Magnet
Collaborated with	AASEE*	AASEE*	

*AASEE: Association for the Advancement of Science and Engineering Education

TISP Student Volunteers: Denny Huynh, Edmond Chih, Nafis Sadat, Purnima Limbu and Sehrish Hameed

Students and teacher working on a booklet

Students testing a design of a boat



An animation on Smart Board

Students winding a coil to make a shaking flashlight