



IEEE Canada

Northern Canada Section



IEEE-NCS, IAS/PES Presents

Tuesday, September 27th, 2016, 6:15 to 8:30pm, doors open at 5:30pm

Technical Seminar:

“Getting on Top of High Voltage Grounding”

Technical Seminar Abstract:

Grounding in the context of high voltage facilities is one of the primary systems integral to the safe operation of the electrical system. Designing effective and economical ground grids requires a sound understanding of engineering principles, electrical circuits, field theory, ground testing, and good judgment. Grounding systems are everywhere and their interaction with each other is often overlooked or underestimated. This seminar will introduce some of the fundamental concepts of grounding in a high voltage context, and provide some practical approaches to solving grounding problems.

Outline:

- Introduction
- Basic concepts – Grounding Fundamentals
 - Where is the ground?
 - Types of Grounding
 - Economics and design
- Finding the real problems
- Testing Fundamentals
- Standards and Guides
- From the past to the future of grounding.



About Speaker:



Carl Moller, P.Eng. of GroundCAN Ltd.

Biography:

Carl Moller is a professional engineer with over 10 years' experience in design, testing, investigation and studies in high voltage grounding. Carl has developed a range of skills in addition to grounding such as protection and control, fault studies, substation design and lightning shielding. Carl has experience implementing high voltage grounding and design related projects in hydro, thermal, mining, SAGD facilities, urban transmission and distribution assets ranging from 600V to 500kV. Recently, Carl has been an active member and contributor on several related IEEE substation committee working groups which produce the following IEEE guides: 80, 81, 837 and 998. Carl has co-delivered an IEEE 81 grounding seminar after the latest publication of the guide. In addition, Carl has worked with another company to co-deliver grounding training and education in the US and Australia. Presently Carl is the principal engineer at GroundCAN Ltd., a consulting company which specializes in engineering, testing, training and education.

Young Speaker (YP) Presentation

“Celestial Batteries”

Abstract

Topic is about Geomagnetic Disturbances caused by Solar Flares. It's science is based on physics, astronomy, history and power systems engineering.

Periodically the sun unleashes extra energy into the universe. If earth is unlucky it will collide with this energy and it can interact detrimentally with the power grid. This phenomenon was first documented in 1859 and then again in 1989 when it knocked out Quebec's entire grid. Since then more assets are at risk than ever before and various entities are taking steps to protect earth from the next time it is assaulted by the sun. But will it be enough? Do we have enough time?

<http://sites.ieee.org/northern-canada-pesias/>



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About Speaker:

William York

Biography:

William York graduated in 2013 from the University of Alberta with a degree of BSc. in Electrical Engineering. Currently he is an Engineer in Training with ATCO Electric.


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When

Date: 27-September-2016

Time: 06:15PM to 08:30PM (2.25 hours)

All times are: Canada/Mountain

 [Add Meeting to Calendar](#)

Where

German Canadian Cultural Association Centre

8310 Roper Rd NW, Edmonton, AB T6E 6E3

Agenda

5.30pm: Doors open

5:30-6:10pm: Networking and Light meal

6:15pm: Presentation of the PES Outstanding Engineer Award

6:30pm: Presentation starts

Email contacts:

Shagufta Tasneem (shagtas@gmail.com)

Kyle Busby (kyle@altelec.net)



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Registration Details:

(Admission fee applies)

[Click Here to Register](https://meetings.vtools.ieee.org/m/40859)

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Online Registration (Open from August 23 to September 25, 2016)

<https://meetings.vtools.ieee.org/m/40859>

Early bird online registration fee

IEEE Members: \$20

Non-IEEE members: \$30

IEEE Student Members: \$5

Non-IEEE Student: \$10

IEEE Life Members: Free

Volunteers: Free

At the Door Registration - (Payable by cash or cheque)

IEEE Members: \$30

Non-IEEE members: \$40

IEEE Student Members: \$10

Non-IEEE Student: \$15

IEEE Life Members: \$5

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