



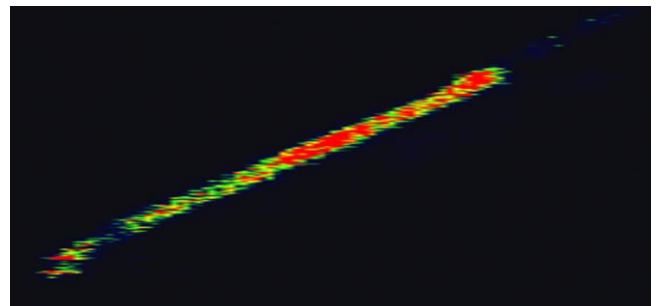
- Next Event:** **Fiber Optic-Based Distributed Acoustic Sensing**
- Organized by:** **IEEE Control Systems & Instrumentation**
- Date:** Thursday Nov 1st from 6:00 to 8:30 PM
- Speaker:** Martin Cwikla, Fotech Solutions Canada
- Location:** 110 – 12 Ave SW, Room T1-Auditorium (Trans Alta Building)
- Registration:** Due to multiple sponsorship and contributions, we are able to offer these presentations for **Free**. The meeting is open to everyone. You do not need to be a member of IEEE or any other organization to attend this event. Just drop by and enjoy the presentation.

Martin Cwikla Biography:

Martin completed his B.Sc. in Computer Engineering at the University of Manitoba in 2007, where his thesis project involved the classification of atrial fibrillation in long-term electrocardiogram recordings. He went on to complete his M.Sc. degree at the University of Manitoba in 2009, where his thesis work involved the acceleration of the Low-Frequency Multipole Method on a General-Purpose Graphics Processing Unit. This also led to the publication of a paper in an IEEE journal. Martin currently works at Fotech Solutions Canada, based in Calgary.

Abstract:

One type of Distributed Acoustic Sensing (DAS) is based on the principle of sending a pulse of light thousands of times per second down a fibre optic cable and measuring the change in the index of refraction at various points along the fibre. Any mechanical strain along the fibre will result in small changes in the index of refraction, which is what the overall system responds to. This presentation will discuss some of the engineering problems and solutions related to the software and signal processing component of the DAS system.





Evening's Program:

- 5:30 Doors open (Networking)
- 6:00 Introduction & Announcements
- 6:15 Presentation
- 6:45 QA
- 7:00 Snack/light Dinner (Voluntary \$5)
- 7:30 Planning for coming events
- 7:45 End (Networking)
- 8:30 Doors closed

Upcoming Events:

- **Thursday Dec 6th** **Reducing Methane and VOC Emissions**
- **Thursday Feb 7th** **Alberta Transmission & Distribution Management System**
- **Thursday March 7th** **Atmospheric Constrains for Green Energy & Smart Grid**

Background:

The idea for a local Control Systems/Automation/Instrumentation chapter was presented at November 2011 AGM for the IEEE Southern Alberta section. Subsequently, monthly meetings have been organized to promote the formation of a new chapter in Southern Alberta. The intent of such a chapter is to use the umbrella of the IEEE to:

- foster networking within the profession,
- to advance the knowledge of the local technical community,
- to bring together a wide breadth of knowledge across all aspects of our specialty,
- to take advantage of local expertise within academia, industry and government,
- to interact with the resources of the wider IEEE organization, and
- to interact with other local activities of the IEEE and other technical organizations.

A formal application has been submitted to officially form this chapter. The Chapter is expected to be official in operation by the end of 2012.

Please feel free to pass along this invitation to your colleagues and friends.

For further information, please contact Matt M. Eskandar at matt.eskandar@mrCSI.com.

If you would like to have your e-mail address removed from IEEE Control Systems/Automation & Instrumentation distribution list, please reply back to IEEE_CSS_Dist@shaw.ca.