



IEEE Control Systems Society and  
IEEE-HKN Epsilon Alpha Chapter  
jointly present

IEEE, Cleveland Section

## Insulation Fault Detection in Buried Power Cables: A Feedback Control Application

**Dr. Robert J. Veillette**

### Date and time

April 5, 2018, Thursday  
5:00-7:00pm

### Location

WH 405  
College of Engineering  
Cleveland State University  
2121 Euclid Ave.  
Cleveland, OH 44115

### Agenda

5:00-5:30pm: Social hour  
5:30-6:30pm: Seminar  
6:30-7:00pm: Q&A

### CPD

One credit available  
Bring your flyer for credit.



Dr. Robert Veillette received the BSEE from Virginia Tech in 1982, MSEE from Clemson University in 1985, and the PhD in EE from the University of Illinois at Urbana-Champaign in 1990. He is currently an associate professor in the Dept. of ECE at the Univ. of Akron with 27 years of academic experiences.

A system is devised to detect insulation faults in buried power distribution cables. The system uses a clamp-on device known as a "blocker," placed at some distance from a signal-injection clamp. The blocker uses feedback control to cancel the injected signal current, approximating an open circuit at the blocker location. To ensure stability of the control loop, the blocker includes a compensator whose parameters are chosen based on an initial line impedance phase measurement. Theoretical and experimental results show that the resulting impedance measurements can be correlated with the condition of the cable insulation in the neighborhood of the signal-injection clamp.

***Refreshment and beverage will be provided!***

**RSVP: Dr. Lili Dong • L.Dong34@csuohio • 216-687-5312**

This is to certify that \_\_\_\_\_ attended this seminar.  
Certified by \_\_\_\_\_. Certificates of attendance and  
other evidence of CPD activity should be retained by the attendee  
for auditing purposes."