

Welcome to the presentation on:

## Geomagnetically induced currents (GIC)

### Dr. Ramsis Girgis



**Where: University of California  
Los Angeles (UCLA)**  
Edward K. Rice Conference Room  
6764 Boelter Hall  
420 Westwood Plaza  
Los Angeles, CA. 90095

**When: Thursday 14 July 2016**

6:00 – 6:30 PM : Pizza & Networking  
6:30 – 7:30 PM : Presentation

**No Cost, Space is limited –  
Please RSVP at registration link  
[girgis.eventbrite.com](http://girgis.eventbrite.com)**

Attendees pay only their car parking

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**Upcoming Events**

<http://www.ieee-sfv.org/>  
<http://www.smartgrid.ucla.edu/>

### Short Description of the Presentation

Over the years, significant geomagnetic disturbances caused power system blackouts in North America and other regions around the world. These events had created a certain level of concern in the electric power industry about the implications of geomagnetically induced currents (GIC) flowing into the neutrals of large power transformers.

The presentation will cover the following topics:

- How GIC are induced
- Harmful effects of GIC in power transformers and electric power systems
- Factors that influence the magnitude of the GIC impact
- Methods to mitigate and protect against the effects of GIC
- Recent industry standards activities in this area

### Speaker's Biography

Dr. Ramsis Girgis is ABB's global leader of the R&D activities in the area of "Transformer Core Performance". Ramsis earned his Ph.D. degree from the University of Saskatchewan, Canada, in Electrical Power Engineering in 1978. He has over 45 years of R&D experience in the area of Power & Distribution Transformers and Rotating Machines. He has published and presented over 80 technical papers in IEEE, IEE, CIGRE, and other international journals and co-authored chapters in two electrical engineering handbooks on transformer design and transformer noise. He was awarded the IEEE Fellow Grade in 1986 and the IEEE Life Fellow Grade in 2012. In 2013, he was awarded the IEEE Standards Medallion for his Technical contributions to the IEEE Transformer Standards. In the nineties, Dr. Girgis was the Technical Advisor representing the US National Committee in IEC Power Transformer Technical Committee (14). Dr. Girgis' involvement with GIC started with the major GMD event of March 13, 1989 that hit the North East of North America.