



Farmingdale
State College

IEEE Power & Energy and Industry Applications Long Island Joint Chapter Invites you to the eleventh annual
2015 IEEE Long Island Systems, Applications, and Technology Conference

LISAT Professional Development Track

Friday May 1, 2015

Farmingdale State College SUNY - 2350 Broadhollow Road - Farmingdale, New York 11735

Register: <https://meetings.vtools.ieee.org/m/30523>

“Shipboard Electrical Power Generation & Distribution Systems”

Presenter: Greg Sachs, P.E., COO of EmPower Solar (0.3 CEU) 9:15am–12:30pm

Shipboard power generation and distribution systems are some of the most complicated, flexible and dynamic systems designed today. The operating environments and system requirements are strict and unforgiving. In addition to serving hotel loads, new innovations in power electronics make highly dynamic electric driven propulsion components more and more common. The drive to become more efficient has also become a major factor. This lecture provides an overview of each of these topics, including but not limited to the following: Grounded vs. Ungrounded systems; Load sharing & voltage / frequency control; Alternative Power Generation means (conventional & renewable); Distribution architectures; Emergency power systems; Energy storage; Electric plant casualties & photos; basic power equations & concepts refresher.

Greg Sachs, P.E. is Chief Operating Officer of EmPower CES, LLC, a Solar Contracting & Consulting company on Long Island. Greg is presently a Co-Chair of the IEEE Long Island Power & Energy Society chapter. Greg is a founding member of the Long Island Solar Energy Industries Association (LISEIA). He is the co-founder of the US Merchant Marine Academy (USMMA) Alternative Power Program and has served as a USMMA Electrical Engineering Instructor. Greg is also a graduate of the USMMA in 1999. After graduation Greg attended Navy Nuclear Power School, and subsequently held several management and teaching positions as a Nuclear Engineer at Knolls Atomic Power Laboratory. Greg holds a Master's Degree from the MIT-Sloan Systems Engineering & Management program.

12:30pm – 1:45pm Conference LUNCH included with registration

“Efficiency Improvement in Electrical Distribution”

Presenter: Gregory Ferguson, Power Quality International, Inc. (0.3 CEU) 1:45pm–5:00pm

In the overwhelming majority of cases, ‘penalty losses’, which exist in medium and low voltage distribution systems and their loads, are self-inflicted. That is, they are generated within the facility. ‘Penalty losses’ include losses due to the distribution of reactive load currents, unbalanced load currents and nonlinear load-generated harmonic currents. Similarly, in the overwhelming majority of cases, low voltage distribution systems are grossly underutilized. Transformer oversizing is a typical outcome when meeting the requirements of national and local electrical codes in the USA and Canada. To maximize energy conservation, the optimum transformer kVA rating can be determined.

Gregory Ferguson was born in Toronto, Ontario, Canada in 1937. He received a B.Sc. Degree in Electrical Engineering from Ryerson University, Toronto. Before incorporating FES International in 1968, his experience included employment with the Ontario Hydro Electric Power Commission, as a Protection & Control Engineer, and the Scarborough Public Utilities Commission, Canada, as the Protection & Control Department Manager. Greg is also the founder and past president of Power Quality International, Inc. (1993). He was also the founding partner of Electrical Testing Instruments Ltd., Canada (1973). In 1991 Greg immigrated to the US where he became a citizen in 2000. With over 50 years’ experience in power system engineering, he became a Life Member of IEEE in 2008.

Track Coordinators: Robert Schmid, P.E., Greg Sachs, P.E., and Louis D’Onofrio, P.E.

The IEEE has been approved as an Authorized CEU provider by the NYS Education Department.

Registration for the full LISAT Conference is required to attend the Professional Development (CEU) track.

Forward completed LISAT Professional Development Track evaluation forms to POWER@IEEE.LI