

## **Seminar Talk**

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**Friday, March 25, 2016  
3:00 p.m. KH 224**

**Title: Electrical Engineering and Solar Energy Concepts**

**Abstract:**

Electrical engineering and solar energy (photovoltaics) are highly important in a world that is increasingly relying on generating electric power using renewable energy sources. In this presentation, certain concepts related to electrical power, semiconductor devices, and equipment used in photovoltaic (PV) systems will be explained in detail. Some of these concepts and devices are taken for granted or simply misunderstood. Theoretical explanations put aside, the physical and lossy characteristics of the devices will be explained with solutions to curb losses and increase efficiency. With a focus on solar energy, we will embark on an exciting journey that begins with the concepts of electrical engineering and ends with a better understanding of photovoltaics beyond theoretical knowledge with practical examples given throughout.

**Bio:**

Yunus Erkaya is currently a Ph.D. student in Electrical Engineering at Old Dominion University, graduating this spring. He holds a B.S. degree in Electrical Engineering from Istanbul Technical University (2010) and is currently seeking employment in the industry as a power electronics/firmware engineer. He is currently working with Dr. Marsillac on developing modeling, simulation, emulation and characterization tools for photovoltaic systems.