

BEARS
9/9/2009

Energy Efficient Power Electronics Technologies and their Applications **Ben Song, Ph.D.**

Abstract:

Recently due to the rapid changes in the climate and an increase of energy consumption, there has been a need in developing new technologies for energy efficient power electronics systems and methodologies of the energy renewal resources.

Such new technologies developments can achieve significant savings in energy consumption with deflect some of the energy issues arising from the depletion of fossil energy resources. Power electronics technology plays a key role in energy saving.

This seminar will introduce several advanced power electronics technology and their applications in the recent years. The introduction will cover two topics 1) High efficient power converters for defense and medical applications 2) electrical Scooter and E-Bike propulsion systems as well as a smart EV charging system for bidirectional power grid interface. These research and development activities rely heavily on the participation of the industry and experiments of energy efficiency and renewal development.