

**Title:** Power Electronics Converters Integrating Renewable Energy Systems

**Abstract:**

A power electronic converter is the centerpiece of many electrical systems, which includes integration of renewable energy sources. Power electronics converters can be classified into two main categories, configurations that process AC voltage and topologies that process DC voltage. This talk focus on the main power configurations dealing with AC voltage and provides a convenient resource to understand the current state-of-the art in power electronic theory and applications. Furthermore, a case study of a novel converter of a microinverter designed for integration of photovoltaic solar systems is presented at the end.

**Short Bio:**

He received the B.S., M.S., and Ph.D. degrees in electrical engineering from Federal University of Campina Grande, Brazil, in 2004, 2005, and 2007, respectively. From 2006 to 2007, he was with Electric Machines and Power Electronics Laboratory, Texas A&M University, College Station, as a Visiting Scholar. From December 2010 to March 2011 he was a visiting professor at the University of Siegen, Germany, sponsored by DAAD/CAPES. From 2009 to 2012, he was with the Department of Electrical Engineering, Federal University of Campina Grande, as a Professor of electrical engineering. Since July 2012 he is with Purdue School of Engineering and Technology, IUPUI as an Assistant Professor. His research interests include power electronics, renewable energy systems and electrical drives. He is a Member of the IEEE Power Electronics Society, IEEE Industrial Electronics Society, IEEE Industry Application Society, and Brazilian Association of Power Electronics. He published two books in power electronics, 45 journal papers, and more than 110 conferences papers.