

EDS DL Mini Symposium

Invited Talk

Emerging Opportunities for Semiconductor Industry in Power Conversion Electronics of Renewable Energy

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Abstract:

An exponential increase in solar photo-voltaic (PV) distributed energy generation over the last decade has created opportunities for the power conversion electronics to propagate towards the basic PV module for optimized energy extraction. The presentation will introduce fundamentals of solar energy, various system partitions between distributed and centralized DC/AC power conversion for PV systems, including DC/DC optimizers and micro-inverters. At the semiconductor level, an overview of the typical micro-inverter circuits will be presented, with emphasis on galvanic isolated sensors and drivers and specialized high-voltage circuits.

Speaker's Biography:

Christian Cojocaru has a Dipl.Eng. degree from the Bucharest Technical University (1988) and a M.Eng. degree from Carleton University (1995). In 1995 he co-founded Philsar Semiconductor, an early pioneer in integrated Bluetooth transceivers acquired by Conexant Systems in 2000. After 15 years in wireless transceiver design at Philsar/Conexant/Skyworks and Hittite Microwave, in 2010 he co-founded Solantro Semiconductor, a specialist in power conversion chipsets where he is currently Director of IC Engineering.