

SEMINAR

Room 236C WEB

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Power Magnetics & Wireless Power Charging

by

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Abstract: Power magnetics and wireless power are hot topics in modern power management technologies. Power Magnetic devices are in the focus when dealing with high-power-density issues, as power inductors and transformers have a strong influence on the efficiency and size of power converters.

Wireless Power is the emerging technology that simplifies battery charging systems and is of great impact in several pervasive applications, such as automotive and wearable & portable products. The lecture will provide an overview of the most recent research activities in this area.



Nicola Femia teaches Power Electronics to graduate students of Electronic Engineering Master Program and Energetic Intelligence to graduate students of Computer Engineering Master Program at the University of Salerno. His main research interests cover circuit theory, design and optimization of switching power supplies, magnetic power components, power electronics and control techniques for photovoltaic systems, wireless power transfer systems, storage systems, digital LED control for photocatalytic reactors. He founded and leads the Power Electronics

Research Group and the Power Electronics and Renewable Sources Laboratory of the Computer and Electrical Engineering and Applied Mathematics Department of the University of Salerno. He has led many research and education projects in collaboration with worldwide leader companies, including Texas Instruments, National Semiconductor, Power-One/ABB, On Semiconductor, Whirlpool, STMicroelectronics, Coilcraft, Silica/AVNET. He has taught Power Electronics Design and Optimization courses and seminars in Europe and United States for National Semiconductor, Texas Instruments, Silica/AVNET and Coilcraft. He has been Visiting Professor at Stanford University, CA, where he taught Power Electronics Control & Energy-Aware Design. He is co-author of more than 150 scientific papers published in international journals and proceedings of international conferences. He is co-author of five patents on control techniques and power converters for photovoltaic applications.