



University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science

SEMINAR

Compressive Sensing – Basics, State of the Art, and Advances in Electromagnetic Engineering

Prof. Andrea MASSA

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25th May, 2017 – 3:30 pm
Seminar Room of former Dept. of Electronics (floor D)

Abstract: The new paradigm of Compressive Sensing (CS) is enabling to completely revisit the concepts linked to the Shannon/Nyquist theorems by distinguishing the "informative content" of signals from their bandwidth. Despite its recent introduction, the application of CS methodologies to Electromagnetics has already enabled several innovative design/synthesis methodologies and retrieval/diagnosis methods to be developed. In this framework, this talk will first review the fundamentals of the CS paradigm, specifically focusing on its EM applications. Then, it will illustrate the state-of-the-art and the most recent advances in Electromagnetic Engineering (including application of CS to antenna synthesis and diagnosis, direction-of-arrival estimation, inverse scattering, and radar imaging) and envisage possible future research trends and challenges within CS as applied to Electromagnetics.

Bio: Since 2005, Andrea Massa has been a Full Professor of Electromagnetic Fields at the University of Trento, and at present is also director of the ELEDIA Research Center, Adjunct Professor at Penn State University (USA), Professor @ CentraleSupélec, and holder of a Senior DIGITEO Chair. His research activities are mainly concerned with inverse problems, analysis/synthesis of antenna systems and large arrays, radar systems synthesis and signal processing, system-by-design and material by design, theory/applications of optimization techniques to engineering problems.

Organizer

Prof. Fabio Dell'Acqua

Ph.D. Coordinator

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Seminar in English

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