

Το Πρόγραμμα Μεταπτυχιακών Σπουδών «Ευφυής Διαχείριση Ανανεώσιμων Ενεργειακών Συστημάτων» σας καλεί στη διάλεξη με θέμα

«Noise in Engineering - The Good, the Bad and the Ugly»

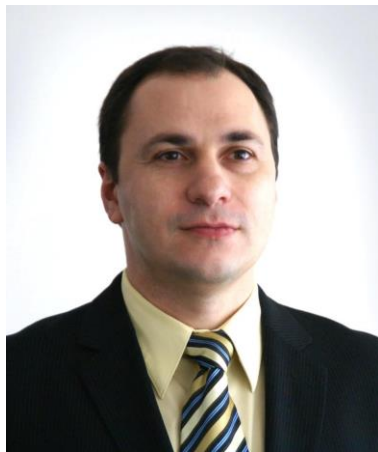
του **Prof Mihai Dimian**
University of Suceava 'Stefan cel Mare'

την Τετάρτη 21/6/2017, και ώρα 15:00, στην Αίθουσα Γ205, ΤΕΙ Στερεάς Ελλάδας (Ψαχνά).

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Abstract: Noise is a ubiquitous phenomenon in science and engineering and yet is far from being well understood both in terms of its fundamental origins and its effects on nowadays technologies. Since noise represents a nuisance effect in linear systems, the potential benefits of noise seem rather counterintuitive and have been overlooked by researchers for a long period of time. However, the recent studies on stochastically driven nonlinear systems proved that such phenomena are quite common and their applications range from signal processing (dithering effect) to climate models (ice age). While it is mostly experience as a disruptive effect, noise can also have a constructive role in nonlinear systems, activating a resonance response. Based on various analytical and numerical tools, a unitary framework for the analysis of various stochastic aspects of hysteresis has been developed by our group and implemented in an open-access academic software. Both disruptive and constructive effects of white and arbitrary colored noises are discussed in several differential, integral, and algebraic models of hysteresis.

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- [4] G. Bertotti and I. Mayergoyz (eds.), Science of Hysteresis, *Elsevier*, New York (2006).
- [5] HysterSoft, User Guide v. 1.8 [online <http://www.eng.fsu.edu/ms/HysterSoft>].



Short biographical note: Mihai Dimian received his Ph.D. in Electrical Engineering from the University of Maryland, College Park (USA) and performed post-doctoral research at Max Planck Institute, Leipzig (Germany). He is Associate Professor at Howard University, Washington DC (SUA) and Professor at the University of Suceava (Romania). He is also Vice-Rector for Scientific Activities at University of Suceava and member of the Romanian National Research Council. His research interests are focused on noise and fluctuations in electrical and electronics engineering, data storage technology, visible light communications, multiscale analysis and modeling.