

# Fuzzy Control Applications

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**Abstract.** In this talk we will presentsome aspects related to new advanced fuzzy control applications. The lecture is focused on research directions in designing new fuzzy control developed by our research team. We present reasoning-based design of intelligent systems and practical applications. In our approach we improve intelligent applications by providing them with elements of deterministic that represents previous knowledge about the processes. Some particular architecture for different applications are introduced. The case studies come from different areas: adaptive control, intelligent transportations, agriculture, renewable energies and medicine.



**Dr. Valentina E. Balas** is currently Professor at the University Aurel Vlaicu of Arad, Romania. She is author of more than 270 research papers in refereed journals and international conferences. Her research interests are in Intelligent Systems, Fuzzy Control, Soft Computing, Smart Sensors, Information Fusion, Modeling and Simulation. She is Editor-in Chief of the International Journal of Advanced Intelligence Paradigms (IJAIP) and of the International Journal of Computational Systems Engineering, member in Editorial Boards for national and international journals, and reviewer for many International Journals. She is General Co-Chair to seven editions of the International Workshop Soft Computing Applications (SOFA) starting from 2005. Dr. Balas was editor for more than 20 Springer and Elsevierbooks. She is series editor for Elsevier Biomedical Engineering from October 2017.

Dr. Balas was participating in many international conferences as General Chair, Organizer, Session Chair and member of International Program Committees. She was Vice-president (Awards) of IFSA International Fuzzy Systems Association Council (2013-2015), responsible with recruiting to European Society for Fuzzy logic and Technology – EUSFLAT (2011-2013), Senior member IEEE, member in Technical Committees to Fuzzy Sets and Systems and Emergent Technologies to IEEE CIS and member in the Technical Committee of Soft Computing to IEEE SMC.