

Call for Papers

Special Session: New Directions in Fuzzy Adaptive Control

FUZZ-IEEE'2012, at [WCCI'2012](#)
Brisbane, Australia, June 10-15, 2012

Session organizers

Valentina E. Balas and Tsung-Chih Lin

Scope:

The aim of this special session is to present the state-of-the-art results in the area of adaptive intelligent control theory and applications and to get together researchers in this area.

Adaptive control is a technique of applying some methods to obtain a model of the process and using this model to design a controller. Especially, fuzzy adaptive control has been an important area of active research for over three decades now. Significant developments have been seen, including theoretical success and practical design. One of the reasons for the rapid growth of fuzzy adaptive control is its ability to control plants with uncertainties during its operation.

The papers in this special session present the most advanced techniques and algorithms of adaptive control. These include various robust techniques, performance enhancement techniques, techniques with less a-priori knowledge and nonlinear intelligent adaptive control techniques.

This special session aims to provide an opportunity for international researchers to share and review recent advances in the foundations, integration architectures and applications of hybrid and adaptive systems.

Keywords:

Fuzzy control, adaptive control, robust control, hybrid intelligent control, knowledge based control systems, fuzzy applications

Topics of interest include, but are not limited to:

Adaptive and learning control theory
Adaptive control of processes
Data based auto-tuning of the controller
Estimation and identification and its application to control design
Fuzzy Control
Fuzzy Control and Robotics
Fuzzy Applications
Soft Computing/ computational intelligence in control systems
Fuzzy Modeling and Simulation
Cooperative Control
Hybrid Intelligent Control
Adaptive Control
Robust Control
Modelling and Simulation
Knowledge based control systems
Control applications

Submissions: details and dates. Papers should be submitted electronically. For details on submissions and for the deadlines, please refer to [the WCCI'2012 website](#). Select the correct special session AND notify the chairs of your submission by sending email to: balas@drbalas.ro and/or tcclin@fcu.edu.tw

Organizers:

Valentina E. Balas, IEEE Senior Member
Associate Professor PhD
Department of Automatics and Applied Informatics
Aurel Vlaicu University of Arad, Romania
balas@drbalas.ro



Tsung-Chih Lin, IEEE – Senior Member
Associate Professor PhD
Department of Electronic Engineering,
Feng-Chia University, Taichung, Taiwan
tclin@fcu.edu.tw



Authors biographies:

Valentina E. Balas is currently an Associate Professor in the Department of Automatics and Applied Software at the Faculty of Engineering, University “Aurel Vlaicu” Arad (Romania). She holds a Ph.D. in Applied Electronics and Telecommunications from Polytechnic University of Timisoara since 2003. She is author of more than 140 research papers in refereed journals and International Conferences. Her research interests are in Intelligent Systems, Fuzzy Control, Soft Computing, Smart Sensors, Modeling and Simulation.

Dr. Balas is Editor-in Chief to *International Journal of Advanced Intelligence Paradigms (IJAIIP)*, member in Editorial Boards for national and international journals, serves as reviewer for many International Journals and conferences, evaluator expert for national and international projects and general co-chair for SOFA conferences.

She is a member of EUSFLAT, ACM and a Senior Member IEEE, member in TC – Fuzzy Systems (IEEE CIS), member in TC - Emergent Technologies (IEEE CIS), member in TC – Soft Computing (IEEE SMCS) and also a member in IFAC - TC 3.2 Computational Intelligence in Control.

Tsung-Chih Lin received the B.S. degree in electronic engineering from the Feng Chia University, Taichung, Taiwan in 1984, the M.S. in control engineering from the National Chiao Tung University in 1986 and the Ph.D. degree in the School of Microelectronic Engineering, Griffith University, Brisbane, Australia in 2002. He is currently Associate Professor in the Department of Electronic Engineering, Feng Chia University, Taichung, Taiwan.

Dr. Lin is Associate Editor to *International Journal of System Dynamics Applications*.

Tsung-Chih Lin's current research interests and publications are in the areas of adaptive control, fuzzy-neural-network, robust control, analog circuit testing, chaotic systems synchronization and adaptive fuzzy control of time-delay systems. He is a Senior Member of IEEE and very active in many IEEE conferences.

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