Guest-editorial

FUZZYSS'2009: 1st International Fuzzy Systems Symposium, 1–2 October 2009, Ankara, Turkey

Adil Baykasoglu[a,*], Turkay Dereli[a] and I. Burhan Turksen[b]
[a]*Department of Industrial Engineering, University of Gaziantep, Gaziantep, Turkey*
[b]*TOBB Economy and Technology University, Turkey*

Welcome to the Journal of Intelligent and Fuzzy Systems's special issue for *"FUZZYSS'2009: 1st International Fuzzy Systems Symposium"*.

Since its introduction by Prof. Lotfi A. Zadeh fuzzy logic has found numerous applications in many diverse areas. Scientific research related to fuzzy logic and its extensions is still an open and promising active research area. There is still a very long way to go and much to explore. It is now very well known by researchers and practitioners that fuzzy logic and systems provides a lot of tools and methodologies to model uncertainty and ambiguity which is an important characteristics of many real life systems. However, we should mention here that in most of the cases it is not straightforward to distinguish between problems that actually require a crisp or fuzzy approach in their modeling and solution. Actually, the boundary between them is also uncertain. What types of problems really require modeling and solution through fuzzy logic? What is "fuzziness" in them? This is actually the first fundamental question which needs to be answered before developing a successful fuzzy model and solution methodology with fuzzy logic approaches. In this special issue the readers will find some of the innovative applications of fuzzy sets and systems to several interesting problems.

The special issue provides good quality original research papers that were presented orally and discussed at the "FUZZYSS'2009: 1st International Fuzzy Systems Symposium, 1–2 October 2009, Ankara, Turkey", some of which were selected as candidates for this special issue. After re-submission of the revised manuscripts, and rigorous refereeing processes, seven papers [1–7] were finally accepted for publication. We would like to thank to the Editor-in-Chief Prof. Reza Langari for giving us the opportunity to publish this special issue. It provides the reader a collection of articles that offer an exclusive perspective on topics ranging from technology watch with fuzzy regression approaches, customer satisfaction modeling with fuzzy sets approach, fuzzy hypothesis verification, two-sided fuzzy assembly line balancing, new product development in bakery industry with fuzzy modeling, improved Takagi-Sugeno fuzzy models with multidimensional fuzzy sets and choral harmonization in music with fuzzy logic.

The Guest-editors
Prof. Dr. Adil Baykasoglu
Faculty of Engineering
Department of Industrial Engineering
University of Gaziantep
27310 Gaziantep
Turkey
Tel./Fax: 0090 3423604383
E-mail: baykasoglu@gantep.edu.tr

Prof. Dr. Turkay Dereli
University of Gaziantep
Turkey

Prof. Dr. I. Burhan Turksen
TOBB Economy and Technology University
Turkey

*Corresponding author. Adil Baykasoglu, University of Gaziantep, Turkey. E-mail: baykasoglu@gantep.edu.tr.

References

[1] T. Dereli and A. Durmuşoğlu, Application of possibilistic fuzzy regression for technology watch, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 353–363.

[2] M. Eminli and N. Guler, An improved Takagi-Sugeno fuzzy model with multidimensional fuzzy sets, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 277–287.

[3] V.A. Niskanen, Application of approximate reasoning to hypothesis verification, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 331–339.

[4] L. Özbakır and P. Tapkan, Balancing fuzzy multiple objective two-sided assembly lines *via* Bees algorithm, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 317–329.

[5] R.G. Özdemir, B. Çiçek and D. Özenç, Multi objective new product development in bakery production under fuzzy demand parameters, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 303–316.

[6] G. Şekkeli, G. Köksal, İ. Batmaz and Ö.T. Bayrak, Classification models based on Tanaka's fuzzy linear regression approach: The case of customer satisfaction modeling, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 341–351.

[7] A.E. Yilmaz and Z. Telatar, Fuzzy logic based four-voice choral harmonization in traditional style, *Journal of Intelligent and Fuzzy Systems* **21**(5) (2010), 289–301.