The 11th International FLINS Conference on Decision Making and Soft Computing (FLINS2014)

August 17-20, 2014, João Pessoa (Paraíba), Brazil

FLINS 2014 - Special Session on
Decision Making Using Hesitant Fuzzy Sets and Type-2 Fuzzy Sets

Chair: **Prof. Cengiz Kahraman**

About the conference

http://www.de.ufpb.br/~flins2014/

The 2014 International FLINS Conference on Decision Making and Soft Computing (FLINS 2014) provides an international forum that brings together those actively involved in areas of interest to the computational intelligence and its applications, to report on up-to-the-minute innovations and developments, to summarize the state-of-the-art, and to exchange ideas and advances in all aspects of computational intelligence.

FLINS 2014 proceedings will be again edited as a book by World Scientific and it will be again included in the ISI proceedings as previous ones.

Moreover, a number of SCI journals will devote a special issue to a strictly refereed selection of extended papers presented at FLINS 2014. Information about this will be available in the Proceedings & Special Issues page.

Topics for this special session:

artificial intelligence	genetic algorithms	real time systems
autonomous reasoning	human-machine interface	risk analysis
chaos theory	hybrid methods	robotics
condition monitoring	intelligent information retrieval	rough set theory
data mining	interactive computational models	security and safety related issues
data visualization	internet tools	signal and image processing
decision making	knowledge engineering	system identification and modeling
decision support system	machine learning	systems integration
e-science and technology	neural networks	telecommunications
evolutionary programming	optimization	time series prediction
expert systems	pattern recognition	uncertainty modeling
fault diagnosis	probabilistic computing	
fuzzy logic	process and system control	

The 11th International FLINS Conference on Decision Making and Soft Computing (FLINS2014)

August 17-20, 2014, João Pessoa (Paraíba), Brazil

About the Session

The concept of a type-II fuzzy set was introduced first by Zadeh (1975) as an extension of the concept of an ordinary fuzzy set, i.e. a type-I fuzzy set. Type-II fuzzy sets have grades of membership that are themselves fuzzy. The MF of a type-II fuzzy set is three-dimensional, and it is the new third dimension that provides new design degrees of freedom for handling uncertainties. Such sets are useful in circumstances where it is difficult to determine the exact MF for a fuzzy set (FS), as in modeling a word by a FS. Interval type-II fuzzy sets, each of which is characterized by the footprint of uncertainty, are a very useful means to depict the decision information in the process of decision making.

Hesitant fuzzy sets (HFS) are the extensions of regular fuzzy sets which handle the situations where a set of values are possible for the membership of a single element. The difficulty of determining the membership value of an element on a set and specify that HFS can be used in cases where uncertainty on the possible membership values are limited. In such cases HFS can represent the situation and instead of using an aggregation operator to get a single value, it is useful to deal with all the possible values. In general, in different levels of decision making process, people may have hesitancy in providing their preferences, in these situations hesitant fuzzy sets can be used to represent the preferences

This session is planned to include the theoretical developments and practical applications on hesitant fuzzy sets and type-2 fuzzy sets.

Important Dates

- **Full paper submission: January 10, 2014**
- **Notification of review reports: March, 10, 2014**
- **Final paper submission: April, 10, 2014**

Paper Submission

http://www.de.ufpb.br/~flins2014/paper_submission.html

Contact:

Cengiz Kahraman (kahramanc@itu.edu.tr)
Tel: +90 212 2931300 (ext.2035)
Istanbul Technical University