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Special Session on "Information Fusion and Fuzzy Linguistic Decision Making"

Organizers:

Luis Martínez, Rosa M^a Rodríguez and Francisco Herrera

Brief Description:

Decision Making is an inherent mankind task related to intelligent and complex activities in which human beings face situations where they must choose among different alternatives by means of reasoning and mental processes. Such decision situations usually involve different types of uncertainty according to their nature. The fusion of information can reduce uncertainty and facilitate the decision making process because it associates, correlates and combines information from multiple sources to provide a relevant and timely view of the situation.

Therefore, information fusion in decision making has been widely studied from different points of view according to the framework in which it should be developed. However, there are still different open challenging problems related to information fusion and decision making because of the necessity of dealing with either novel decision making problems with new types of uncertainty and their modelling or with the advances in information fusion that imply improvements regarding previous approaches.

Additionally, many real decision situations are defined under uncertain contexts with imprecise information, in which it is straightforward the use of linguistic information. Fuzzy linguistic approach based models and Computing with Words (CW) provides the tools and methodology to deal with words. CW emulates human cognitive processes to improve decision solving processes under uncertainty. Consequently, information fusion processes, fuzzy linguistic approach and CW have been applied as modelling and computational basis for linguistic decision making, because it provides tools close to human beings reasoning processes related to decision making, which improve and facilitate the resolution of decision making under uncertainty as linguistic decision making.

All Information Fusion, Decision Making, Fuzzy Linguistic Approach and Computing with Words have recently attracted much attention in which, novel mathematical foundations and new decision models raised to be applied in different decision fields such as multi-criteria decision making, decision analysis, evaluation processes, consensus reaching processes, etc.

Objectives and topics:

This invited session aims at providing an opportunity for researchers working in both research areas to discuss and to share their new ideas, original research results and practical experiences. More specifically,

we expect you to have any contribution with the focus on the use of linguistic modelling in decision making. The topics of this special session are as follows:

Fusion Methods for Linguistic Decision making
Linguistic expression domains to represent preferences
Linguistic hesitant for modeling preference
Multi-criteria and group decision making
Selection and consensus models with linguistic information
Combining Heterogeneous Information in Decision Making
Multi-Level Fusion for Decision Making
Large Scale Decision Making
Fusing Linguistic Information in Decision Making
Intelligent Decision Support Systems
Dynamic Decision Making
Context-Based Information Fusion
Fusion in Networked Systems

Linguistic decision making in Engineering evaluation, resource management and transfer, Industry applications, sensory evaluation, evaluation and recommendation, Investments applications and risk assessment, ...

Important Dates:

Submission Deadline: 15th January 2016

Notification Acceptance: 15th March 2016

Final paper submission deadline: 15th April 2016

Paper Submission

Procedure for paper formatting should be followed as specified on the WCCI'2016 website (<http://www.wcci2016.org/>).

Submitted papers for this Special Session should be uploaded from the website provided for uploading (<http://iee-cis.org/conferences/fuzzieee2016/upload.php>) and choose in **Main Research Topic** the choice **SS33 Information Fusion and Fuzzy Linguistic Decision Making**.

Contact information:

Luis Martínez

Email address: luis.martinez@ujaen.es

Rosa M. Rodríguez

Email address: rosam.rodriguez@decsai.ugr.es

Francisco Herrera

Email address: herrera@decsai.ugr.es