Fuzzy information and contexts for designing Automatic Decision-making Systems*

*Note: The full contents of this paper have been published in the volume *Lecture Notes in Artificial Intelligence 11160* (LNAI 11160)

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***Abstract*—The replacement of people by Automatic Decision-making Systems (ADS) has become a threat today. However, it seems that this replacement is unstoppable. Thus, the need for future and current ADS to perform their tasks as perfectly as possible is, more than a necessity an obligation. Hence, the design of these ADS must be carried out in accordance with the theoretical models on which they are to be built. From this point of view, this paper considers the classic definition of General Decision Making Problem and introduces two new key elements for building ADS: the nature of the information available and the context in which the problem is being solved. The new definition allows to cover different models and decision and optimization problems, some of which are presented for illustrative purposes.**

***Index Terms*—Fuzzy Information, Decision Making problems, Contexts**