

SS-22: Application to Business

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With respect to application of soft computing, its usefulness in many research results have been reported. However, with regard to field-based business, do not have too much penetration. In addition, the field of business systems, fuzzy and uncertain data that the data exists and is being processed them appropriately has been desired. Therefore, in this session will be announced about the application of soft computing system for the field of business.

The papers in the session relates to decision making and risk management using soft computing method. Especially business fields require studies to solve various problems using soft computing. Then, it is meaningful that the study results will present in IFSA-SCIS2017.

The papers in the session are as follows:

- **Management Decision by Combination Two-level DEA and Kernel-based Mechanism** by Fu-Hsiang Chen, Jhih-Hong Zeng, Ming-Fu Hsu and Sin-Jin Lin
This study proposes a novel hybrid mechanism for corporate operating assessment. The decision makers can take this mechanism as a decision support tool to modify their investment portfolios as well as increase their profit margin under this fluctuating business atmosphere.
- **Time Series Data Analysis by Rough Set and Merging Method of Decision Rule** by Yoshiyuki Matsumoto and Junzo Watada
This paper applies the rough set theory to analysis of time series data. It is possible to acquire knowledge from economic time series data and suggest a method to apply to predictions. It is difficult to acquire knowledge from many rules. It is also difficult to find knowledge from rules with a large number of condition attributes. This paper proposes a method to reduce condition attributes.
- **The Difference between the Formulations of Fuzzy Robust Regression Model** by Yoshiyuki Yabuuchi
A possibilistic robust regression model is an interval type of fuzzy regression model, and can reduce the influence of unusual samples and illustrate the possibility of a target system. This improvement can be confirmation by its objective function and constraints. This paper, by using numerical examples, discusses the objective functions of linear programming.