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Editorial

Dear Colleague:

Welcome to volume 9(2) of *Intelligent Data Analysis* – An International Journal!

This issue consists of six articles that are related to two main topics of learning and classification, and association mining. All six articles represent some of the best applied research in the field of intelligent data analysis with results of their methods evaluated using real data sets.

In the first article of this issue, Rokach and Maimon discuss feature set decomposition and propose a method that is based on building classifiers from subsets and combining them at a later stage. Their method nests a number of algorithms the first two of which being responsible for a serial and multiple search. Their results show that feature set decomposition can increase the accuracy of decision trees. Žnidaršič and Bohanec, in the second article of this issue, propose a data-based revision method for multi-attribute decision models. Their approach is based on the revision of probability distributions in qualitative hierarchical multi-attribute models. Their results, evaluated using artificial domain, show an improvement on the classification accuracy of the revised models. Boulle's article is also on improvements of learning algorithms. It introduces an automatic method, based on Bayesian approach, to optimize the number of bins for equal frequency discretizations in supervised learning applications. The article also includes an optimal search algorithm whose run-time is super-linear based on the sample size.

Thomas et al, in the fourth article of this issue, propose a new information theory based approach for classification and compare it with a number of classification methods listed in the literature. The results show that the new approach is better than some classification methods such as Na?ve Bayes, and comparable to some others such as Singly Connected Network.

The last two articles of this issue are about mining associations from databases and literature. Shitong et al propose a new approach to mine generalized Boolean association rules from quantitative databases with fuzzy taxonomy structures. They introduce a new taxonomic quantitative database model and present results of their evaluation using some real databases. Similarly, Huang et al, in the last article of this issue propose a novel method to predict new relationships between a starting concept of interest and other concepts by mining scientific literature. The approach is based on the co-occurrence of concepts in the literature and also their sibling relationship in a hierarchical structure of concepts. The approach is evaluated in the field of biomedicine with the performance being better in all measures except recall.

And finally, we would like to remind our readers that the 6th International Symposium of Intelligent Data Analysis (IDA-2005) will be held in Madrid from September 8–10. Conference information are available at the IDA society home page at: http://www.ida-society.org or at the conference home page at: http://www.ida-2005.org. We will have a special issue of the IDA journal, in early 2006, that would be dedicated to the extended versions of 5–6 of the best papers presented at this symposium. We look forward to the participation of researchers and practitioners of the IDA field in this important bi-annual event.

With our best wishes,

Dr. A. Famili
Editor-in-Chief

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