Editorial

Dear Colleague:

Welcome to volume 8(1) of the journal *Intelligent Data Analysis*!

This issue of the IDA journal contains a collection of five articles, that represent some of the best papers in applied and theoretical research related to the field of Intelligent Data Analysis. The articles vary from topics in time-series forecasting, to concept drift, data reduction, detecting outliers and feature identification.

In the first article, Huarng and Yu propose a dynamic approach to adjust the length of intervals in fuzzy time-series forecasting which helps in improving fuzzy relationships. The results of improvements are shown in data sets related to enrollment and stock index fuzzy time-series forecasting. Lazarescu, Venkatesh and Bui, in the second article, introduce a multiple window incremental learning algorithm that distinguishes between virtual and real concept drifts. This is an unsupervised algorithm that tracks concept drift based on using three windows of different size to estimate change in the data. One of the advantages of their algorithm is that it can progressively adapt and predict the change thus enabling it to deal more effectively with different types of drift. Results include the application of their algorithm to real world data and its comparison with another well-known concept drift algorithm. The third article of this issue by Morring and Martinez present two new algorithms to deal with the problem of search and storage in the nearest neighbour algorithms. Their approach is based on the concept of typicality in conjunction with Instance-Weighting. Their results showed a decease of 71% fewer instances than the most competing algorithm. In addition, their approach stored only a small fraction of the instances while maintaining generalization accuracies that were comparable to the best accuracies reported by others. Hu and Sung, in their article, propose a local trimmed mean approach to evaluate the spatial outlier factors, which is the degree by which the outlying of a site is identified comparing to its neighbours. The approach is based on a general spatial data model. They demonstrate that their approach is more outlier resistant than median in estimating sample location. Their experimental results also show that their approach is significantly better than scatter plot and spatial statistic. The last article of this issue by Meinicke et al. apply independent component analysis for feature extraction and selection to EEG signals. Their approach is based on a non-parametric source representation which allows modeling a multi-modal feature distributions. Their results are correlated well with coherence analysis and show that their approach is suitable for uncovering cognitively relevant features in EEG signals.

And finally, the fifth Intelligent Data Analysis symposium was held in Berlin, Germany from August 28–30, 2003. Like previous events, this was a great success from which there will be a special issue of IDA journal that will be published in 2004. This issue will be dedicated to 5–6 of the best papers from this symposium. In addition, plans are underway to hold the IDA-2005 in Madrid. We will provide you with all the details in the next issue of the IDA journal.

With our best wishes,

Dr. A. Famili
Editor-in-Chief