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Guest-editorial

Dear Colleague:

Welcome to volume 6(3) of the journal *Intelligent Data Analysis*!

This issue is devoted to some of the best papers from IDA 2001, the fourth International Conference on Intelligent Data Analysis. The conference was held in Cascais, Portugal in September 2001.

As an inter-disciplinary conference, interaction between researchers from different areas is strongly encouraged. As such, the conference was restricted to a single presentation track, and this imposed bounds on the number of papers accepted. The conference attracted more than 150 submissions. After a vigorous reviewing process, where each submission was seen by at least two reviewers, 40 papers were selected for oral or poster presentation at the conference. All papers from the conference are published in the proceedings [1].

The papers presented here were selected by members of the programme committee on grounds including quality and novelty, and are extended versions of the proceedings counterparts. They also represent the broad scope of interest of the conference, both in terms of methodology and application. First, Cortes, Pregibon and Volinsky, describe a data structure suitable for characterising large amounts of relational, temporal data from telephony networks, and use this data structure as a basis for fraud detection.

After providing a critique of the existing framework for constructing association rules, and suggesting possible failings, Berzal, Blanco, Snchez and Vila, outline a new and better method for measuring rule quality and accuracy. The extension of association rules to interval sequences is explored by H öppner and Klawonn, who provide methodology for finding and evaluating temporal patterns.

Lewandowski and Protzel are concerned with models for functions that change over time. In particular, they describe time adaptive models based on local linear regression models with adaptive kernel functions. Kellam, Liu, Martin, Orengo, Swift and Tucker, focus the on analysis of short, multivariate time series arising from virus gene expression. They provide a three step modelling strategy for such data, and demonstrate that the strategy can reveal previously unknown structure. Finally, Li, Biswas, Dale and Dale, provide improved methods for clustering temporal data using Hidden Markov models, and illustrate their methodology on Ecology data.

We see a strong theme throughout these papers relating to time and association, and this reflects well the tone of the conference.

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Reference

[1] F. Hoffman, D.J. Hand, N. Adams, F. Fisher and G. Guimaraes, eds, *Advances in Intelligent Data Analysis*, LNCS 2189, Springer, 2001.