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## Editorial

Over the last 10 years, every time that the real results of data analysis research and development efforts became available, researchers in various fields of science and engineering became intrigued to see what those achievements were and how they could apply them to their problems. Manufacturing, aerospace, finance and medical are some of the examples. More recently, researchers in biology are using intelligent data analysis techniques to search for patterns in genes and DNA's. More and more techniques are still needed. For example, to use the full potential of DNA array experiments in which one would study the expression level of thousands of genes, we need proper tools and capabilities. These capabilities would allow us to process and extract useful information from large gene expression data sets.

Volume 3(6) of IDA consists of five articles that are a mix of theoretical and applied research.

In the first article, Su, Cook and Holder discuss methods for discovering structural regularities in protein sequences. They further explain the use of a knowledge discovery system in analyzing protein data and discovering patterns in the data.

Sousa, Mattoso and Ebecken, in the second article, present an approach for data mining through parallel DBMS processing. This is particularly important when all the data is not on one server or the size of the database is extremely large. Experimental results reported in this paper show the potential benefit of the approach in today's data mining applications.

The third article by Black and Hickey, deals with the problem of maintaining the performance of classifiers under concept drift. They propose a methodology that is based on elimination of cases that are no longer useful and only retain valid examples. They report the results of a number of experiments in which their algorithm could detect drift in a variety of drift-batch scenarios and against a background noise.

Similarly, since capturing the effects of data characteristics changes are quite important, in the fourth article Zhang has looked at the problem of aggregation and maintenance of database mining. The paper presents a model for aggregating association rules aimed at maintaining association rules in dynamic databases as well as aggregating association rules from different data sources.

In the last article, Cardoso, Themido and Pires present an approach based on statistics and machine learning to evaluate clustering solutions. The method proposed in this paper is based on constructing models to associate properties to clusters in order to perform a better knowledge discovery. The paper includes the results of evaluation of this approach to a market tourism case study.

And finally, this issue wraps up volume 3 of Intelligent Data analysis journal. Over the last three years, we have published 65 articles, presenting some of the best results of the efforts that are going on this field. We are extremely pleased with the level of participation and feedback that we have received from our colleagues. We always look for new ideas and contributions. Thank you.

**A. Famili**  
*Editor-in-Chief*