CALL FOR PAPERS

4th International Workshop on
Biological Knowledge Discovery and Data Mining (BIOKDD'13)

Held in parallel with

24th International Conference on Database and
Expert Systems Applications (DEXA'13)

www.dexa.org

Prague, Czech Republic

August 26 - 30, 2013

With the development of Molecular Biology during the last decades, we are witnessing an exponential growth of both the volume and the complexity of biological data. For example, the *Human Genome Project* provided the sequence of the 3 billion DNA bases that constitute the human genome. And, consequently, we are provided too with the sequences of about 100,000 proteins. Therefore, we are entering the post-genomic era: after having focused so many efforts on the accumulation of data, we have now to focus as much effort, and even more, on the analysis of these data. Analyzing this huge volume of data is a challenging task because, not only, of its complexity and its multiple and numerous correlated factors, but also, because of the continuous evolution of our understanding of the biological mechanisms. Classical approaches of biological data analysis are no longer efficient and produce only a very limited amount of information, compared to the numerous and complex biological mechanisms under study. From here comes the necessity to use computer tools and develop new *in silico* high performance approaches to support us in the analysis of biological data and, hence, to help us in our understanding of the correlations that exist between, on one hand, structures and functional patterns of biological sequences and, on the other hand, genetic and biochemical mechanisms. *Knowledge Discovery and Data Mining* (KDD) are a response to these new trends.

Topics of BIOKDD'12 workshop include, but not limited to:

Data Preprocessing: Biological Data Storage*, Representation and Management (data warehouses, databases, sequences, trees, graphs, biological networks and pathways, …), Biological Data *Cleaning* (errors removal, redundant data removal, completion of missing data, …), *Feature* Extraction (motifs, subgraphs, …), *Feature* Selection (filter approaches, wrapper approaches, hybrid approaches, embedded approaches, …)

Data Mining: Biological Data Regression (regression of biological sequences…), Biological data clustering/biclustering (microarray data biclustering, clustering/biclustering of biological sequences, …), Biological Data Classification (classification of biological sequences…), Association Rules Learning from Biological Data, Text mining and Application to Biological Sequences, Web mining and Application to Biological Data, Parallel, Cloud and Grid Computing for Biological Data Mining

Data Postprocessing: Biological Nuggets of Knowledge Filtering, Biological Nuggets of Knowledge Representation and Visualization, Biological Nuggets of Knowledge Evaluation (calculation of the classification error rate, evaluation of the association rules *via* numerical indicators, e.g. *measurements of interest*, …), Biological Nuggets of Knowledge Integration

PAPER SUBMISSION DETAILS:

Authors are invited to submit electronically original contributions in English. Submitted papers should not exceed 5 pages in IEEE format http://www.computer.org/portal/web/cscps/formatting. All accepted

papers will be published in the proceedings of DEXA'12 Workshops with IEEE CSP. One of the authors of an accepted paper must register to DEXA'13 conference and present the paper at BIOKDD'13 workshop. For paper registration and electronic submission see <http://confdriver.ifs.tuwien.ac.at/dexa2013/>, starting from January 2013.

IMPORTANT DATES: Submission of abstracts: March 22, 2013   April 3, 2013—April 18
                                  Submission of full papers: March 29, 2013   April 10, 2013 – April 25
                                  Notification of acceptance: May 20, 2013   May 10, 2013
                                  Camera-ready copies due: June 10, 2013   May 20, 2013

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