CALL FOR PAPERS

9th International Workshop on
Biological Knowledge Discovery from Big Data (BIOKDD'18)

Held in parallel with

29th International Conference on Database and
Expert Systems Applications (DEXA'18)

www.dexa.org/biokdd2018

Regensburg, Germany
September 3 - 6, 2018

In the recent years, there has been a rapid development of biological technologies producing more and more *biological data*, i.e., data related to biological macromolecules (DNA, RNA and proteins). The rise of *Next Generation Sequencing* (NGS) technologies, also known as *high-throughput sequencing* technologies, has contributed actively to the deluge of these data. In general, these data are big, heterogeneous, complex, and distributed in all over the world in databases. Analyzing biological big data is a challenging task, not only, because 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 adopt new computer tools and develop new *in silico* high performance approaches to support us in the analysis of biological big data and, hence, to help us in our understanding of the correlations that exist between, on one hand, structures and functional patterns in biological macromolecules and, on the other hand, genetic and biochemical mechanisms. *Biological Knowledge Discovery from Big Data* (BIOKDD) is a response to these new trends.

Topics of BIOKDD'18 workshop include, but not limited to:

Data Preprocessing: Biological Big Data Storage, Representation and Management (data warehouses, databases, sequences, trees, graphs, biological networks and pathways, …), Biological Big 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 Big Data Regression (regression of biological sequences…), Biological Big Data Clustering/Biclustering (microarray data biclustering, clustering/biclustering of biological sequences, …), Biological Big Data Classification (classification of biological sequences…), Association Rules Learning from Biological Big Data, Text mining and Application to Biological Sequences, Web mining and Application to Biological Big Data, Parallel, Cloud and Grid Computing for Biological Big 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 CSP format http://www.computer.org/portal/web/cscps/formatting. All accepted papers will be published in the proceedings of DEXA'18 Workshops with IEEE CSP. One of the authors of an accepted paper must register to DEXA'18 conference and present the paper at BIOKDD'18 workshop. For paper registration and electronic submission see http://confdriver.ifs.tuwien.ac.at/dexa2018/ starting from January 2018.

IMPORTANT DATES: Submission of abstracts: March 11, 2018
Submission of full papers: March 18, 2018
Notification of acceptance: May 18, 2018
Camera-ready copies due: June 08, 2018

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