<p style="text-align:center; color:red">Call for Papers
The 24th International Symposium on
Methodologies for Intelligent Systems
(ISMIS 2018)</p>

Special Session
– Advanced Methods in Machine Learning for Modeling Complex Data –

October 29 - 31, 2018, St. Raphael Resort, Limassol, Cyprus

ISMIS is an established and prestigious conference for exchanging the latest research results in building intelligent systems. Held twice every three years, the conference provides a medium for exchanging scientific research and technological achievements accomplished by the international community.

The scope of ISMIS is intended to represent a wide range of topics on applying Artificial Intelligence techniques to areas as diverse as decision support, automated deduction, reasoning, knowledge based systems, machine learning, computer vision, robotics, planning, databases, information retrieval, etc. The focus is on research in intelligent systems. The conference addresses issues involving solutions to problems that are complex to be solved through conventional approaches and that require the simulation of intelligent thought processes, heuristics and applications of knowledge. The integration of these multiple approaches in solving complex problems is of particular importance. ISMIS provides a forum and a means for exchanging information for those interested purely in theory, those interested primarily in implementation, and those interested in specific research and industrial applications.

Advanced Methods in Machine Learning for Modeling Complex Data

Recent advances in storage, hardware, information technology, communication, and networking have resulted in a large amount of digital data. Unlike the structured small-scale data previously utilized in traditional machine learning tasks, many of the data available nowadays are large-scale complex data, with features like heterogeneity, multiple labels, multiple modalities, and incompleteness, etc. The increasing complexity of these digital data give rise to new challenges in machine learning techniques, calling for novel and innovative methods and implementations to process these complex data in an efficient and effective manner.

Topics

This special session on "Advanced Methods in Machine Learning for Modeling Complex Data" aims to provide a platform for academics and industry-related researchers in the areas of applied mathematics, machine learning, artificial intelligence, pattern recognition, data mining, multimedia processing, social media, health informatics, and big data to exchange ideas and explore novel machine learning theories and methodologies for modeling complex data as well as efficient implementations in complicated real-world applications. The topics of the special session include, but are not limited to:

➢ Supervised/unsupervised/semi-supervised learning models for complex data
➢ Dimensionality reduction and feature extraction for high-dimensional data
➢ Regularization and generalization in machine learning
➢ Optimization and numerical methods in machine learning for large-scale data
➢ Approximation in machine learning

- ➢ Distributed/parallel optimization algorithms in machine learning
- ➢ Deep learning
- ➢ Multi-modal/view/instance/task/label/scale learning
- ➢ Multi-graph learning
- ➢ Learning with heterogeneous data
- ➢ Learning with tensorial data
- ➢ Learning with imbalanced data
- ➢ Learning with incomplete data
- ➢ Machine learning in healthcare
- ➢ Machine learning in medicine
- ➢ Machine learning in social networks
- ➢ Cross-media learning
- ➢ Web/text/image mining
- ➢ Learning for personalization, advertising, and recommendation

Paper Submission

Authors are invited to submit their manuscripts (maximum 10 pages) electronically in Springer's LNCS/LNAI style. For the detailed instructions please refer to the conference homepage (http://cyprusconferences.org/ismis2018/). Any necessary information concerning typesetting can be obtained directly from Springer's webpage. All submissions will be subject to review by the ISMIS 2018 program committee in consultation with the special session organizers.

Publication

The accepted papers will be published in ISMIS 2018 proceedings in Springer's LNAI series.

Important Date

Paper submission:	June 10, 2018
Notification of acceptance/rejection:	July 10, 2018
Camera-Ready:	July 31, 2018
Author Registration Deadline:	July 31, 2018

Special Session Chairs

Dr. Yang Liu	Prof. Jiming Liu	Prof. Keith C. C. Chan
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