Call for Papers and Posters for Special Session/Workshop on

Machine learning and graphical models in static and dynamic complex environments

Organized as part of the 14th IEEE International Conference on Machine Learning and Applications (IEEE ICMLA 2015)
Miami – Florida, USA
December 9-11
For more information and submission visit:
http://www.icmla-conference.org/icmla15/

Machine learning and graphical models (MLGMs) are widely applied in many complex problem-domains such as medicine, bioinformatics, neuro-informatics, forensic science, social networks, finance, bibliometry, speech recognition, natural language processing, information retrieval, troubleshooting, planning and control, reliability, music, psychology, human-computer interaction, text mining, computer vision and robotics. This is because of the ability of MLGMs algorithms to discover and model previously unknown knowledge in complex situations that are either static or evolving (dynamic) over time. MLGMs are based on compact and powerful (a)cyclic graphs to efficiently capture dependencies and encode constraints in the problem domain. MLGMs, in large, have proven successful whenever dynamic process changes occur due to changing of system states, varying operation modes, or environmental conditions. Numerous applications of MLGMs can be seen for the modeling of static/dynamic gene regulatory networks, control and planning polices, fault detection, and many more.
This workshop aims at gathering papers dealing with applications and the underlying theory of MLGMs, and provide researchers and participants with a multidisciplinary forum for exchanging ideas and discussing challenges for various domain-applications of MLGMs in complex, evolving and big datasets. This workshop seeks original *practical* and *theoretical* research papers including but not limited to the following topics on graphical models:

- Supervised and unsupervised Bayesian network learning algorithms,
- Dynamic Bayesian network learning algorithms,
- Markov network learning algorithms,
- Chain graph learning algorithms,
- Dependency network learning algorithms,
- Naïve Bayes learning algorithms,
- Relevance network learning algorithms,
- Boolean network learning algorithms,
- Hidden Markov network learning algorithms, etc.

We encourage authors to submit full research papers (6 pages) as well as short research papers (4 pages) reporting work in progress. All accepted papers from the two types of submissions will be included in the proceedings to be published by IEEE Press.

Authors should submit papers through the main conference submission website. Papers must correspond to the requirements detailed in the instructions to authors. All conference submissions will be handled electronically. Detailed instructions for submitting the papers are provided on the conference home page at:

http://www.icmla-conference.org/icmla15/

Accepted papers should be presented by one of the authors to be published in the conference proceedings. If you have any questions, do not hesitate to direct your questions to the workshop organizers.

Important Dates:

Paper Submission Deadline: August 6th, 2015
Notification of acceptance: September 9th, 2015
Camera-ready papers: October 1st, 2015
The ICMLA Conference: December 9th, 2015

Organizers:

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Preliminary Program Comittee Members (To Be Confirmed):

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