



Graphical Model Inference and Learning for Visual Computing

**A Special Track of the
9th International Symposium on Visual Computing (ISVC'13)**

<http://www.isvc.net>

July 29-31, 2013, Crete, Greece

Scope:

A wide array of problems in Visual Computing can be naturally formulated as graphical model inference tasks. In this context, one often wants to both learn and optimize an objective function that measures how well a set of hidden parameters fits to the observed visual data. The popularity of such an approach stems from the fact that most processes related to Visual Computing are typically characterized by a lack of closed form solutions, and uncertainties (due to noise, imperfect sensors, ambiguities in the visual interpretation etc.). As a result perfect or exact solutions hardly exist, whereas inexact but optimal (in an application-specific sense) solutions and their efficient computation is what one aims at.

Computer vision, computer graphics and medical imaging are three areas of Visual Computing for which the use of graphical models has gained a significant interest within the last years, also largely due to the development of highly efficient and sophisticated inference and learning techniques, which are capable of handling large scale problems with complex objective functions. In this special track we are soliciting papers from all the above mentioned fields that present new theoretical contributions as well as interesting applications of such inference and learning methods.

Topics:

The topics of interest include but are not limited to the following areas:

- Image and video modeling
- Image segmentation
- Motion estimation and tracking
- Texture synthesis
- Image/video completion
- Optical flow
- Discrete or continuous optimization approaches
- Variational methods
- Markov Random Fields (inference, learning and MAP estimation)
- Structured output learning methods
- Graph-cuts, linear programming, message-passing methods

- PDEs
- Level set methods
- Comparison of performance
- Computational complexity
- Markov Chain Monte Carlo techniques

Paper Submission Procedure:

Papers submitted to ISVC 2013 Special Track must not have been previously published and must not be currently under consideration for publication elsewhere. Manuscripts should be submitted in camera-ready format and should not exceed **12 pages**, including figures and tables (see <http://www.isvc.net> for details). All papers accepted will appear in the symposium proceedings which will be published by **Springer-Verlag** in the **Lecture Notes in Computer Science (LNCS)** series.



Important Dates:

Paper submissions	May 10, 2013
Notification of acceptance	June 10, 2013
Final camera ready paper	June 28, 2013
Advance Registration	June 28, 2013
ISVC'13 Symposium	July 29-31, 2013

Organizers:

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