

Call for Papers

Special Issue on

Partially Supervised Learning for Pattern Recognition

to be published in *Pattern Recognition Letters*

***** Submission deadline: June 30, 2012 *****

Partially supervised learning (PSL) is a general framework for learning with labeled and unlabeled data. In traditional pattern classification a label (the correct class) is associated with each training pattern; in the PSL framework this label might as well be crisp, but it might also be paired with a confidence value, or it might be an imprecise and/or uncertain soft label (defined through certain types of uncertainty models), or it might be that such a label is not available at all.

PSL thus generalizes, involves, or builds upon several kinds of learning paradigms that have also found application to pattern classification problems. Such paradigms include: supervised and unsupervised techniques; semi-supervised learning; transductive, transfer, and diffusion learning; policy learning in partially observable environments. Therefore PSL methods and algorithms for pattern recognition are of great interest in both practical applications and theory. Research in the field of PSL is still in its early stages and has great potential for further growth.

This special issue invites paper submissions on the most recent developments in PSL research rooted in (or, aimed at) pattern recognition. The special issue will comprise (1) papers submitted in response to this call, and (2) extended versions of selected papers from the recent, successful PSL 2011 Workshop held in Ulm (Germany) (<http://neuro.informatik.uni-ulm.de/PSL2011/>), sponsored by the International Association for Pattern Recognition.

Topics of interest include (yet, they are not limited to) the following issues.

Methodological issues (as long as they relate to pattern recognition):

- Combinations of supervised and unsupervised learning
- Diffusion learning
- Semi-supervised classification and clustering
- PSL with deep architectures
- Active learning
- PSL with vague, fuzzy, or uncertain teaching signals
- PSL in multiple classifier systems and ensembles
- PSL in neural nets, machine learning, or statistical pattern recognition
- Transfer learning
- Transductive learning

Pattern recognition applications of PSL in:

- Image and signal processing
- Multimodal information processing
- Information fusion
- Data mining and web mining
- Bioinformatics/Cheminformatics

Paper submission

Papers must be submitted online via the Pattern Recognition Letters website (<http://ees.elsevier.com/patrec/>), selecting the choice that indicates this special issue (identifier: PSL-PR). Prepare your paper following the Journal guidelines for Authors (http://www.elsevier.com/wps/find/journaldescription.cws_home/505619/authorinstructions), which include specifications for submissions aimed at Special Issues. In particular, a maximum of 7500 words is admitted for special issue papers, without counting the References (plus at most 10 Figures/Tables in total). Priority will be given to the papers with high novelty and originality.

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(note: electronic submission opens on May 30, 2012)

If you are not sure on whether your manuscripts matches the aims and scope of this special issue or not, do not hesitate to get in touch with the guest editors at any time.

Guest editors

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