

Preface

Partially supervised learning (PSL) is a rapidly evolving area of machine learning, data mining and pattern recognition. In many applications unlabeled data may be relatively easy to collect, whereas labeling these data is difficult, expensive, and/or time-consuming as it requires the effort of human experts. PSL is a general framework for learning with partial supervision, or learning with partially labeled data. In this framework, the supervision information might be a crisp label, or a label plus a confidence value, or it might be an imprecise and/or uncertain soft label defined through a certain type of uncertainty model, or it might be that information about a class label is not available.

The PSL framework thus generalizes many kinds of learning paradigms including supervised and unsupervised learning, semi-supervised learning for classification and regression, transductive learning, semi-supervised clustering, multi-instance learning, weak label learning, policy learning in partially observable environments, etc. Therefore, PSL theories and algorithms are of great interest to various research communities. Research in the field of PSL is still in its early stages and has great potential for further growth, thus leaving plenty of room for further development.

PSL 2013 received 26 full submissions. The Program Committee consisting of 24 experts carefully reviewed the submissions, with the help of some external reviewers. Based on the reviews, 10 papers were selected for presentation at the workshop and inclusion in the post-workshop proceedings. Authors were requested to improve their manuscripts by incorporating reviewers' comments and feedbacks from the workshop audience, leading to the revised selected papers in this volume. The workshop program was significantly enhanced by the invited talk of Prof. Dale Schuurmans of the University of Alberta, Canada.

This workshop would not have been possible without the help of many individuals and organizations. First of all, we would like to thank the Program Committee members and reviewers for their great efforts in providing insightful comments on the submissions. We also wish to thank all the authors who have submitted their recent work to the workshop. The management of the papers, including the preparation of this proceedings volume, was done by the EasyChair conference management system. Special thanks go to the local arrangement and publicity chairs, Ming Li, Yang Yu, and Michael Glodek, for their outstanding contribution to the organization of PSL 2013.

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Papers

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