

Preface

Yvan Saeys

YVAN.SAEYS@PSB.UGENT.BE

Huan Liu

HUAN.LIU@ASU.EDU

Iñaki Inza

INAKI.INZA@EHU.ES

Louis Wehenkel

L.WEHENKEL@ULG.AC.BE

Yves Van de Peer

YVES.VANDEPEER@PSB.UGENT.BE

Welcome to FSDM'08

The organizing committee of FSDM'08 is pleased to welcome you at this third edition of the Workshop on New Challenges for Feature Selection in Data Mining and Knowledge Discovery (FSDM'08). This year, FSDM is co-organized by Ghent University, The University of the Basque Country, the University of Liège and Arizona State University, in collaboration with the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2008).

This workshop aims at bringing together different research disciplines, and encouraging discussion and collaboration between scientists working in different fields on the common topic of feature selection. Feature selection is an essential step in successful applications, and reducing the number of dimensions by selecting features has proven to be efficient and effective in dealing with high-dimensional data. Feature selection constitutes an important preprocessing step in many areas such as statistics, pattern recognition, machine learning, and data mining. Important advantages of feature selection include the ability to construct better models, designing faster and more cost-effective models and gaining more insight in the processes that are described by the data.

This collection contains a wide range of research work in feature selection, ranging from new theoretical developments to novel application domains for feature selection. A remarkable number of submissions also elaborate on new feature selection techniques for unsupervised learning, a research area that is clearly gaining importance.

Due to a limited amount of time, only 12 out of about 40 submissions could be accepted for the workshop. This large amount of submissions to the workshop is an indicator of the increasing importance of feature selection and related research work in many applications. We are thus happy to present a high quality program of selected talks.

In addition, we are happy to announce that the Journal of Machine Learning Research (JMLR) has agreed to publish extended versions of the accepted papers in its Workshop

and Conference Proceedings series.

It has been an enjoyable process for us to work together in achieving the aims of this workshop. We would like to convey our immense gratitude to the members of the program committee for their great reviewing job, and to the authors who have contributed to make this workshop a success. Furthermore we would like to thank our invited speaker George Forman, Neil Lawrence from JMLR, the Research Foundation - Flanders (FWO) and the organizers of ECML-PKDD for giving us the opportunity to organize this workshop.

Yvan Saeys, Huan Liu, Iñaki Inza, Louis Wehenkel and Yves Van de Peer

September 15, Antwerp, Belgium

FSDM'08 Workshop Chairs

- Yvan Saeys (Ghent University)
- Huan Liu (Arizona State University)
- Iñaki Inza (University of the Basque Country)
- Louis Wehenkel (University of Liège)
- Yves Van de Peer (Ghent University)

Invited speaker

- George Forman (Hewlett-Packard Labs, Palo Alto, CA, USA)

Workshop Program Committee

- Constantin Aliferis (Vanderbilt-Ingram Cancer Center)
- Leonardo Auslender (SAS Institute)
- Hamparsum Bozdogan (University of Tennessee)
- Manoranjan Dash (Nanyang Technological University)
- Joaquín Dopazo (Centro de Investigación Príncipe Felipe, Valencia)
- Pierre Geurts (University of Liège)
- Mark Hall (Pentaho)
- Iñaki Inza (University of the Basque Country)
- Igor Kononenko (University of Ljubljana)
- Mineichi Kudo (Hokkaido University)
- Ludmila Kuncheva (University of Wales)
- Pedro Larrañaga (University of the Basque Country)
- Huan Liu (Arizona State University)
- Elena Marchiori (Radboud University Nijmegen)
- Stan Matwin (University of Ottawa)
- Hiroshi Motoda (Osaka University)
- Wei Pan (University of Minnesota)
- Jose M. Peña (Linköping University)

- Marko Robnik-Sikonja (University of Ljubljana)
- Roberto Ruiz (Pablo de Olavide University, Seville)
- Yvan Saeys (Ghent University)
- Kari Torkkola (Motorola Research)
- Ioannis Tsamardinos (Vanderbilt University)
- Yves Van de Peer (Ghent University)
- Louis Wehenkel (University of Liège)
- Lei Yu (Binghamton University)
- Jacob Zahavi (Tel Aviv University)

Workshop web site

<http://bioinformatics.psb.ugent.be/fsdm2008>