

EDM 2011

**4th International Conference on
Educational Data Mining**

PROCEEDINGS OF THE
FOURTH INTERNATIONAL CONFERENCE ON
EDUCATIONAL DATA MINING

Eindhoven, July 6-8, 2011

**Mykola Pechenizkiy, Toon Calders,
Cristina Conati, Sebastian Ventura,
Cristobal Romero and John Stamper**

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Mykola Pechenizkiy, Toon Calders, Cristina Conati, Sebastian Ventura,
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Preface

The 4th International Conference on Educational Data Mining (EDM 2011) brings together researchers from computer science, education, psychology, psychometrics, and statistics to analyze large datasets to answer educational research questions. The conference, held in Eindhoven, The Netherlands, July 6-9, 2011, follows the three previous editions (Pittsburgh 2010, Cordoba 2009 and Montreal 2008), and a series of workshops within the AAAI, AIED, EC-TEL, ICALT, ITS, and UM conferences.

The increase of e-learning resources such as interactive learning environments, learning management systems, intelligent tutoring systems, and hypermedia systems, as well as the establishment of state databases of student test scores, has created large repositories of data that can be explored to understand how students learn. The EDM conference focuses on data mining techniques for using these data to address important educational questions. The broad collection of research disciplines ensures cross fertilization of ideas, with the central questions of educational research serving as a unifying focus.

This year's conference includes short papers as a new submission category targeting original and unpublished research with merit in terms of originality and importance rather than maturity and technical validation. In the paper track, we received 60 long and 20 short papers, each of which was reviewed by three experts in the field, resulting in 20 long and 17 short papers accepted for presentation at the conference (some of the long paper submissions have been accepted as short paper). We also received 22 posters, targeting work in progress and last minute results with high potential to foster new developments and interesting discussions during the conference's poster presentation sessions. These sessions included the presentation of 30 posters, 14 from the original pool of poster submissions and the remainder from the pool of paper submissions.

All accepted submissions appear in these proceedings. The conference also includes invited talks by Barry Smyth (University College, Dublin, Ireland), John Stamper (Carnegie Mellon University, USA) and Erik-Jan van der Linden (MagnaView B.V., the Netherlands), with abstract in these proceedings.

We would like to thank Eindhoven University of Technology for the sponsorship and hosting of EDM'2011. We would like to thank the Netherlands Organization for Scientific Research (NWO), Belgium-Netherlands Association for Artificial Intelligence (BNVKI) and the Dutch Research School for Information and Knowledge Systems (SIKS), University of Cordoba and PSLC DataShop.

We also want to acknowledge the amazing work of the program committee members and additional reviewers, who with their enthusiastic contributions gave us invaluable support in putting this conference together.

Our special thanks to the local organizing team and additional thanks to Evgeny Knutov and Jorn Bakker for their technical support on putting these proceedings together.

Last but not least we would like to thank Arnon Hershkovitz who has served as the Web Chair of EDM series from its first edition.

June 2011

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