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# Formal Concept Analysis

10th International Conference, ICFCA 2012  
Leuven, Belgium, May 7-10, 2012  
Proceedings

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# Preface

This volume contains the papers presented at the 10th International Conference on Formal Concept Analysis (ICFCA 2012) held during May 7–10, at the Katholieke Universiteit Leuven, Belgium.

There were 68 submissions by authors from 27 countries. Each submission was reviewed by at least three Program Committee members, and 20 regular papers (29%) were accepted. The program also included six invited talks on topical issues: Recent Advances in Machine Learning and Data Mining, Mining Terrorist Networks and Revealing Criminals, Concept-Based Process Mining, and Scalability Issues in FCA and Rough Sets. The corresponding abstracts are gathered in the first section of this volume. Another 14 papers were assessed as valuable for discussion at the conference and were therefore collected in the supplementary proceedings.

Formal concept analysis emerged in the 1980s from attempts to restructure lattice theory in order to promote better communication between lattice theorists and potential users of lattice theory. Since its early years, formal concept analysis has developed into a research field in its own right with a thriving theoretical community and a rapidly expanding range of applications in information and knowledge processing including visualization, data analysis, and knowledge management.

The conference aims to bring together researchers and practitioners working on theoretical or applied aspects of formal concept analysis within major related areas such as mathematics, computer and information sciences and their diverse applications to fields such as software engineering, linguistics, life and social sciences.

We would like to thank the authors and reviewers whose hard work ensured presentations of very high quality and scientific vigor. In addition, we express our deepest gratitude to all Program Committee and Editorial Board members as well as external reviewers, especially to Bernhard Ganter, Claudio Carpineto, Frithjof Dau, Sergei Kuznetsov, Sergei Obiedkov, Sebastian Rudolf and Stefan Schmidt for their advice and support.

We would like to acknowledge all sponsoring institutions and the local organization team who made this conference a success. In particular, we thank Amsterdam-Amstelland Police, IBM Belgium, OpenConnect Systems, Research Foundation Flanders, and Vlerick Management School.

We are also grateful to Springer for publishing this volume and the developers of the EasyChair system, which helped us during the reviewing process.

March 2012

Florent Domenach  
Dmitry I. Ignatov  
Jonas Poelmans

# Organization

The International Conference on Formal Concept Analysis is the annual conference and principal research forum in the theory and practice of formal concept analysis. The inaugural International Conference on Formal Concept Analysis was held at the Technische Universität Darmstadt, Germany, in 2003. Subsequent ICFCA conferences were held at the University of New South Wales in Sydney, Australia, 2004, Université d'Artois, Lens, France, 2005, Institut für Algebra, Technische Universität Dresden, Germany, 2006, Université de Clermont- Ferrand, France, 2007, Université du Québec à Montréal, Canada, 2008, Darmstadt University of Applied Sciences, Germany, 2009, Agadir, Morocco, 2010, and University of Nicosia, Cyprus, 2011. ICFCA 2012 was held at the Katholieke Universiteit Leuven, Belgium. Its committees are listed below.

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