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Concept Lattices

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Preface

This volume contains the Proceedings of ICFCA 2004, the 2nd International Conference on Formal Concept Analysis. The ICFCA conference series aims to be the premier forum for the publication of advances in applied lattice and order theory and in particular scientific advances related to formal concept analysis.

Formal concept analysis emerged in the 1980s from efforts to restructure lattice theory to promote better communication between lattice theorists and potential users of lattice theory. Since then, the field has developed into a growing research area in its own right with a thriving theoretical community and an increasing number of applications in data and knowledge processing including data visualization, information retrieval, machine learning, data analysis and knowledge management.

In terms of theory, formal concept analysis has been extended into attribute exploration, Boolean judgment, contextual logic and so on to create a powerful general framework for knowledge representation and reasoning. This conference aims to unify theoretical and applied practitioners who use formal concept analysis, drawing on the fields of mathematics, computer and library sciences and software engineering. The theme of the 2004 conference was ‘Concept Lattices’ to acknowledge the colloquial term used for the line diagrams that appear in almost every paper in this volume.

ICFCA 2004 included tutorial sessions, demonstrating the practical benefits of formal concept analysis, and highlighted developments in the foundational theory and standards. The conference showcased the increasing variety of formal concept analysis software and included eight invited lectures from distinguished speakers in the field. Seven of the eight invited speakers submitted accompanying papers and these were reviewed and appear in this volume.

All regular papers appearing in this volume were refereed by at least two referees. In almost all cases three (or more) referee reports were returned. Long papers of approximately 14 pages represent substantial results deserving additional space based on the recommendations of reviewers. The final decision to accept the papers (as long, short or at all) was arbitrated by the Program Chair based on the referee reports. As Program Chair, I wish to thank the Program Committee and the additional reviewers for their involvement which ensured the high scientific quality of these proceedings. I also wish to particularly thank Prof. Paul Compton and Rudolf Wille, Dr. Richard Cole and Peter Becker for their support and enthusiasm.

January 2004

Peter Eklund

Organization

The International Conference on Formal Concept Analysis (ICFCA) is intended as a regular 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 Technical University of Darmstadt, Germany in 2003 and ICFCA 2004 in Sydney, Australia.

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