ICFCA 2014: THE 12TH INTERNATIONAL CONFERENCE ON FORMAL CONCEPT ANALYSIS

CYNTHIA VERA GLODEANU, MEHDI KAYTOUE, AND CHRISTIAN SĂCĂREA

Formal Concept Analysis (FCA) is a multi-disciplinary field built on the solid foundation of lattice and order theory. Besides this, FCA is strongly rooted in philosophical aspects of the mathematical formalization of concept and concept hierarchy. Since its emergence in the 1980s the field has developed into a constantly growing research area in its own right, with a thriving theoretical community further applying and developing this powerful framework of qualitative analysis of data. One of the initial goals of FCA was to promote better communication between lattice theorists and potential users of lattice theory. The increasing number of applications in diverse areas such as data visualization, information retrieval, data mining and knowledge discovery demonstrates how that goal is being met.

In order to offer researchers the opportunity to meet and discuss developments and applications of FCA annually, the International Conference on Formal Concept Analysis (ICFCA) was established and held for the first time in Darmstadt, Germany in 2003. Since then, the ICFCA has been held in different countries from Europe, America, Africa and in Australia.

The 12th ICFCA took place from the 10th to the 13th of June, 2014 at the Babeş-Bolyai University, Cluj-Napoca, Romania. There were 39 submissions by authors from 14 different countries. Each paper was reviewed by 3 members of the Program Committee (exceptionally four). Sixteen high-quality papers were chosen for publication in the conference proceedings volume, amounting to an acceptance rate of 41%. Six other works in progress were considered valuable for presentation during the conference, five of them being included in this special issue of the journal *Studia Universitatis Babeş-Bolyai, Series Informatica*.

We were also delighted that three prestigious researchers accepted to give an invited talk:

- Learning Spaces, and How to Build them by Prof. Jean-Paul Doignon, Université Libre de Bruxelles, Belgium;
- On the Succinctness of Closure Operator Representations by Prof. Sebastian Rudolph, Technische Universität Dresden, Germany;

- 6 CYNTHIA VERA GLODEANU, MEHDI KAYTOUE, AND CHRISTIAN SĂCĂREA
 - MDL for Pattern Mining: A Brief Introduction to Krimp by Prof. Arno Siebes, Universiteit Utrecht, The Netherlands.

Our deepest gratitude goes to all the authors of submitted papers. Choosing ICFCA 2014 as a forum to publish their research was key to the success of the conference. Besides the submitted papers, the high quality of the published volumes would not have been possible without the strong commitment of the authors, the Program Committee and Editorial Board members, and the external reviewers. Working with the efficient and capable team of local organizers was a constant pleasure. We are deeply indebted to all of them for making this conference a successful forum on FCA.

Last, but not least, we are most grateful to the editorial board of *Studia Universitatis Babeş-Bolyai*, *Series Informatica* for accepting to publish the *Contributions to ICFCA 2014* as a special issue of this journal, as well to the organizations that sponsored this event: the Bitdefender company, the iQuest company, the Babeş-Bolyai University, and the City of Cluj-Napoca, Romania. Finally, we would like to emphasize the great help of EasyChair for making the technical duties easier.

Technische Universität Dresden, Zellescher Weg 12-14, 01062 Dresden, Germany

E-mail address: Cynthia-Vera.Glodeanu@tu-dresden.de

INSA DE LYON, 20 AVENUE ALBERT EINSTEIN, 69621 VILLEURBANNE, FRANCE *E-mail address*: mehdi.kaytoue@insa-lyon.fr

Babeş-Bolyai University, Kogălniceanu 1, 400084 Cluj-Napoca, Romania *E-mail address*: csacarea@cs.ubbcluj.ro

ICFCA 2014 7

ORGANIZATION

EXECUTIVE COMMITTEE

Conference Chair

Christian Sacarea, Babeş-Bolyai University, Cluj-Napoca, Romania

Conference Organizing Committee

Brigitte Breckner, Babeş-Bolyai University, Cluj-Napoca, Romania Sanda Dragoş, Babeş-Bolyai University, Cluj-Napoca, Romania Diana Haliţă, Babeş-Bolyai University, Cluj-Napoca, Romania Diana Troancă, Babeş-Bolyai University, Cluj-Napoca, Romania Viorica Varga, Babeş-Bolyai University, Cluj-Napoca, Romania

Program and Conference Proceedings

Program Chairs

Cynthia Vera Glodeanu, Technische Universität Dresden, Germany Mehdi Kaytoue, Université de Lyon, France

Editorial Board

Peggy Cellier, IRISA, INSA Rennes, France Felix Distel, Technische Universität Dresden, Germany Florent Domenach, University of Nicosia, Cyprus Peter Eklund, University of Wollongong, Australia Sebastien Ferré, Université de Rennes 1, France Bernhard Ganter, Technische Universität Dresden, Germany Robert Godin, Université du Québec à Montréal, Canada Robert Jäschke, Leibniz Universität Hannover, Germany Sergei O. Kuznetsov, Higher School of Economics, Russia Leonard Kwuid, Bern University of Applied Sciences, Switzerland Rokia Missaoui, Université du Québec en Outaouais, Canada Sergei Obiedkov, Higher School of Economics, Russia Uta Priss, Ostfalia University of Applied Sciences, Germany Sebastian Rudolph, Technische Universität Dresden, Germany Stefan E. Schmidt, Technische Universität Dresden, Germany Gerd Stumme, University of Kassel, Germany Petko Valtchev, Universite du Québec à Montréal, Canada Karl Erich Wolff, University of Applied Sciences, Germany

Honorary Member

Rudolf Wille, Technische Universität Darmstadt, Germany

Program Committee

Simon Andrews, University of Sheffield, United Kingdom Mike Bain, University of New South Wales, Australia Jaume Baixeries, Polytechnical University of Catalonia, Spain Radim Bělohlávek, Palacký University, Czech Republic Karell Bertet, L3I Université de La Rochelle, France François Brucker, Centrale Marseille, France Claudio Carpineto, Fondazione Ugo Bordoni, Italy Stephan Doerfel, University of Kassel, Germany Vincent Duquenne, ECP6-CNRS, Université Paris 6, France Alain Gély, Universite Paul Verlaine, France Marianne Huchard, LIRMM, Université Montpellier, France Dmitry Ignatov, Higher School of Economics, Russia Tim Kaiser, SAP AG, Germany Markus Krötzsch, Technische Universität Dresden, Germany Michal Krupka, Palacký University, Czech Republic Marzena Kryszkiewicz, Warsaw University of Technology, Poland Wilfried Lex, Universität Clausthal, Germany Engelbert Mephu Nguifo, LIMOS, Université de Clermont Ferrand 2 France Amedeo Napoli, LORIA, Nancy, France Lhouari Nourine, Université Blaise Pascal, France Jan Outrata, Palacký University, Czech Republic Jean-Marc Petit, LIRIS, INSA de Lyon, France Jonas Poelman, Katholieke Universiteit Leuven, Belgium Sandor Radeleczki, University of Miskolc, Hungary Laszlo Szathmary, University of Debrecen, Hungary Andreja Tepavčević, University of Novi Sad, Serbia

External Reviewers

Gabriela Arevalo, Universidad Nacional de La Plata, Argentina, Philippe Fournier-Viger, Université du Québec à Montreal, Canada Clément Guérin, L3I Université de La Rochelle, France Mohamed Nader Jelassi, Université de Clermont, France Jan Konecny, Palacký University, Czech Republic Michel Krebs, Bern University of Applied Sciences, Switzerland Branimir Šešelja, University of Novi Sad, Serbia Romuald Thion, Université de Lyon, France

ICFCA 2014 9

SPONSORING INSTITUTIONS

The Babeş-Bolyai University Cluj-Napoca, Romania The City of Cluj-Napoca, Romania The Bitdefender Company, Bucharest, Romania iQuest GmbH & Co KG, Frankfurt, Germany