

Lecture Notes in Artificial Intelligence 6167

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Preface

This volume contains the collected contributions of three conferences, AISC 2010, Calculemus 2010 and MKM 2010. AISC 2010 was the 10th International Conference on Artificial Intelligence and symbolic computation. Its area of concern is the use of AI techniques within symbolic computation as well as the application of symbolic computation to AI problem solving. Calculemus 2010 was the 17th Symposium on the Integration of Symbolic Computation and Mechanised Reasoning, dedicated to the combination of computer algebra systems and automated deduction systems. MKM 2010 was the 9th International Conference on Mathematical Knowledge Management, an emerging interdisciplinary field of research in the intersection of mathematics, computer science, library science, and scientific publishing. All three conferences are thus concerned with providing intelligent computer mathematics. Although the conferences have separate communities and separate foci, there is a significant overlap of interest in building systems for intelligent computer mathematics.

As in 2008 and 2009, the three events were colocated. In 2010 this was at the Conservatoire National des Arts et Métiers (CNAM), Paris, France, under the umbrella of the Conferences on Intelligent Computer Mathematics (CICM 2010), organized by Renaud Rioboo and Laurence Rideau. This collocation is intended to counteract the tendency towards fragmentation of communities working on different aspects of various independent branches of our general field; traditional branches (e.g., computer algebra, theorem proving and artificial intelligence in general), as well as newly emerging ones (on user interfaces, knowledge management, theory exploration, etc.). This also facilitates the development of systems for intelligent computer mathematics that will be routinely used by mathematicians, computer scientists and engineers in their every-day work.

While the proceedings are shared, the submission process was separate. The responsibility for acceptance/rejection rests completely with the three separate Program Committees. In total, 25 papers were submitted to AISC. For each paper there were at least four reviews, and on average 5.3 reviews by Program Committee members, out of which 9 papers were accepted for publication in these proceedings. Calculemus received 14 submissions. For each paper, there were at least 3 reviews, and 3.2 reviews on average. After discussion, 7 papers were accepted for publication in these proceedings and 3 papers were selected to appear in the track of emerging trends (not published in this volume). MKM received 27 submissions. For each paper there were at least 3 reviews, and 3.2 reviews on average. After discussion, 16 papers were accepted for publication.

We were very pleased that the keynote talks of AISC, Calculemus, MKM and associated workshops were presented by an array of such highly distinguished speakers. We have included abstracts or full papers for most of these talks in the proceedings. The keynote speakers were:

Andrea Asperti	University of Bologna, Italy
Jacques Calmet	Karlsruhe Institute of Technology, Germany
John Campbell	University College London, UK
Jacques Carette	McMaster University, Canada
Pierre Cartier	Institut des Hautes Études Scientifiques, France
James H. Davenport	University of Bath, UK
Bruno Salvy	INRIA Rocquencourt, France
Masakazu Suzuki	Kyushu University, Japan
Doron Zeilberger	Rutgers University, USA

In the preparation of these proceedings and in managing the whole discussion process, Andrei Voronkov's EasyChair conference management system proved itself an excellent tool.

May 2010

Serge Autexier
Jacques Calmet
David Delahaye
Patrick Ion
Renaud Rioboo
Alan Sexton

AISC, Calculemus and MKM Organization

Conference Chairs	Laurence Rideau, Renaud Rioboo
Local Organization	David Delahaye, Catherine Dubois, Véronique Viguié-Donzeau-Gouge
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