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Artificial Intelligence and Symbolic Computation

12th International Conference, AISC 2014
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Preface

This volume is devoted to the proceedings of the 12th International Conference on Artificial Intelligence and Symbolic Computation (AISC 2014). This conference was organized by the University of Seville in Spain and held during December 11–13, 2014, in the Department of Computer Sciences and Artificial Intelligence at the University of Seville.

AISC 2014 was the latest in the series of specialized biennial conferences founded in 1992 by Jacques Calmet and John Campbell. Its goal was to investigate original research contributions in the fields of artificial intelligence (AI) and symbolic computation: Originally, the conferences were called AISMC where the letter *M* stood for mathematical. From 1998 on the scope became broader than only mathematics and the *M* was dropped. This trend led to the conference being associated with potentially similar ones, including Calculemus and Mathematical Knowledge Management (MKM), under the integrated federation of the Conference on Intelligent Computer Mathematics (CICM).

From the beginning, the proceedings have appeared as volumes in the LNCS and then the LNAI series.

AISC 2014 was again independent from the CICM federation in order to extend the scope to new domains covered by AI and symbolic computation beyond mathematics. The goals were to bind mathematical domains such as algebraic topology or algebraic geometry to AI, but also to link AI to domains outside pure algorithmic computing.

The new scope thus covers domains that can be described generically as belonging to the mechanization and computability of AI. This covers the basic concepts of computability and new Turing machines, logics including non-classic ones, reasoning, learning, decision support systems but also machine intelligence and epistemology and philosophy of symbolic mathematical computing. Theoretical as well as application papers were solicited.

Among the 22 submitted papers, 16 were selected. Each paper was reviewed by three referees, either members of the Program Committee or sub-reviewers. Acceptance was based solely on the evaluation of the referees and scores achieved. For two accepted papers a revised version was required and refereed again by the same reviewers who evaluated the original submission. In a third case the revised version was rejected.

The scope of the accepted contributions does not fully cover the expected new scope outlined for this series of conferences but illustrates nicely the trend set for these conferences.

October 2014

Gonzalo A. Aranda-Corral
Jacques Calmet
Francisco J. Martín-Mateos

Organization

AISC 2014, the 12th International Conference on Artificial Intelligence and Symbolic Computation, was held at the University of Seville, Seville, December 11-13, 2014. The Department of Computer Science and Artificial Intelligence, University of Seville, was responsible for the organization and local arrangements of the conference.

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