A note from the Editor-in-Chief

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We have just celebrated the 25th anniversary of the *Annals of Mathematics and Artificial Intelligence (AMAI)*. The idea of creating the journal came from our late colleague Peter L. Hammer who saw the need for a quality publication which would become a home for research bridging the two disciplines. After two years of his brainstorming with colleagues, the journal was born. I am thankful for the trust expressed in placing it into my hands as the founding Editor-in-Chief paying tribute to Peter as a role model and mentor in this endeavor. At the end of this year, we commemorate the 10th year of his passing.

The first volumes of the *Annals* appeared in 1990 together with the establishment of our flagship conference the International Symposium on Artificial Intelligence and Mathematics (ISAIM). The Symposium has been held every two years, sponsored by Florida Atlantic University and organized by my colleague Frederick Hoffman. It has been paramount in defining and encouraging research in this multi-disciplinary field. Several thousand researchers from across the globe have participated in these activities.

Finally, I would like to take this opportunity to thank my associate editors, guest editors, editorial board, referees and the Springer staff for their hard work on behalf of *AMAI*. It has been through their dedicated service that we have been able to provide the community with a journal realizing the dream of its founders.

1 About this issue

This issue of *AMAI* opens with the paper “Distributive mereotopology: Extended distributive contact lattices” by Tatyana Ivanova and Dimiter Vakarelov who generalize the notion of contact algebra, one of the main tools in formal representations of spatial regions and

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relations between regions, extending the language of distributive contact lattices initially studied in by Düntsch and coauthors.

The second paper, “On the performance of MaxSAT and MinSAT solvers on 2SAT-MaxOnes” by Josep Argelich, Ramón Béjar, Cèsar Fernández, Carles Mateu and Jordi Planes, analyzes and compares two solvers for Boolean optimization problems: WMaxSatz, a solver for Partial MaxSAT, and MinSatz, a solver for Partial MinSAT. They find that the fraction of positive literals in the clauses is an important factor regarding the quality of the bounds computed by the algorithms. They also study the importance of this factor on the typical case complexity of Random- p 2SAT-MaxOnes.

The third paper, “Alternating-offers bargaining in one-to-many and many-to-many settings” by Bo An, Nicola Gatti and Victor Lesser, deals with automating negotiations in markets with multiple buyers and sellers. One-to-one negotiations are classically studied as bilateral bargaining problems, while one-to-many and many-to-many negotiations are studied as auctioning problems. This paper proposes combining these two approaches when agents follow an extension of the alternating-offers bargaining protocol of Rubinstein, proposing a novel mechanism that captures the peculiarities of these settings. They also analyze agents equilibrium strategies in complete information bargaining and study incomplete information bargaining with one-sided uncertainty regarding agents reserve prices, providing an algorithm based on the combination of game theoretic analysis and search techniques.

The fourth paper, “Notes on the existence of a solution in the pairwise comparisons method using the heuristic rating estimation approach” by Konrad Kulakowski, treats modeling the subjective preferences of a decision maker, for example in voting systems and social choice theory. The new approach discussed in this article takes advantage of the weights of some alternatives that can also be a priori known.

The fifth paper, “Latent binary MRF for online reconstruction of large scale systems” by Victorin Martin, Jean-Marc Lasgouttes and Cyril Furtlehner, presents a novel method for online inference of real-valued quantities on a large network from very sparse measurements. Target applications include large scale systems such as traffic networks. Their method makes no assumptions about the joint and marginal distributions of the variables but is primarily designed with multimodal joint distributions in mind.

The issue concludes with the belated appearance of the Preface for our special issue on “*Geometric Reasoning*” edited by Jacques Fleuriot and Tetsuo Ida, *Annals of Mathematics and Artificial Intelligence* vol. 74 no. 3-4 (2015) which inadvertently was not published together with the papers of the special issue itself. We apologize to the editors, authors and readers for this error, but are glad to provide it here.

Martin Charles Golumbic, Editor-in-Chief (Haifa, 2016)