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Preface

This is the proceedings of the 11th edition of the Algebraic Methodology and Software Technology (AMAST) conference series. The first conference was held in the USA in 1989, and since then AMAST conferences have been held on (or near) five different continents and have been hosted by many of the most prominent people and organizations in the field.

The AMAST initiative has always sought to have practical effects by developing the science of software and basing it on a firm mathematical foundation. AMAST has interpreted software technology broadly, and has, for example, held AMAST workshops in areas as diverse as real-time systems and (natural) language processing. Similarly, algebraic methodology is interpreted broadly and includes abstract algebra, category theory, logic, and a range of other mathematical subdisciplines. The truly distinguishing feature of AMAST is that it seeks rigorous mathematical developments, but always strives to link them to real technological applications. Our meetings frequently include industry-based participants and are a rare opportunity for mathematicians and mathematically minded academics to interact technically with industry-based technologists. Over the years AMAST has included industrial participants from organizations specializing in safety-critical (including medical) systems, transport (including aerospace), and security-critical systems, amongst others.

AMAST has continued to grow and change. Much of the work that was the subject of early meetings is now established and used. A good deal of it has been presented in the eight monographs that have so far appeared as part of Springer's LNCS series. Many of the issues that the AMAST community was concerned with academically have now become part of major industrial organizations' research and development as security, correctness, and safety-critical performance become more and more important in the systems we use daily. Other issues remain unresolved, and new questions continually arise. What is certain is that in the future the fundamental character of AMAST—serious mathematics developed for real technology—will remain important.

The 11th edition of the conference was held in Kuressaare in Estonia, hosted by the Institute of Cybernetics at Tallinn University of Technology. Among the 55 full submissions, the Programme Committee selected 24 regular papers and 3 system demonstrations. All submissions were reviewed by three PC members with the help of external reviewers. In addition to the accepted papers, the conference also featured invited talks by three distinguished speakers: Ralph Back (Åbo Akademi University, Finland), Larry Moss (Indiana University, USA) and Till Mossakowski (Universität Bremen, Germany).

After the successful dual meeting in Stirling in 2004, the conference was co-located with Mathematics of Program Construction (MPC) for the second time. We thank the MPC organizers for suggesting this co-location. It is also worth

noting that AMAST enjoys the cooperation and overlapping organizational participation with other like-minded conferences including CALCO, CMCS and WADT.

AMAST 2006 was the result of a considerable effort by a number of people. It is our pleasure to express our gratitude to the AMAST Programme Committee and additional referees for their expertise and diligence in reviewing the submitted papers, and to the AMAST Steering Committee for its general guidance. Our special thanks go to Tarmo Uustalu and his colleagues from the Institute of Cybernetics for taking care of practical matters in the local organization. We are also grateful to Andrei Voronkov for providing the EasyChair system, which was used to manage the electronic submissions, the review process, the electronic PC meeting, and to assemble the proceedings. Finally, we would like to express our thanks to Springer for its continued support in the publication of the proceedings in the *Lecture Notes in Computer Science* series.

April 2006

Michael Johnson
Varmo Vene

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