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# Algebraic Methodology and Software Technology

11th International Conference, AMAST 2006  
Kuressaare, Estonia, July 5-8, 2006  
Proceedings

## Volume Editors

Michael Johnson  
Macquarie University  
Information and Communication Sciences  
2109, Australia  
E-mail: mike@ics.mq.edu.au

Varmo Vene  
University of Tartu  
Liivi 2, EE-50409, Estonia  
E-mail: varmo@cs.ut.ee

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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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# Table of Contents

## Invited Talks

Incremental Software Construction with Refinement Diagrams <i>Ralph-Johan Back</i> .....	1
Recursive Program Schemes: Past, Present, and Future <i>Lawrence S. Moss</i> .....	2
Monad-Based Logics for Computational Effects <i>Till Mossakowski</i> .....	3

## Contributed Papers

State Space Representation for Verification of Open Systems <i>Irem Aktug, Dilian Gurov</i> .....	5
Data Movement Optimisation in Point-Free Form <i>Brad Alexander, Andrew Wendelborn</i> .....	21
Measuring the Speed of Information Leakage in Mobile Processes <i>Benjamin Aziz</i> .....	36
Formal Islands <i>Emilie Balland, Claude Kirchner, Pierre-Etienne Moreau</i> .....	51
Some Programming Languages for LOGSPACE and PTIME <i>Guillaume Bonfante</i> .....	66
Opaque Predicates Detection by Abstract Interpretation <i>Mila Dalla Preda, Matias Madou, Koen De Bosschere, Roberto Giacobazzi</i> .....	81
DO-Casl: An Observer-Based Casl Extension for Dynamic Specifications <i>Matteo Dell'Amico, Maura Cerioli</i> .....	96
Model Transformations Incorporating Multiple Views <i>John Derrick, Heike Wehrheim</i> .....	111
Hyperfinite Approximations to Labeled Markov Transition Systems <i>Ernst-Erich Doberkat</i> .....	127



State Space Reduction of Rewrite Theories Using Invisible Transitions <i>Azadeh Farzan, José Meseguer</i> .....	142
The Essence of Multitasking <i>William L. Harrison</i> .....	158
The Substitution Vanishes <i>Armin Kühnemann, Andreas Maletti</i> .....	173
Decomposing Interactions <i>Juliana Küster Filipe Bowles</i> .....	189
Verification of Communication Protocols Using Abstract Interpretation of FIFO Queues <i>Tristan Le Gall, Bertrand Jeannet, Thierry Jéron</i> .....	204
Assessing the Expressivity of Formal Specification Languages <i>Natalia López, Manuel Núñez, Ismael Rodríguez</i> .....	220
Fork Algebras as a Sufficiently Rich Universal Institution <i>Carlos Gustavo Lopez Pombo, Marcelo Fabián Frias</i> .....	235
Realizability Criteria for Compositional MSC <i>Arjan Mooij, Judi Romijn, Wieger Wesselink</i> .....	248
Quantaes and Temporal Logics <i>Bernhard Möller, Peter Höfner, Georg Struth</i> .....	263
Fractional Semantics <i>Härmel Nestra</i> .....	278
Reasoning About Data-Parallel Pointer Programs in a Modal Extension of Separation Logic <i>Susumu Nishimura</i> .....	293
Testing Semantics: Connecting Processes and Process Logics <i>Dusko Pavlovic, Michael Mislove, James B. Worrell</i> .....	308
Tableaux for Lattices <i>Georg Struth</i> .....	323
Accelerated Modal Abstractions of Labelled Transition Systems <i>Miguel Valero Espada, Jaco van de Pol</i> .....	338
A Compositional Semantics of Plan Revision in Intelligent Agents <i>M. Birna van Riemsdijk, John-Jules Ch. Meyer</i> .....	353

## System Descriptions

ITP/OCL: A Rewriting-Based Validation Tool for UML+OCL Static Class Diagrams <i>Manuel Clavel, Marina Egea</i> .....	368
A Computational Group Theoretic Symmetry Reduction Package for the SPIN Model Checker <i>Alastair F. Donaldson, Alice Miller</i> .....	374
Using Category Theory as a Basis for a Heterogeneous Data Source Search Meta-engine: The Prométhée Framework <i>Paul-Christophe Varoutas, Philippe Rizand, Alain Livartowski</i> .....	381
<b>Author Index</b> .....	389