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Theory Is Forever

Essays Dedicated to Arto Salomaa
on the Occasion of His 70th Birthday

Springer

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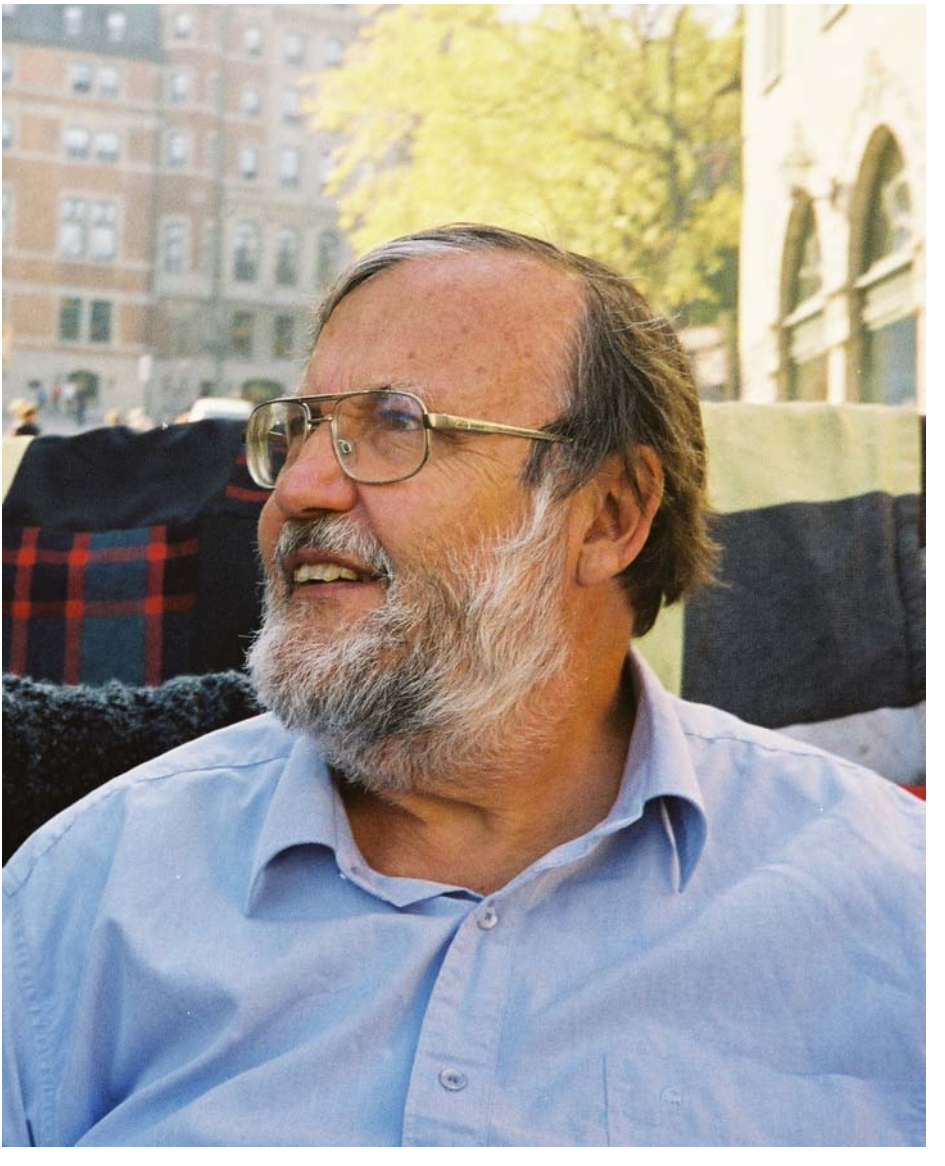

Arto Salomaa

Preface

This Festschrift celebrates the 70th birthday of Arto Kustaa Salomaa (born in Turku, Finland on June 6, 1934), one of the most influential researchers in theoretical computer science.

Most of his research concerns theory – he is one of the founding fathers of formal language and automata theory, but he has also made important contributions to cryptography and natural computing. His approach to research in theoretical computer science is exemplary and inspirational for his students, collaborators, and the readers of his papers and books. For him, the role of theory (in computer science) is to discover general rules of information processing that hold within computer science and in the world around us. One should not waste time on research concerning passing artifacts (or fashionable topics of the moment) in computer science – theory should be permanently predictive, insightful, and inspiring. That's why we chose the title "Theory is Forever".

The main source of his influence on theoretical computer science is his publications. Arto is a born writer – his papers and books are always most elegant. He has a unique gift for identifying the real essence of a research problem, and then presenting it in an incisive and eloquent way. He can write about a very involved formal topic and yet avoid a (much too common) overformalization. Many of his writings are genuine jewels and belong to the classics of theoretical computer science. They have inspired generations of students and researchers. Indeed, even computers as well as computer science have learned a lot from Arto's publications – this is nicely illustrated by DADARA on the cover of this volume. His writing talent extends beyond science – he writes beautiful and engaging stories, and his close friends very much enjoy receiving his long, entertaining and informative letters.

There is much other information that could be cited in this preface, such as the fact that he is one of the most celebrated computer scientists (e.g., he holds eight honorary degrees), or that he has been very instrumental in providing the organizational infrastructure for theoretical computer science in Europe (e.g., he is the past President of the European Association for Theoretical Computer Science), or that he is an absolute authority on the Finnish sauna (including both theory and practice). However, all of these accomplishments have been documented already in many places (e.g., in the companion book "Jewels are Forever"[1] published on the occasion of Arto's 65th birthday). Thus we have restricted ourselves to reflections on his research and writings.

We are indebted to all the contributors for their tribute to Arto through this book. We ourselves have benefited enormously through many years of collabo-

[1] J. Karhumäki, H. Maurer, G. Păun, G. Rozenberg, Jewels are Forever, Contributions on Theoretical Computer Science in Honor of Arto Salomaa, Springer-Verlag, 1999.

ration with Arto from his guidance and friendship – editing this volume is just a token of our gratitude. We are also indebted to Mrs. Ingeborg Mayer from Springer-Verlag for the pleasant and efficient collaboration in producing this volume. As a matter of fact this collaboration is quite symbolic, as Arto has worked very closely with Springer-Verlag, especially with Mrs. Ingeborg Mayer and Dr. Hans Wössner, on many projects over many years. Finally, our special thanks go to T. Harju, M. Hirvensalo, A. Lepistö, and Kalle Saari for their work on this book.

April 2004

Juhani Karhumäki
Hermann Maurer
Gheorghe Păun
Grzegorz Rozenberg

Table of Contents

Duality for Three: Ternary Symmetry in Process Spaces 1
Janusz Brzozowski, Radu Negulescu

Mathematical Proofs at a Crossroad? 15
Cristian S. Calude, Solomon Marcus

Rational Relations as Rational Series 29
Christian Choffrut

Networks of Standard Watson-Crick *D0L* Systems with Incomplete Information Communication 35
Erzsébet Csuhaj-Varjú

On the Size of Components of Probabilistic Cooperating Distributed Grammar Systems 49
Erzsébet Csuhaj-Varjú, Jürgen Dassow

Remarks on Sublanguages Consisting of Primitive Words of Slender Regular and Context-Free Languages 60
Pál Dömösi, Carlos Martín-Vide, Victor Mitrana

A Semiring-Semimodule Generalization of ω-Context-Free Languages 68
Zoltán Ésik, Werner Kuich

Integer Weighted Finite Automata, Matrices, and Formal Power Series over Laurent Polynomials 81
Vesa Halava

Two Models for Gene Assembly in Ciliates 89
Tero Harju, Ion Petre, Grzegorz Rozenberg

On Self-Dual Bases of the Extensions of the Binary Field 102
Mika Hirvensalo, Jyrki Lahtonen

On NFA Reductions 112
Lucian Ilie, Gonzalo Navarro, Sheng Yu

Some Results on Directable Automata 125
Masami Ito, Kayoko Shikishima-Tsuji

Rectangles and Squares Recognized by Two-Dimensional Automata 134
Jarkko Kari, Cristopher Moore

Substitution on Trajectories 145
Lila Kari, Stavros Konstantinidis, Petr Sosík

Recombination Systems 159
Mikko Koivisto, Pasi Rastas, Esko Ukkonen

Algebraic Aspects of Parikh Matrices 170
Alexandru Mateescu

On Distributed Computing on Elliptic Curves 181
Tommi Meskanen, Ari Renvall, Paula Steinby

On the Formal Modelling of Trust in Reputation-Based Systems 192
Mogens Nielsen, Karl Krukow

Issues with Applying Cryptography in Wireless Systems 205
Valtteri Niemi

On a Tomographic Equivalence Between (0,1)-Matrices 216
Maurice Nivat

P Systems with Tables of Rules 235
Gheorghe Păun, Mario J. Pérez-Jiménez, Agustín Riscos-Núñez

Some Properties of Multistage Interconnection Networks 250
Azaria Paz

Structural Equivalence of Regularly Extended E0L Grammars:
An Automata Theoretic Proof 259
Kai Salomaa, Derick Wood

Complexity of Evolving Interactive Systems 268
Peter Verbaan, Jan van Leeuwen, Jiří Wiedermann

Author Index 283