

## EDITORIAL

Descriptional complexity is one of the traditional fields of computer science. Nowadays, classical results such as the asymptotic size of circuits describing Boolean functions (by SHANNON), the minimization of finite automata or the concept of Kolmogorov complexity have become part of courses in theoretical computer science. On the other hand, there still are many challenging and interesting problems so that descriptional complexity is a field of active research.

As a consequence, in July 1999 the first *Workshop on Descriptive Complexity of Automata, Grammars and Related Structures* was organized by the Working Group 1.2 Descriptive Complexity of the International Federation of Information Processing and by the Faculty of Computer Science of the Otto von Guericke University in Magdeburg. The scientific program consisted of eight invited lectures and thirteen submissions. The topics ranged from the number of states of finite automata to the composition of finite functions, to the length of words in systems modelling evolutionary processes and to the description of real numbers. 39 scientists from 14 countries (and all continents) participated in the workshop. At the business meeting of the Working Group 1.2 it was decided to hold additional workshops in the future, and thus in July 2000 the second *Workshop on Descriptive Complexity of Automata, Grammars and Related Structures* will take place in London (Ontario, Canada).

This volume contains papers based on the invited lectures by E. CSUHAJ-VARJÚ, J. GRUSKA, K. HASHIGUCHI, H. LEUNG, H. PETERSEN and J. SHALLIT and eight submissions. All selected papers have passed the customary refereeing procedure of the international program committee and the journal.

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J. Dassow  
D. Wotschke

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Magdeburg  
Frankfurt