

Selected Papers Dedicated to

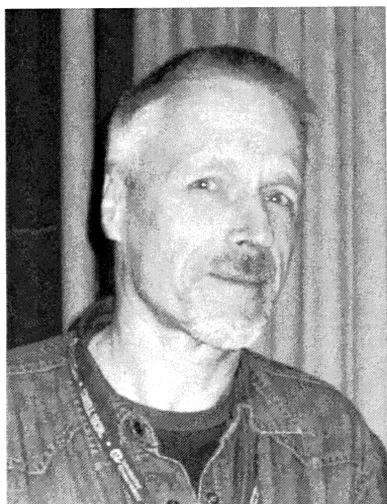
FRIEDRICH OTTO

on the Occasion of his 60th Birthday

Edited by Henning Bordihn, Jürgen Dassow, Martin Kutrib, and Bianca Truthe

EDITORIAL

This special issue of the *Journal of Automata, Languages, and Combinatorics* contains articles on recent research in the theory of automata, formal languages, rewriting systems, and related topics. It is dedicated to Prof. Dr. Friedrich Otto on the occasion of his 60th birthday on February, 21, 2012.



Friedrich Otto studied mathematics and computer science at the University of Kaiserslautern. In 1978, he obtained his diploma in mathematics with the diploma thesis *Charakterisierung subrekursiver Teilklassen von Wortfunktionen über abzählbar unendlichen Alphabeten*.

Between 1978 and 1986, Friedrich Otto was a research associate in Kaiserslautern. In the years 1982/83, he visited the University of California at Santa Barbara sponsored by the German Research Foundation (DFG). From 1986 until 1988, he worked as Associate Professor at the Department of Computer Science of the State University of New York at Albany. In 1989, Friedrich Otto was appointed professor in Theoretical Computer Science at the University of Kassel, where he is also nowadays

with the Department of Electrotechnics and Computer Science.

Friedrich Otto obtained the doctoral degree with the dissertation *Untersuchungen zur Komplexität algorithmischer Probleme in abzählbar erzeugten Gruppen* in 1980 and the habilitation with the thesis *Decision Problems and their Complexity for Monadic Church-Rosser Thue Systems* in 1985, both from the University of Kaiserslautern. These two topics, algorithmic questions on groups and rewriting systems, have been studied by him during the last 20 years; his last publications on these fields are from the recent three years. His contributions concern decidability and complexity of classical problems for string rewriting systems as well as homological finiteness, confluence and combinatorial problems of such systems. The monograph *String Rewriting Systems* by Ron Book and Friedrich Otto, which appeared in 1993, belongs to the standard literature.

Since 2003, Friedrich Otto has been investigating restarting automata and their associated languages, which are motivated by the analysis of natural languages. One can say that his group in Kassel is one of the centres of research on restarting automata; most of the important results in the field were obtained in cooperation with scientists from Kassel, especially with Friedrich Otto, and most of the active researchers in this topic stayed for some time at the University of Kassel. The results by Friedrich Otto concern the hierarchies of restarting automata as well as their descriptonal complexity. Moreover, he belongs to the inventors of very interesting concepts related to restarting automata and their combination with well-known existing ideas.

Friedrich Otto published approximately 200 scientific papers and supervised six doctoral dissertations.

Furthermore, Friedrich Otto renders outstanding organizing services within the German community. Since 1994, he belongs to the Steering Committee of the special interest group on *Automata and Formal Languages* of the German *Gesellschaft für Informatik*. From 2003 to 2009, he served as the chairman of this group and represents it very successfully within the community working in Theoretical Computer Science. The *Theorietag 'Automaten und Formale Sprachen'*, the annual meeting of the special interest group, was organized by Friedrich Otto in 1999 and 2010. In 2009, he and other members of the Steering Committee of the special interest group started a new series of workshops on *Non-Classical Models of Automata and Applications*, which took place in Wrocław (Poland), Jena (Germany), and Milan (Italy) and is now well established. Furthermore, in 2004 and 2012, he organized/will organize the workshop *FORMAT* where young computer scientists from some German universities exchange intensively their ideas and results.

Dear Professor Otto, dear Fred, we wish you a Happy Birthday and further healthy and successful years to come.

Henning Bordihn (Potsdam)
Jürgen Dassow (Magdeburg)
Martin Kutrib (Giessen)
Bianca Truthe (Magdeburg)

February 2012