

Preface

This special issue of *INTEGERS, Electronic Journal of Combinatorial Number Theory* summarizes proceedings of a workshop on *Number Theoretic Algorithms and Related Topics* which took place in Strobl, Austria, in 2004 from September 27 to October 1.

The workshop would not have been possible in this form without the financial support by the Austrian Science Foundation FWF. This concerns the workshop itself but, even more important, the support of the joint research programme *Number Theoretic Algorithms and their Applications*, a national research network which, for the duration of about six years, coordinates several research projects on related topics.

In 2004 research projects on the following topics were part of this research programme: Statistical properties of number systems, Analysis of digital point sets, Algorithmic diophantine problems, Quasi-Monte Carlo methods in finance and insurance, Combinatorial tools for the analysis of number theoretic algorithms, Quasi-Random points: theory and software development, Topological methods in algorithmic number theory and diophantine analysis, and Number-theoretic methods in cryptography and pseudorandom number generation. In each of these projects young researchers could be engaged and so the research programme was a very valuable instrument for promoting the scientific development of the young generation in Austria.

Thus one of the main goals of the workshop was to bring together students and young scientists with international top researchers. All together there were more than 70 participants. Main speakers were Vityaly Bergelson, Valérie Berthé, Harald Niederreiter, Attila Pethő, Gerald Tenenbaum and Robert Tijdeman. (More details about the workshop can be found under [http://www.geometrie.tuwien.ac.at/NumbThAlgo2004/.](http://www.geometrie.tuwien.ac.at/NumbThAlgo2004/))

Accordingly, this volume contains papers of researchers at the beginning of their career as well as articles of renowned scientists. The main editorial work for this volume was done by Reinhard Winkler. All other editors are indebted to him and thank him for hundreds of hours he used for preparing this volume.

Finally, the organizers of the workshop and the guest editors are very grateful to the Editors-in-chief of *INTEGERS*, in particular to Prof. Pomerance, for making possible this special issue.

The Guest Editors:

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