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Stochastic Algorithms: Foundations and Applications

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Preface

The second Symposium on Stochastic Algorithms, Foundations and Applications (SAGA 2003), took place on September 22–23, 2003, in Hatfield, England. The present volume comprises 12 contributed papers and 3 invited talks.

The contributed papers included in the proceedings present results in the following areas: ant colony optimization; randomized algorithms for the intersection problem; local search for constraint satisfaction problems; randomized local search methods for combinatorial optimization, in particular, simulated annealing techniques; probabilistic global search algorithms; network communication complexity; open shop scheduling; aircraft routing; traffic control; randomized straight-line programs; and stochastic automata and probabilistic transformations.

The invited talk by Roland Kirschner provides a brief introduction to quantum informatics. The requirements and the prospects of the physical implementation of a quantum computer are addressed.

Lucila Ohno-Machado and Winston P. Kuo describe the factors that make the analysis of high-throughput gene expression data especially challenging, and indicate why properly evaluated stochastic algorithms can play a particularly important role in this process.

John Vaccaro et al. review a fundamental element of quantum information theory, source coding, which entails the compression of quantum data. A recent experiment that demonstrates this fundamental principle is presented and discussed.

Our special thanks go to all who supported SAGA 2003, to all authors who submitted papers, to the members of the program committee, to the invited speakers, and to the members of the organizing committee.

Andreas Albrecht
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Organization

SAGA 2003 was organized by the University of Hertfordshire, Department of Computer Science, Hatfield, Hertfordshire AL10 9AB, United Kingdom.

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