



Special Issue on Analysis of Algorithms

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This special issue of *Algorithmica* is dedicated to a select group of six papers from the 29th International Conference on Probabilistic, Combinatorial and Asymptotic Methods for the Analysis of Algorithms (AofA 2018), held in Uppsala, Sweden, June 25–29, 2018.

Extended abstracts of these papers were first published in volume 110 of the *Leibniz International Proceedings in Informatics* (LIPIcs).

In the present volume of *Algorithmica*, the authors of these six papers give expanded treatments of their research. The topics of these papers are drawn from many areas of the analysis of algorithms, including asymptotic behavior of certain q -regular sequences, a central limit theorem for certain additive functionals of conditioned Galton–Watson trees, permutations arising in random node labelings of trees, random permutations avoiding sets of multiple patterns, theoretical and empirical analysis of QuickXsort, and a vector kernel method for systematically analyzing words generated by automata.

Analysis of algorithms is a scientific basis for computation, providing a link between abstract algorithms and the performance characteristics of their implementations in the real world. The general effort to precisely predict the performance of algorithms has come to involve research in analytic combinatorics, the analysis of random discrete structures, asymptotic analysis, exact and limiting distributions, and other fields of inquiry in computer science, probability theory, and enumerative combinatorics. For an overview of this area, see <http://aofa.cs.purdue.edu/>.

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—James Allen (“Jim”) Fill and Mark Daniel Ward (Guest Editors)

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