

The aim of ANALCO is to provide a forum for original research in the analysis of algorithms and associated combinatorial structures. The papers study the properties of fundamental combinatorial structures that arise in practical computational applications (such as trees, permutations, strings, tries and graphs) and address the precise analysis of algorithms for processing such structures, including average-case analysis; analysis of moments, extrema, and distributions; and probabilistic analysis of randomized algorithms.

The papers in these proceedings were presented in New York on January 3, 2009, at the Sixth Workshop on Analytic Algorithmics and Combinatorics (ANALCO'09). We selected 11 papers out of a total of 22 submissions. An invited lecture by Gaston Gonnet “Mathematics and Computer Science serving/impacting Bioinformatics” was also presented at the workshop.

The workshop took place on the same day as the Eleventh Workshop on Algorithm Engineering and Experiments (ALENEX'09). Since researchers in both fields are approaching the problem of learning detailed information about the performance of particular algorithms, we expect that interesting synergies will develop. People in the ANALCO community are encouraged to look over the ALENEX papers for problems where the analysis of algorithms might play a role; people in the ALENEX community are encouraged to look over these ANALCO papers for problems where experimentation might play a role.

With this sixth edition, ANALCO has matured into a successful event, with ample recognition in the scientific community working in the analysis of algorithms and associated combinatorial structures, and other related areas of mathematics and computer science as well. We are confident that ANALCO will continue serving well the research community in the years to come.

We would like to express our gratitude to all the people contributing to the success of the workshop: the authors who submitted papers, the ANALCO Program Committee members, the external reviewers, and the helpful SIAM staff, in particular, Joyce Bagley, Nancy Griscom and Kirsten Wilden.

Conrado Martínez and Robert Sedgewick

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