

Preface

This volume contains papers presented at DNA 23: The 23rd International Conference on DNA Computing and Molecular Programming. The conference was held at The University of Texas at Austin during September 24–28, 2017, and organized under the auspices of the International Society for Nanoscale Science, Computation and Engineering (ISNSCE). A workshop day, consisting of the Education Workshop and the Synthetic Biology Workshop, was held on September 24, 2017. The DNA conference series aims to draw together mathematics, computer science, physics, chemistry, biology, and nanotechnology to address the analysis, design, and synthesis of information-based molecular systems.

Papers and presentations were sought in all areas that relate to biomolecular computing, including, but not restricted to: algorithms and models for computation with biomolecular systems; computational processes *in vitro* and *in vivo*; molecular switches, gates, devices, and circuits; molecular folding and self-assembly of nanostructures; analysis and theoretical models of laboratory techniques; molecular motors and molecular robotics; studies of fault-tolerance and error correction; software tools for analysis, simulation, and design; synthetic biology and *in vitro* evolution; applications in engineering, physics, chemistry, biology, and medicine.

For DNA 23 we received 109 submissions: 23 Track A submissions, 10 Track B submissions, and 76 Track C submissions. Each Track A and B submission was reviewed by at least three reviewers, with an average of more than four reviews per submission. The Program Committee accepted 16 submissions in Track A and 8 submissions in Track B. Also, 8 submissions in Track C were selected for both poster and breaking-news short oral presentations. The papers accepted for Track A are published in these conference proceedings.

In addition to the accepted submissions, the scientific program included invited talks from David Doty, Eric Klavins, Cristopher Moore, Vincent Noireaux, Yannick Rondelez, and Karin Strauss. The Education Workshop included talks from Eric Klavins, Carlos Castro, and Brian Korgel, and The Synthetic Biology Workshop included talks from Reinhard Heckel, Sri Kosuri, and James Diggans.

We thank all invited speakers and all authors who submitted their work to this conference. Finally, we thank the members of the Program Committee and the additional reviewers for their hard work in reviewing the submissions and taking part in post-review discussions.

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