

Preface

This volume contains the papers presented at DNA 21: the 21st International Conference on DNA Computing and Molecular Programming. The conference was held at the Wyss Institute for Biologically Inspired Engineering, Harvard University, Massachusetts, USA, during August 17–21, 2015, and organized under the auspices of the International Society for Nanoscale Science, Computation and Engineering (ISNSCE). 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.

Presentations were sought in all areas that relate to biomolecular computing, including, but not restricted to: algorithms and models for computation on 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.

Authors who wished to present their work were asked to select one of two submission tracks: Track A (full paper) or Track B (one-page abstract with supplementary document). Track B is primarily for authors submitting experimental results who plan to submit to a journal rather than publish in the conference proceedings. We received 63 submissions for oral presentations: 26 submissions in Track A and 37 submissions in Track B. Each submission was reviewed by at least three reviewers, with an average of four reviewers per paper. The Program Committee accepted 13 papers in Track A and 15 papers in Track B. This volume contains the papers accepted for Track A.

We express our sincere appreciation to our invited speakers: George Church, Sharon Glotzer, Lila Kari, Paul Rothmund, Leslie Valiant, and Chris Voigt. We would also like to thank all of the authors who contributed papers to these proceedings, and who presented papers and posters during the conference. Last but not least, the editors would like to thank the members of the Program Committee and the additional invited reviewers for their hard work in reviewing the papers and providing constructive comments to authors.

August 2015

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DNA Computing and Molecular Programming
21st International Conference, DNA 21, Boston and
Cambridge, MA, USA, August 17-21, 2015. Proceedings
Phillips, A.; Yin, P. (Eds.)
2015, XII, 213 p. 92 illus., Softcover
ISBN: 978-3-319-21998-1