

Preface

This volume contains the papers presented at DNA 22: The 22nd International Conference on DNA Computing and Molecular Programming. The conference was held at Ludwig-Maximilians-Universität (LMU) in Munich, Germany, during September 4–8, 2016, and organized under the auspices of the International Society for Nanoscale Science, Computation and Engineering (ISNSCE). A one-day Symposium on RNA-Based Information Processing was held after the main conference on September 9, 2016. 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.

Authors who wished to orally 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 55 submissions for oral presentations: 16 submissions in Track A and 39 submissions in Track B. Each submission was reviewed by at least four reviewers. The Program Committee accepted 11 papers in Track A and 18 papers in Track B. This volume contains the papers accepted for Track A. In addition, we received 95 poster submissions for Track C.

We express our sincere appreciation to our invited speakers: Matthew Cook, Monika Heiner, Yan Liu, Pekka Orponen, Rebecca Schulman, and Bernard Yurke and invited tutorial speakers Thomas Ouldridge, Paul W.K. Rothmund, and Nadrian C. Seeman. We especially thank all of the authors who contributed papers to these proceedings, and who presented papers and posters during the conference. Finally, the editors thank the members of the Program Committee and the additional reviewers for their hard work in reviewing the papers and providing constructive comments to the authors, as well as for taking part in enthusiastic post-review discussions.

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