

Contents

Dominance and T-Invariants for Petri Nets and Chemical Reaction Networks	1
<i>Robert Brijder</i>	
Synthesizing and Tuning Chemical Reaction Networks with Specified Behaviours	16
<i>Neil Dalchau, Niall Murphy, Rasmus Petersen, and Boyan Yordanov</i>	
Universal Computation and Optimal Construction in the Chemical Reaction Network-Controlled Tile Assembly Model	34
<i>Nicholas Schiefer and Erik Winfree</i>	
Reflections on Tiles (in Self-Assembly)	55
<i>Jacob Hendricks, Matthew J. Patitz, and Trent A. Rogers</i>	
Optimal Program-Size Complexity for Self-Assembly at Temperature 1 in 3D.	71
<i>David Furcy, Samuel Micka, and Scott M. Summers</i>	
Flipping Tiles: Concentration Independent Coin Flips in Tile Self-Assembly	87
<i>Cameron T. Chalk, Bin Fu, Alejandro Huerta, Mario A. Maldonado, Eric Martinez, Robert T. Schweller, and Tim Wylie</i>	
New Geometric Algorithms for Fully Connected Staged Self-Assembly	104
<i>Erik D. Demaine, Sándor P. Fekete, Christian Scheffer, and Arne Schmidt</i>	
Leader Election and Shape Formation with Self-organizing Programmable Matter	117
<i>Zahra Derakhshandeh, Robert Gmyr, Thim Strothmann, Rida Bazzi, Andréa W. Richa, and Christian Scheideler</i>	
Leakless DNA Strand Displacement Systems	133
<i>Chris Thachuk, Erik Winfree, and David Soloveichik</i>	
Supervised Learning in an Adaptive DNA Strand Displacement Circuit	154
<i>Matthew R. Lakin and Darko Stefanovic</i>	
Automated Design and Verification of Localized DNA Computation Circuits.	168
<i>Michael A. Boemo, Andrew J. Turberfield, and Luca Cardelli</i>	

On Low Energy Barrier Folding Pathways for Nucleic Acid Sequences	181
<i>Leigh-Anne Mathieson and Anne Condon</i>	
Stochastic Simulation of the Kinetics of Multiple Interacting Nucleic Acid Strands.	194
<i>Joseph Malcolm Schaeffer, Chris Thachuk, and Erik Winfree</i>	
Author Index	213

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