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Altri autori (Persone)	GoelAshish SimmelFriedrich C SosikPetr <1967->
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Nota di contenuto	Experimental Validation of Signal Dependent Operation in Whiplash PCR -- Towards DNA Comparator: The Machine That Compares DNA Concentrations -- Construction of Photon-Fueled DNA Nanomachines by Tethering Azobenzenes as Engines -- Operon Structure Optimization by Random Self-assembly -- Isothermal Reactivating Whiplash PCR for Locally Programmable Molecular Computation -- DNA as a Universal Substrate for Chemical Kinetics -- A Simple DNA Gate Motif for Synthesizing Large-Scale Circuits -- Tiamat: A Three-Dimensional Editing Tool for Complex DNA Structures -- Connecting the Dots: Molecular Machinery for Distributed Robotics -- Polyomino-Safe DNA Self-assembly via Block Replacement -- Robust Self-

assembly of Graphs -- Time Optimal Self-assembly for 2D and 3D Shapes: The Case of Squares and Cubes -- Self-assembly of Discrete Self-similar Fractals -- Speeding Up Local-Search Type Algorithms for Designing DNA Sequences under Thermodynamical Constraints -- Sequentiality Induced by Spike Number in SNP Systems.

Sommario/riassunto

The 14th international meeting on DNA computation took place in the Czech Republic in Prague, June 2-9, 2008. During the last 14 years the DNA Computing meetings have been the key forum at the boundary between computer science, biochemistry and nanotechnology where the most recent results have been presented and their authors have met. Their scientific program includes mathematical foundations and theoretical study of DNA computing - or bio-computing in general - and recent experimental results in DNA nanotechnology, nanoscience and nanocomputing. It continues to be one of the most exciting interdisciplinary meetings, as exemplified by the diverse nature of contributions in this volume. The meeting began with tutorial talks by Friedrich Simmel ("Molecular Biology for Computer Scientists"), Nadrian Seeman ("Structural DNA Nanotechnology"), and Yasubumi Sakakibara ("Formal Grammars for DNA Computation and Bioinformatics"). During the meeting, a number of excellent keynote speakers gave an up-to-date overview of different aspects of DNA computing and biochemical information processing. Luca Cardelli talked about "Molecules as Automata," while Niles Pierce gave an exciting talk entitled "Molecular Choreography--Programming Nucleic Acid Self-Assembly and Disassembly Partways." In a more biological talk, Laura Landweber discussed "RNA-Guided, Engineered Genetic Programming and Reprogramming of Genomic Information in Ciliates," and Ming Li gave an overview of "Modern Homology Search." The meeting was concluded by a Nanoday with beautiful presentations by Christof Niemeyer, Kurt Gothelf, Andrew Ellington and David Pine.
