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	Nota di contenuto	Session 1. Invited Talks -- Fast Distributed Algorithms Via Primal-Dual (Extended Abstract) -- Time Optimal Gathering in Sensor Networks -- Treewidth: Structure and Algorithms -- Session 2. Autonomous Systems: Graph Exploration -- Fast Periodic Graph Exploration with Constant Memory -- Why Robots Need Maps -- Graph Searching with Advice -- Session 3. Distributed Algorithms: Fault Tolerance -- From Renaming to Set Agreement -- A Self-stabilizing Algorithm for the Median Problem in Partial Rectangular Grids and Their Relatives -- A New Self-stabilizing Maximal Matching Algorithm -- Session 4. Distributed Algorithms and Data Structures -- Labeling Schemes with Queries -- A Simple Optimistic Skiplist Algorithm -- Data Aggregation in Sensor Networks: Balancing Communication and Delay Costs -- Session 5. Autonomous Systems: Location Problems -- Optimal Moves for Gossiping Among Mobile Agents -- Swing Words to Make Circle

Formation Quiescent -- Distributed Algorithms for Partitioning a Swarm of Autonomous Mobile Robots -- Session 6. Wireless Networks -- Local Edge Colouring of Yao-Like Subgraphs of Unit Disk Graphs -- Proxy Assignments for Filling Gaps in Wireless Ad-Hoc Lattice Computers -- Location Oblivious Distributed Unit Disk Graph Coloring -- Session 7. Communication Networks: Fault Tolerance -- Edge Fault-Diameter of Cartesian Product of Graphs -- Rapid Almost-Complete Broadcasting in Faulty Networks -- Design of Minimal Fault Tolerant On-Board Networks: Practical Constructions -- Session 8. Autonomous Systems: Fault Tolerance -- Dynamic Compass Models and Gathering Algorithms for Autonomous Mobile Robots -- Fault-Tolerant Simulation of Message-Passing Algorithms by Mobile Agents -- Session 9. Communication Networks: Parallel Computing and Selfish Routing -- Optimal Conclusive Sets for Comparator Networks -- Selfish Routing with Oblivious Users -- Upper Bounds and Algorithms for Parallel Knock-Out Numbers.

Sommario/riassunto	This book constitutes the refereed proceedings of the 14th International Colloquium on Structural Information and Communication Complexity, SIROCCO 2007, held in Castiglioncello, Italy in June 2007. The 23 revised full papers presented together with 4 invited talks were carefully reviewed and selected from 66 submissions. The papers address issues such as distributed computing, high-speed networks, interconnection networks, mobile computing, optical computing, parallel computing, sensor networks, wireless networks, and autonomous robots. The papers are organized in topical sections on graph exploration, fault tolerance, distributed algorithms and data structures, location problems, wireless networks, fault tolerance, as well as parallel computing and selfish routing.