

1. Record Nr.	UNISA996198267803316
Titolo	Structural Information and Communication Complexity [[electronic resource] ] : 21st International Colloquium, SIROCCO 2014, Takayama, Japan, July 23-25, 2014, Proceedings // edited by Magnús M. Halldórsson
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-09620-6
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XX, 372 p. 59 illus.)
Collana	Theoretical Computer Science and General Issues, , 2512-2029 ; ; 8576
Disciplina	004.36
Soggetti	Algorithms Computer networks Computer science—Mathematics Discrete mathematics Artificial intelligence—Data processing Computer Communication Networks Discrete Mathematics in Computer Science Data Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Invited Presentations -- Algorithmic Aspects of Resource Management in the Cloud -- From Turing to the Clouds (On the Computability Power of Distributed Systems) -- Communication Complexity Lower Bounds in Distributed Message-Passing -- Biological Distributed Computing -- Distributed Algorithmic Foundations of Dynamic Networks -- Best Student Paper -- The Beachcombers' Problem: Walking and Searching with Mobile Robots -- Shared Memory and Multiparty Communication -- Reliable Shared Memory Abstractions on Top of Asynchronous t-Resilient Byzantine Message-passing Systems -- Distributed Transactional Contention Management as the Traveling Salesman Problem -- The complexity gap between consensus and safe-consensus (Extended Abstract) -- The simultaneous number-in-hand communication model for networks: private coins, public coins and

determinism -- Network Optimization -- Approximation of the Degree-Constrained Minimum Spanning Hierarchies -- Secluded Path via Shortest Path -- CONGEST Algorithms and Lower Bounds -- Distributed Approximation of Minimum Routing Cost Trees -- Randomized Lower Bound for Distributed Spanning-Tree Verification.- Lessons from the Congested Clique Applied to MapReduce -- Wireless networks -- Oblivious Rendezvous in Cognitive Radio Networks -- Local Broadcasting with Arbitrary Transmission Power in the SINR Model -- Aggregation and Creation Games in Networks -- Continuous Aggregation in Dynamic Ad-Hoc Networks -- Network Creation Games with Traceroute-Based Strategies -- Patrolling and Barrier Coverage.- Patrolling by Robots Equipped with Visibility -- Distributed Barrier Coverage with Relocatable Sensors -- Exploration -- Exploration of Constantly Connected Dynamic Graphs Based on Cactuses -- How Many Ants Does It Take To Find the Food? -- What Do We Need to Know to Elect in Networks with Unknown Participants? -- Rendezvous.- Rendezvous of Distance-aware Mobile Agents in Unknown Graphs -- Rendezvous of Heterogeneous Mobile Agents in Edge-weighted Networks -- Mobile Agents.-Move-optimal partial gathering of mobile agents in asynchronous trees -- A Recursive Approach to Multi-Robot Exploration of Trees.-Improved Periodic Data Retrieval in Asynchronous Rings with a Faulty Host.

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#### Sommario/riassunto

This book constitutes the refereed proceedings of the 21st International Colloquium on Structural Information and Communication Complexity, SIROCCO 2014, held in Takayama, Japan, in July 2014. The 24 full papers presented together with 5 invited talks were carefully reviewed and selected from 51 submissions. The focus of the colloquium is on following subjects Shared Memory, and Multiparty Communication, Network Optimization, CONGEST Algorithms and Lower Bounds, Wireless networks, Aggregation and Creation Games in Networks, Patrolling and Barrier Coverage, Exploration, Rendezvous, and Mobile Agents.

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