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Nota di contenuto	Exploring Gafni's Reduction Land: From ? k to Wait-Free Adaptive - Renaming Via k-Set Agreement -- Exploring Gafni's Reduction Land: From ? k to Wait-Free Adaptive -Renaming Via k-Set Agreement -- Renaming in Message Passing Systems with Byzantine Failures -- Built-In Coloring for Highly-Concurrent Doubly-Linked Lists -- Fault-Tolerant and Self-stabilizing Mobile Robots Gathering -- Fast Computation by Population Protocols with a Leader -- On Self-stabilizing Search Trees -- Efficient Dynamic Aggregation -- Groupings and Pairings in Anonymous Networks -- A New Proof of the GHS Minimum Spanning Tree Algorithm -- A Knowledge-Based Analysis of Global Function Computation -- Checking a Multithreaded Algorithm with ?+?CAL -- Capturing Register and Control Dependence in Memory Consistency Models with Applications to the Itanium Architecture -- Conflict Detection and Validation Strategies for Software Transactional Memory -- Transactional Locking II -- Less Is More: Consensus Gaps Between Restricted and Unrestricted Objects -- One-Step Consensus Solvability -- Time-Bounded Task-PIOAs: A Framework for Analyzing Security Protocols -- On Consistency of Encrypted Files -- Agreeing to Agree: Conflict Resolution for Optimistically Replicated Data -- A Lazy Snapshot Algorithm with Eager Validation -- Bounded Wait-Free f-Resilient Atomic Byzantine Data Storage Systems for an Unbounded Number of Clients -- Time and Communication Efficient Consensus for

Crash Failures -- Subconsensus Tasks: Renaming Is Weaker Than Set Agreement -- Exact Distance Labelings Yield Additive-Stretch Compact Routing Schemes -- A Fast Distributed Approximation Algorithm for Minimum Spanning Trees -- On Randomized Broadcasting in Power Law Networks -- Distributed Approximation Algorithms in Unit-Disk Graphs -- The Weakest Failure Detectors to Boost Obstruction-Freedom -- Fully-Adaptive Algorithms for Long-Lived Renaming -- Constructing Shared Objects That Are Both Robust and High-Throughput -- Byzantine and Multi-writer K-Quorums -- On Minimizing the Number of ADMs in a General Topology Optical Network -- Robust Network Supercomputing with Malicious Processes -- Distributed Resource Allocation in Stream Processing Systems -- Low-latency Atomic Broadcast in the presence of contention -- Oblivious Gradient Clock Synchronization -- Brief Announcement: Abortable and Query-Abortable Objects -- Brief Announcement: Fault-Tolerant SemiFast Implementations of Atomic Read/Write Registers -- Brief Announcement: Convergence Analysis of Scalable Gossip Protocols -- Brief Announcement: Computing Automatically the Stabilization Time Against the Worst and the Best Schedules -- Brief Announcement: Many Slices Are Better Than One -- Brief Announcement: On Augmented Graph Navigability -- Brief Announcement: Decoupled Quorum-Based Byzantine-Resilient Coordination in Open Distributed Systems -- Brief Announcement: Optimistic Algorithms for Partial Database Replication -- Brief Announcement: Performance Analysis of Cyclon, an Inexpensive Membership Management for Unstructured P2P Overlays -- Brief Announcement: Decentralized, Connectivity-Preserving, and Cost-Effective Structured Overlay Maintenance -- Brief Announcement: Monitoring of Linear Distributed Computations -- Brief Announcement: Communication-Optimal Implementation of Failure Detector Class -- Brief Announcement: Synchronous Distributed Algorithms for Node Discovery and Configuration in Multi-channel Cognitive Radio Networks -- Invited Talks -- Provably Unbreakable Hyper-encryption Using Distributed Systems -- Time, Clocks, and the Ordering of My Ideas About Distributed Systems -- My Early Days in Distributed Computing Theory: 1979–1982 -- Panel on the Contributions of the DISC Community to Distributed Computing: A Historical Perspective -- DISC at Its 20th Anniversary: Past, Present and Future -- Erratum -- DISC at Its 20th Anniversary: Past, Present and Future.

Sommario/riassunto

DISC, the International Symposium on DIStributed Computing, is an annual forum for presentation of research on all facets of distributed computing, including the theory, design, analysis, implementation, and application of distributed systems and networks. The 20th anniversary edition of DISC was held on September 18-20, 2006, in Stockholm, Sweden. There were 145 extended abstracts submitted to DISC this year, and this volume contains the 35 contributions selected by the Program Committee and one invited paper among these 145 submissions. All submitted papers were read and evaluated by at least three Program Committee members, assisted by external reviewers. The final decision regarding every paper was taken during the Program Committee meeting, which took place in Beer-Sheva, June 30 and July 1, 2006. The Best Student Award was split and given to two papers: the paper “Exact Distance Labelings Yield Additive-Stretch Compact Routing Schemes,” by Arthur Bradley, and Lenore Cowen, and the paper “A Fast Distributed Approximation Algorithm for Minimum Spanning Trees” co-authored by Maleq Khan and Gopal Pandurangan. The proceedings also include 13 three-page-long brief announcements (BA). These BAs are representations of ongoing works for which full papers are not ready yet, or of recent results whose full description will soon be or has

been recently presented in other conferences. Researchers use the BA track to quickly draw the attention of the community to their experiences, insights and results from ongoing distributed computing research and projects. The BAs included in this proceedings volume were selected among 26 BA submissions.
