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Soggetti	Logic design Computer simulation Data structures (Computer science) Computer organization Logic Design Simulation and Modeling Data Structures and Information Theory Computer Systems Organization and Communication Networks
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Nota di contenuto	Reversible Occurrence Nets and Causal Reversible Event Structures -- Involutory Turing Machines -- Event structures for the reversible early internal pi-calculus -- Hermes: A Language for Light-Weight Encryption -- Reversible programming languages capturing complexity classes -- On the expressivity of total reversible programming languages -- Toward a Curry-Howard Correspondence for Linear, Reversible Computation -- A tutorial introduction to quantum circuit programming in dependently typed Proto-Quipper -- Fractional Types: Expressive and Safe Space Management for Ancilla Bits -- Circuit Synthesis -- Quantum CNOT circuits synthesis for NISQ architectures using the syndrome decoding problem -- Maximality of reversible gate sets -- Search-based Transformation Synthesis for 3-valued Reversible Circuits -- ReverCSP: Time-travelling in CSP computations -- Reversible Computations in Logic Programming -- Towards a formal

	account for software transactional memory -- Encoding Reversing Petri Nets in Answer Set Programming -- A Reversible Runtime Environment for Parallel Programs.
Sommario/riassunto	This book constitutes the refereed proceedings of the 12th International Conference on Reversible Computation, RC 2020, held in Oslo, Norway, in July 2020. The 17 full papers included in this volume were carefully reviewed and selected from 22 submissions. The papers are organized in the following topical sections: theory and foundation; programming languages; circuit synthesis; evaluation of circuit synthesis; and applications and implementations.