

1. Record Nr.	UNINA9910488707903321
Titolo	Reversible Computation : 13th International Conference, RC 2021, Virtual Event, July 7–8, 2021, Proceedings // edited by Shigeru Yamashita, Tetsuo Yokoyama
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2021
ISBN	3-030-79837-2
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (277 pages)
Collana	Programming and Software Engineering, , 2945-9168 ; ; 12805
Disciplina	004
Soggetti	Logic design Computers, Special purpose Computer science Microprogramming Natural language processing (Computer science) Logic Design Special Purpose and Application-Based Systems Theory of Computation Control Structures and Microprogramming Natural Language Processing (NLP)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Invited Talks -- How Can We Construct Reversible Turing Machines in a Very Simple Reversible Cellular Automaton -- Variational Quantum Eigensolver and Its Applications -- Programming and Programming Languages -- Reversible Functional Array Programming -- Compiling Janus to RSSA -- Causal-Consistent Debugging of Distributed Erlang Programs -- Towards a Unified Language Architecture for Reversible Object-Oriented Programming -- Reversible Concurrent Computation -- Towards a truly concurrent semantics for reversible CCS -- Forward-Reverse Observational Equivalences in CCSK -- Explicit Identifiers and Contexts in Reversible Concurrent Calculus -- Reversibility and predictions -- Theory and Foundations -- A Tangled Web of 12 Lens Laws -- Splitting recursion schemes into reversible and

classical interacting threads -- Reversibility of Executable Interval
Temporal Logic Specifications -- Circuit Synthesis -- Efficient
Construction of Functional Representations for Quantum Algorithms --
Finding Optimal Implementations of Non-native CNOT Gates using SAT
-- Fast Swapping in a Quantum Multiplier Modelled as a Queuing
Network -- OR-Toffoli and OR-Peres Reversible Gates.

Sommario/riassunto

This book constitutes the refereed proceedings of the 13th International Conference on Reversible Computation, RC 2021, which was held online during July 7-8, 2021. The 11 papers included in this book were carefully reviewed and selected from 21 submissions. The book also contains 2 invited talks in full-paper length, 3 work-in-progress papers and 1 tool paper. They were organized in topical sections named: programming and programming languages; reversible concurrent computation; theory and foundations; and circuit synthesis.
