Record Nr. UNISA996198266703316 Descriptional Complexity of Formal Systems [[electronic resource]]: **Titolo** 16th International Workshop, DCFS 2014, Turku, Finland, August 5-8. 2014, Proceedings / / edited by Helmut Jürgensen, Juhani Karhumäki, Alexander Okhotin Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2014 **ISBN** 3-319-09704-0 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (XII, 366 p. 59 illus.) Theoretical Computer Science and General Issues, , 2512-2029; ; 8614 Collana Disciplina 004.0151 Soggetti Computer science Machine theory **Algorithms** Computer science—Mathematics Discrete mathematics Theory of Computation Formal Languages and Automata Theory Computer Science Logic and Foundations of Programming Discrete Mathematics in Computer Science Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Includes index. Note generali Nota di contenuto Automata, grammars, languages and other formal systems -- Various modes of operation and complexity measures -- Trade-offs between computational models and modes of operation -- Succinctness of description of objects, state explosion-like phenomena -- Circuit complexity of Boolean functions and related measures -- Resourcebounded or structure-bounded environments -- Frontiers between decidability and undecidability -- Universality and reversibility --Structural complexity -- Formal systems for applications (e.g., software reliability, software and hardware testing, modeling of natural languages) -- Nature-motivated (bio-inspired) architectures and unconventional models of computing -- Complexity aspects of

combinatorics on words -- Kolmogorov complexity.

Sommario/riassunto

This book constitutes the refereed proceedings of the 16th International Conference on Descriptional Complexity of Formal Systems, DCFS 2014, held in Turku, Finland, in August 2014. The 27 full papers presented were carefully reviewed and selected from 35 submissions. The conference dealt with the following topics: Automata, grammars, languages and other formal systems; various modes of operation and complexity measures; trade-offs between computational models and modes of operation; succinctness of description of objects, state explosion-like phenomena; circuit complexity of Boolean functions and related measures; resource-bounded or structurebounded environments; frontiers between decidability and undecidability; universality and reversibility; structural complexity; formal systems for applications (e.g., software reliability, software and hardware testing, modeling of natural languages); nature-motivated (bio-inspired) architectures and unconventional models of computing: complexity aspects of combinatorics on words; Kolmogorov complexity.