

1. Record Nr.	UNISALENTO991003531529707536
Titolo	Exploiting hidden structure in matrix computations: algorithms and applications [e-book] : Cetraro, Italy 2015 / by Michele Benzi, Dario Bini, Daniel Kressner, Hans Munthe-Kaas, Charles Van Loan ; edited by Michele Benzi, Valeria Simoncini
Pubbl/distr/stampa	Cham : Springer International Publishing, 2016
ISBN	9783319498874 9783319498867
Descrizione fisica	1 online resource (ix, 406 p. 57 illus., 46 illus. in color.)
Collana	Lecture Notes in Mathematics, 0075-8434 ; 2173
Classificazione	AMS 65F LC QA297-299.4
Altri autori (Persone)	Benzi, Michele.author Bini, Darioauthor Kressner, Daniel Munthe-Kaas, Hans Van Loan, Charles F. Benzi, Micheleauthor Simoncini, Valeria
Disciplina	518
Soggetti	Computer science - Mathematics Numerical analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Focusing on special matrices and matrices which are in some sense near' to structured matrices, this volume covers a broad range of topics of current interest in numerical linear algebra. Exploitation of these less obvious structural properties can be of great importance in the design of efficient numerical methods, for example algorithms for matrices with low-rank block structure, matrices with decay, and structured tensor computations. Applications range from quantum chemistry to queuing theory. Structured matrices arise frequently in applications. Examples include banded and sparse matrices, Toeplitz-type matrices, and matrices with semi-separable or quasi-separable structure, as well

as Hamiltonian and symplectic matrices. The associated literature is enormous, and many efficient algorithms have been developed for solving problems involving such matrices. The text arose from a C.I.M. E. course held in Cetraro (Italy) in June 2015 which aimed to present this fast growing field to young researchers, exploiting the expertise of five leading lecturers with different theoretical and application perspectives
