1. Record Nr. UNISA996466506103316

Autore	Tian Jianjun Paul
Titolo	Evolution algebras and their applications / / Jianjun Paul Tian
Pubbl/distr/stampa	Berlin, Germany ; ; New York, New York : , : Springer, , [2008] ©2008
ISBN	3-540-74284-0
Edizione	[1st ed. 2008.]
Descrizione fisica	1 online resource (XI, 133 p.)
Collana	Lecture notes in mathematics ; ; 1921
Disciplina	512.554
Soggetti	Phytophthora infestans - Genetics Stochastic processes Nonassociative algebras Markov processes Genetic algebras Banach algebras Algebra
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references (pages [119]-121) and index.
Nota di contenuto	Motivations -- Evolution Algebras -- Evolution Algebras and Markov Chains -- Evolution Algebras and Non-Mendelian Genetics -- Further Results and Research Topics.
Sommario/riassunto	Behind genetics and Markov chains, there is an intrinsic algebraic structure. It is defined as a type of new algebra: as evolution algebra. This concept lies between algebras and dynamical systems. Algebraically, evolution algebras are non-associative Banach algebras; dynamically, they represent discrete dynamical systems. Evolution algebras have many connections with other mathematical fields including graph theory, group theory, stochastic processes, dynamical systems, knot theory, 3-manifolds, and the study of the Ihara-Selberg zeta function. In this volume the foundation of evolution algebra theory and applications in non-Mendelian genetics and Markov chains is developed, with pointers to some further research topics.