1. Record Nr. UNINA9910483560103321 Autore Colombo Fabrizio **Titolo** Michele Sce's Works in Hypercomplex Analysis: A Translation with Commentaries / / by Fabrizio Colombo, Irene Sabadini, Daniele C. Struppa Cham:,: Springer International Publishing:,: Imprint: Birkhäuser,, Pubbl/distr/stampa 2020 ISBN 3-030-50216-3 Edizione [1st ed. 2020.] 1 online resource (VI, 122 p. 3 illus., 1 illus. in color.) Descrizione fisica Disciplina 515.9 Soggetti Functions of complex variables Functions of a Complex Variable Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia 1 Introduction -- 2 Monogenicity and total derivability in real and Nota di contenuto complex algebras -- 3 On systems of partial differential equations related to real algebras -- 4 On the variety of zero divisors in algebras -- 5 Remarks on the power series in quadratic modules -- 6 Regular functions in the Cayley algebra -- Index. This book presents English translations of Michele Sce's most Sommario/riassunto important works, originally written in Italian during the period 1955-1973, on hypercomplex analysis and algebras of hypercomplex numbers. Despite their importance, these works are not very well known in the mathematics community because of the language they were published in. Possibly the most remarkable instance is the socalled Fueter-Sce mapping theorem, which is a cornerstone of modern hypercomplex analysis, and is not yet understood in its full generality. This volume is dedicated to revealing and describing the framework Sce worked in, at an exciting time when the various generalizations of complex analysis in one variable were still in their infancy. In addition to faithfully translating Sce's papers, the authors discuss their significance and explain their connections to contemporary research in

hypercomplex analysis. They also discuss many concrete examples that

can serve as a basis for further research. The vast majority of the results presented here will be new to readers, allowing them to finally

access the original sources with the benefit of comments from fellow mathematicians active in the field of hypercomplex analysis. As such, the book offers not only an important chapter in the history of hypercomplex analysis, but also a roadmap for further exciting research in the field.