1. Record Nr. UNINA9910300250003321

Autore	Agarwal Ravi P
Titolo	Fixed point theory in metric type spaces / / by Ravi P. Agarwal, Erdal KARAPINAR, Donal O'Regan, Antonio Francisco Roldán-López-de-Hierro
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2015
ISBN	3-319-24082-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (395 p.)
Disciplina	515.7
Soggetti	Numerical analysis Functions of real variables Functional analysis Numerical Analysis Real Functions Functional Analysis
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction with a Brief Historical Survey -- Preliminaries -- G-Metric Spaces -- Basic Fixed Point Results in the Setting of G-Metric Spaces -- Fixed Point Theorems in Partially Ordered G-Metric Spaces -- Further Fixed Point Results on G-Metric Spaces -- Fixed Point Theorems via Admissible Mappings -- New Approaches to Fixed Point Results on G-Metric Spaces -- Expansive Mappings -- Reconstruction of G-Metrics: G*-Metrics -- Multidimensional Fixed Point Theorems on G-Metric Spaces -- Recent Motivating Fixed Point Theory.
Sommario/riassunto	Written by a team of leading experts in the field, this volume presents a self-contained account of the theory, techniques and results in metric type spaces (in particular in G-metric spaces); that is, the text approaches this important area of fixed point analysis beginning from the basic ideas of metric space topology. The text is structured so that it leads the reader from preliminaries and historical notes on metric spaces (in particular G-metric spaces) and on mappings, to Banach type contraction theorems in metric type spaces, fixed point theory in

partially ordered G-metric spaces, fixed point theory for expansive mappings in metric type spaces, generalizations, present results and techniques in a very general abstract setting and framework. Fixed point theory is one of the major research areas in nonlinear analysis. This is partly due to the fact that in many real world problems fixed point theory is the basic mathematical tool used to establish the existence of solutions to problems which arise naturally in applications. As a result, fixed point theory is an important area of study in pure and applied mathematics and it is a flourishing area of research.