1. Record Nr. UNINA9910299379803321

Titolo	Moment Tensor Solutions : A Useful Tool for Seismotectonics / / edited by Sebastiano D'Amico
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-77359-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XI, 752 p. 340 illus., 265 illus. in color.)
Collana	Springer Natural Hazards, , 2365-0656
Disciplina	551.22
Soggetti	Structural geology Geology—Statistical methods Application software Geophysics Structural Geology Quantitative Geology Computer Applications Geophysics and Environmental Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	PART 1 Theory and Basic Physics -- Earthquake and source theory -- Radiation patterns and beach balls -- Use of P and S wave data for focal mechanism determination -- Review on moment tensor -- PART 2 Techniques and Geodynamic Interpretation -- Centroid Moment Tensor (CMT) Inversion -- Regional Centroid Moment Tensor (RCMT) -- Time Domain Moment Tensor (TDMT) -- Saint Louis University Moment Tensor (SLUMT) -- Cat And Paste Inversion (CAP) technique -- NIED Moment Tensor.
Sommario/riassunto	The book first focuses on the explanation of the theory about focal mechanisms and moment tensor solutions and their role in the modern seismology. The second part of the book compiles several state-of-the-art case studies in different seismotectonic settings of the planet. The assessment of seismic hazard and the reduction of losses due to future earthquakes is probably the most important contribution of seismology to society. In this regard, the understanding of reliable

determination seismic source and of its uncertainty can play a key role in contributing to geodynamic investigation, seismic hazard assessment and earthquake studies. In the last two decades, the use of waveforms recorded at local-to-regional distances has increased considerably. Waveform modeling has been used also to estimate faulting parameters of small-to-moderate sized earthquakes. .