1. Record Nr. UNINA9910160769403321

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Titolo	Earthquakes, Tsunamis and Nuclear Risks [[electronic resource]] : Prediction and Assessment Beyond the Fukushima Accident / / edited by Katsuhiro Kamae
Pubbl/distr/stampa	Cham, : Springer Nature, 2015 Tokyo : , : Springer Japan : , : Imprint : Springer, , 2016
ISBN	4-431-55822-5
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XII, 177 p. 74 illus., 36 illus. in color.)
Disciplina	333.7
Soggetti	Environmental management Nuclear energy Natural disasters Quality control Reliability Industrial safety Probabilities Environmental Management Nuclear Energy Natural Hazards Quality Control, Reliability, Safety and Risk Probability Theory and Stochastic Processes
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Foreword -- Preface -- Cooperators -- Part 1 Active Faults -- Part 2 Seismic Source Modeling and Seismic Motion -- Part 3 Probabilistic Risk Assessment with External Hazards -- Part 4 Nuclear Risk Governance in Society.
Sommario/riassunto	This book covers seismic probabilistic risk assessment (S-PRA) and related studies which have become more important to increase the safety of nuclear facilities against earthquakes and tsunamis in the face of the many uncertainties after the Fukushima accident. The topics are (1) Active faults and active tectonics important for seismic hazard

assessment of nuclear facilities,(2) Seismic source modeling and simulation and modeling techniques indispensable for strong ground motion prediction, and (3) PRA with external hazard and risk communication. The Fukushima accident has showed us the limitations of the deterministic evaluation approach to external events (an earthquake and tsunami) in which there are many uncertainties. Furthermore, public anxiety regarding nuclear safety because of an unexpected threat caused by an earthquake or tsunami is growing. The current policy on the estimation of the design basis of ground motion as well as tsunami height still has not been improved following the Fukushima accident. In particular, the risk concept in a nuclear system regarding seismic motion and a tsunami beyond the design basis is indispensable. Therefore, research and development for PRA enhancing nuclear safety are being actively pursued not only in Japan but also worldwide. This book provides an opportunity for readers to consider the future direction of nuclear safety vis-à-vis natural disasters.