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Regional Earthquake Early Warning System and Site Characterization of itsStations -- Overview of Artificial Intelligence (AI) and Machine Learning (ML) in Seismology. .

Sommario/riassunto

This book presents a comprehensive analysis of diverse aspects of geohazards. The growing vulnerability and exposure to failures in risk reduction and policy-making increases the severity of geohazard impacts by many folds. Therefore, detailed geohazard analysis, modelling and forecasting are needed to reduce the impacts of extreme events. An interdisciplinary approach to hazard mitigation provides an advanced tool for risk reduction. The book thus summarizes recent modelling and analysis techniques for hazard assessment and risk mitigation. Topics discussed in the book are hazard and risk associated with earthquakes, vulnerability assessment for landslides and avalanches, the assessment of tsunami risk in coastal regions, the implementation of early warning systems to prevent catastrophic consequences, climate change risk modelling and risk communication. The convergent approach with the aspects of natural, engineering, and social sciences attracts a vast audienceworking to advance disaster science. This book also significantly facilitates the acquisition of policy-relevant knowledge for risk reduction, which is beneficial to the general public.