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Publisher's description: In 2013 several scientific activities have been devoted to mathematical researches for the study of planet Earth. The current volume presents a selection of the highly topical issues presented at the workshop "Mathematical models and methods for planet Earth", held in Roma (Italy), in May 2013. The fields of interest span from impacts of dangerous asteroids to the safeguard from space debris, from climatic changes to monitoring geological events, from the study of tumor growth to sociological problems. In all these fields the mathematical studies play a relevant role as a tool for the analysis of specific topics and as an ingredient of multidisciplinary problems. To investigate these problems we will see many different mathematical tools at work: just to mention some, stochastic processes, PDE, normal forms, chaos theory. The articles of this volume will not be indexed individually.

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