

## Advanced Networks, Algorithms and Modeling for Earthquake Prediction

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Imagination depicts earthquakes as a mysterious and magic matter. However, as scientists and technical, we do have to consider them also form a different perspective: they are natural phenomena that evolve with time and depend on a number of variables.

Their modeling can help us to reply to the simplest and ? at the same time ? the most complex question: *are earthquakes predictable?*

In case the answer is affirmative, what could be the role of the extremely mature Information and Communication Technology (ICT) in setting up an effective prediction process? How artificial Intelligence Algorithms can contribute to the picture?

The book presents our vision about the above matter. The book is organized in three parts. Part 1 frames the possible use of ICT and Artificial Intelligence in dealing with earthquake-related Disaster Ahead management (DAM). Part 2 presents modeling tools for the earthquake issue and proposes possible ICT tools for supporting the earthquake DAM. Part 3 presents and experimental network for earthquake DAM based on communications and navigation (GNSS) tools.

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We need to learn how to predict natural disasters. To protect human life is not a choice, it is a duty. Therefore, with this publication we call upon the heads of west and rich countries to create a new "Manhattan Project". What humankind did seventy years ago for the war, we should be able to repeat also for Life.



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