Advanced Networks, Algorithms and Modeling for Earthquake Prediction

Description:

 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.

Keywords: Information and Communication Technology, Artificial Adaptive Intelligence, Earthquakes, Swarm Networks, Sensors, Modelling and Analysis, Disaster Ahead Management, Prediction, Non Linear Systems, Wireless networks, Semantic Analyzers, Animal Behaviour, Satellite Sensors, Experimental network, Satel