



Entropy, Nonlinear Dynamics, and Methods of Complex Systems in Earthquake Physics including Precursory Phenomena

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Message from the Guest Editor

Dear Colleagues,

During the last decade, considerable progress has been made towards the understanding of pre-seismic processes. In this direction, the physics of critical phenomena, information entropy, and methods of complex systems have been applied for the study of rupture in the Solid Earth crust.

From another point of view, during the 21st century, many very strong earthquakes took place (e.g., the 2011 M9.1 Tohoku, the 2004 M9.0 Sumatra, Andaman, or the 2010 M8.8 Chile earthquakes). Since the instrumentation in our days is much better than that of the previous century, the study of various physical (or geophysical) observables before these earthquakes may provide useful precursory signals. When combined with and studied within the aforementioned frame of modern methods, such signals may lead to more efficient earthquake prediction methods than ever before.

The scope of this special issue is to strengthen and present the most recent attempts in both theoretical and experimental methods for understanding the physics of earthquakes and hence foresee their occurrence.

Dr. Nicholas V Sarlis

Guest Editor





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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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