

# Preface

This book contains the papers presented at the NATO Advanced Research Workshop, “New Challenges in Complex Systems: Disaster forecasting, crisis modeling and sustainable development” held in Samarkand, Uzbekistan, from May 20 to 24, 2013.

The focus of the Workshop was to discuss problems and prospects in the area of complex system physics and its applications to a broad spectrum of problems from physics, biology, natural disasters and social sciences with a special focus on nonlinear evolution, extreme events, crisis and critical phenomena.

In the past decade, the physics of complex systems has become one of the most interdisciplinary subjects of contemporary science. In particular, this field has penetrated into various areas of natural and even social sciences for the modeling of complex dynamics, data analysis, prediction and monitoring purposes.

Talks presented at the Workshop covered such topics as econophysics, sociophysics, earthquake dynamics, crisis and conflict modeling, complex networks and complex nanoscale systems.

A total of 58 talks were presented by invited and plenary speakers, with 35- and 20-min durations, respectively. Panel discussions attracted a broad audience of experts working on physics, mathematics, seismology, economics and sociology.

The conference was successfully organized due to the efforts of the local organizing committee with K. Sharipov, U. Tashkenbaev, K. Muminov, B. Eschanov, J. Yusupov and A. Saidov. Our special thanks to Samarkand State University for its great contribution to the local organizing activity.

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H. Eugene Stanley  
Davron Matrasulov

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Matrasulov, D.; Stanley, E.H. (Eds.)

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