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Vadim S. Anishchenko
Issue Editor

**SYNCHRONIZATION OF CHAOTIC
AND STOCHASTIC OSCILLATIONS AND ITS APPLICATIONS**

The field «Nonlinear Dynamics of Complex Systems in the Presence of Fluctuations» is one of the hottest topics of today's physical and biological research. It is very intriguing to see and to research the rules how a deterministic process becomes stochastic or how a stochastic process becomes synchronized to a deterministic process when certain parameters evolve.

This is a strongly interdisciplinary field of science. Originally, only mathematicians and theoretical physicists dealt with these phenomena but nowadays a wide range of scientists, including experimental physicists, biophysicists, information scientists, engineers, biomedical scientists, etc. devote their efforts to this field.

The International scientific conference «Synchronization of Chaotic and Stochastic Oscillations; Applications in Physics, Chemistry, Biology and Medicine» (SYNCHRO-2002) took place in September, 22-28, 2002, in Saratov (Russia). The conference was organized by the Laboratory of Nonlinear Dynamics of Saratov State University and the Research-Educational Center of Nonlinear Dynamics and the Biophysics of SSU (REC-006). The conference SYNCHRO-2002 was sponsored by the U.S. Civilian Research and Development Foundation, the Russian Federation Ministry of Education, the Russian Foundation for Basic Research, the Alexander von Humboldt Foundation and Project SFB 555 (Germany).

About hundred scientists coming from fourteen countries of Europe, Asia and America attended the meeting. Twenty-eight invited talks were held by recognized leaders in scientific fields related to stochastic nonlinear dynamical systems.

The focus topics of the conference were synchronization phenomena and related fundamental issues in nonlinear systems and the practical applications of the results.

The conference proceedings is published in a special issue of the Journal «Applied Nonlinear Dynamics» (in Russian)* and a special selection of invited papers in the Journal «Fluctuation and Noise Letters».

You have that special selection in your hands. We wish you an inspiring reading.

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* The best reports of young scientists were awarded by prize of the organizing committee and recommended for publishing. Now they have been recently published in the journal «Izv. VUZ. Applied Nonlinear Dynamics», 2003, vol. 11, № 2.

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