

Edited by

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Trends and Cycles

RUSSIAN ACADEMY OF SCIENCES Keldysh Institute of Applied Mathematics

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Trends and Cycles

Edited by Leonid E. Grinin, and Andrey V. Korotayev



'History & Mathematics' Yearbook

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The present yearbook (which is the fourth in the series) is subtitled *Trends & Cycles*. It is devoted to cyclical and trend dynamics in society and nature; special attention is paid to economic and demographic aspects, in particular to the mathematical modeling of the Malthusian and post-Malthusian traps' dynamics.

An increasingly important role is played by new directions in historical research that study long-term dynamic processes and quantitative changes. This kind of history can hardly develop without the application of mathematical methods. There is a tendency to study history as a system of various processes, within which one can detect waves and cycles of different lengths – from a few years to several centuries, or even millennia. The contributions to this yearbook present a qualitative and quantitative analysis of global historical, political, economic and demographic processes, as well as their mathematical models.

This issue of the yearbook consists of three main sections: (I) Long-Term Trends in Nature and Society; (II) Cyclical Processes in Pre-industrial Societies; (III) Contemporary History and Processes.

We hope that this issue of the yearbook will be interesting and useful both for historians and mathematicians, as well as for all those dealing with various social and natural sciences.

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