

# Applied Mathematics and Dynamic Modeling of Non-Linear Economic and Administrative Systems:

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## Description:

Modern economies and administrative structures operate in environments characterized by uncertainty, change, and complex interdependence among systems. Non-linear systems exhibit feedback loops, threshold effects, and evolving dynamics that cannot be explained through traditional analytical methods. By applying mathematical tools like differential equations, optimization techniques, systems theory, and computational simulations, researchers and policymakers can analyze patterns of economic growth, resource allocation, decision-making processes, and institutional performance. Dynamic modeling provides a framework for predicting system behavior, enabling effective planning, policy formulation, and management within economic and administrative environments characterized by uncertainty and continuous change.

**Applied Mathematics and Dynamic Modeling of Non-Linear Economic and Administrative Systems** employs mathematical and dynamic modeling to analyze complex, nonlinear, and multivariable economic and administrative systems. It examines the behavior of markets and institutions in environments characterized by uncertainty and volatility, integrating applied mathematics with management and economic principles to aid quantitative analysis and decision making. This book covers topics such as financial markets, mathematical modeling, and nonlinear dynamics, and is a useful resource for business owners, mathematicians, academicians, researchers, and scientists.

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**Hardcover:** \$250 **Softcover:** \$210 **E-Book:** \$240 **Hardcover + E-Book:** \$250

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- Economics & Economic Theory
- Financial Markets
- Financial Risk Management
- Mathematical Modeling
- Mathematics & Statistics
- Monetary Policies
- Nonlinear Dynamics
- Numerical Simulation
- Sensitivity Analysis

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