

**Call for Book Chapters Contributions**  
**Book title:**  
**“Mathematical Models in Economics”**



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<http://www.asers.eu/asers-publishing/books>  
To be published by **ASERS Publishing** in CD-ROM format with ISBN.

## INTRODUCTION

The tasks that lay ahead the economist are so wide, contradictory and restrained that they reclaim more and more captious knowledge from other fields as well, especially concerning the modeling of economic phenomena, the use of the methods of mathematical research.

Economy, generally supposes consumers and producers, goods and services that they exchange, prices that establish the conditions of these exchanges, states of balance and fundamental problems determined by them (the existence of the balance, the uniqueness, the constancy or its establishment, the evolution in time). The use of mathematics for solving such economic problems sometimes determines profound and unjustified reticence, because, on one hand the mathematic device got complicated, fact that implies a major effort to know it, and on the other hand, the discoveries useful to economy are rather recent as timing. The economic science has made great progress in the latest years, but this progress is rather unknown maybe because the mathematic theory became extremely refined, requiring a continuous effort to be understood.

Because of the complexity of real processes, in the constituting of models a certain detail limit must be adopted, restraining the essential elements and the principals depending on them. That is why the model must be always a simplified representation of the reality which is to permit actions, based on rationality, over the modeled process.

In the economics there are met hundreds of mathematical models. They contain numerous parameters, this implies a high difficult apply and concerning the mathematics is reclaims using some topological methods of the singularities theory (catastrophes and bifurcations).

It is clear that in the last 50 years, the study of economics has been more mathematical, with the use of equations and simulation over the long prose of yesteryear.

Just like the new telescopes enlarge our horizons without invalidating the discoveries did before from the close part of the universe, the mathematics show also new views, while it develops on existent knowledge. Perspectives may change, but not truths.

## Book Objectives

In the real economy, at the level of the economic agent, of the branch or of the national economy, the activities can be followed, analyzed and optimized with the help of the modern methods approached in a unitary concept, systemic and strongly abstracted and mathematized.

The theme of this book is modeling the economic phenomena using mathematics. The authors must concentrate on the techniques used to set up mathematical models and describe many systems in full detail.

Thus, the goal of this book is to encourage the exchange of new ideas about mathematical models in economics and to promote their use in the economic processes.

The target audience for this publication is academics, researchers, and practitioners engaged in various disciplines such as stock brokers, finance analyses, economic prognosis, decision making, international business, entrepreneurship, and investors in the emerging stock market.

**Recommended topics of the book include, but are not limited to, the following:** optimization problems as to goal equilibrium, whether of a household, business firm, or policy maker static (or equilibrium) analysis in which the economic unit (such as a household) or economic system (such as a market or the economy) is modeled as not changing comparative statics as to a change from one equilibrium to another induced by a change in one or more factors dynamic analysis, tracing changes in an economic system over time, for example from economic growth.

### **SUBMISSION PROCEDURE:**

Potential contributors are invited to submit on or before August 20, 2011 a chapter proposal clearly explaining the mission and concerns of their proposed chapter. Contributors of accepted proposals will be notified by 30 August, 2011 regarding the status of their proposals. For keeping a reasonable trade-off between theoretical and practical issues, a careful selection of the chapters will be done, on the one hand, to cover a broad spectrum of formal and practical aspects and, on the other hand, to achieve as much as possible a self-contained book. Final Camera Ready Manuscript is expected to be September 20, 2011. Contributors may also be requested to serve as reviewers for this book project.

This will facilitate the planning of the review process. Careful preparation of the manuscripts will help keep production time short and ensure satisfactory appearance of the finished book. Please prepare the manuscript using the [author guidelines](#) as follows:

- Each chapter must be self-contained and not exceed 30 pages;
- Please centralize all tables and figures with appropriate legends;
- Please carefully check for typos inside the text, figures, legends, etc;
- All equations must be numbered and please try to use standard fonts.

### **IMPORTANT DATES:**

**Full Manuscript/Chapter Due: 20 August, 2011**

Acceptance of Chapter Notification: 30 August, 2011

Final Camera Ready Manuscript/Chapter Due: 20 September, 2011

Publication Date: **20 October 2011.**