
A Book Review: Frontiers of Dynamic Games

Professor Emeritus Manuel Alberto M. Ferreira¹



Frontiers of Dynamic Games
(**Game Theory and Management, St. Petersburg, 2017**),
978-3-319-92988-0

by

Petrosyan, Leon A., Mazalov, Vladimir V., Zenkevich, Nikolay (Eds.)
Springer Series *Static & Dynamic Game Theory: Foundations & Applications*,
2363-8516 is the book here evaluated and reviewed.

The presentation at Springer site informs that:

Covers a wide spectrum of topics in game theory;
Includes carefully selected contributions;
Provides applications of game theory to management.

As the subtitle indicates this book gathers contributions from the speeches given at the Game Theory and Management Conference held in St. Petersburg, Russia, in June 2017. The book has 16 chapters as follows:

- Countervailing Power with Large and Small Retailers
Geronikolaou, George (et al.)
- Dynamic Voluntary Provision of Public Goods: The Recursive Nash Bargaining Solution

¹ *Instituto Universitário de Lisboa (ISCTE – IUL), ISTAR-IUL, BRU - IUL, Lisboa, Portugal* manuel.ferreira@iscte.pt

Hoof, Simon

- Altruistic, Aggressive and Paradoxical Types of Behavior in a Differential Two-Person Game

Kleimenov, Anatolii

- Learning in a Game of Strategic Experimentation with Three-Armed Exponential Bandits

Klein, Nicolas

- Solution for a System of Hamilton–Jacobi Equations of Special Type and a Link with Nash Equilibrium

Kolpakova, Ekaterina A.

- The Impact of Discounted Indices on Equilibrium Strategies of Players in Dynamical Bimatrix Games

Krasovskii, Nikolay (et al.)

- On Control Reconstruction Problems for Dynamic Systems Linear in Controls

Krupennikov, Evgeniy

- Evolution of Risk-Statuses in One Model of Tax Control

Kumacheva, Suriya (et al.)

- Stationary Nash Equilibria for Average Stochastic Positional Games

Lozovanu, Dmitrii

- Game Equilibria and Transition Dynamics in Networks with Heterogeneous Agents

Matveenko, Vladimir (et al.)

- Non-cooperative Differential Game Model of Oil Market with Looking Forward Approach

Petrosian, Ovanes (et al.)

- S-strongly Time-Consistency in Differential Games

Petrosyan, Leon A. (et al.)

- Characteristic Functions in a Linear Oligopoly TU Game

Sedakov, Artem

- The Position Value and the Myerson Value for Hypergraph Communication Situations

Shan, Erfang (et al.)

- Bertrand Meets Ford: Benefits and Losses
Sidorov, Alexander (et al.)

- On Multilateral Hierarchical Dynamic Decisions
Szajowski, Krzysztof

Evaluation Review:

“Frontiers of Dynamic Games” gathers contributions from the speeches given at the Game Theory and Management Conference held in St. Petersburg, Russia. Under the main and general topic of game theory, the contributions that integrate this book cover:

- Theoretical topics like cooperative games; dynamic games; evolutionary games; stochastic games.

- Application topics like management applications in fields such as strategic management, industrial organization, marketing, operations and supply chain management, public management, financial management, human resources, energy and resource management.

From the point of view of the game theory branches considered in this book, we can consider it quite complete and the word "frontier" that integrates the title makes perfect sense since these branches are approached to the highest level of their knowledge.

Contributors generally used very clear language and were very rigorous from the scientific point of view, impeccable in the use and development of the mathematical concepts. It is thus a very rich and interesting text to read both in a study approach and in a cultural one.

This conference, seeming predominantly directed to and integrated by academics, has nevertheless had a very large number of subjects of practical interest from applications of game theory to management. Evidently, these subjects will concern academics. However, certainly, not going around, can be a source of very useful knowledge for qualified professionals in the area of management, and for policy decision-makers.

It should also emphasize a quality of this text that is the fact that each chapter of this book is autonomous and complete, allowing itself to acquire the respective knowledge and tools for decision-making action.

Therefore, “Frontiers of Dynamic Games” is a book on game theory, of high scientific level, both theoretically and in terms of applications, very well written and interesting reading for students, teachers, researchers, managers and policy decision-makers.