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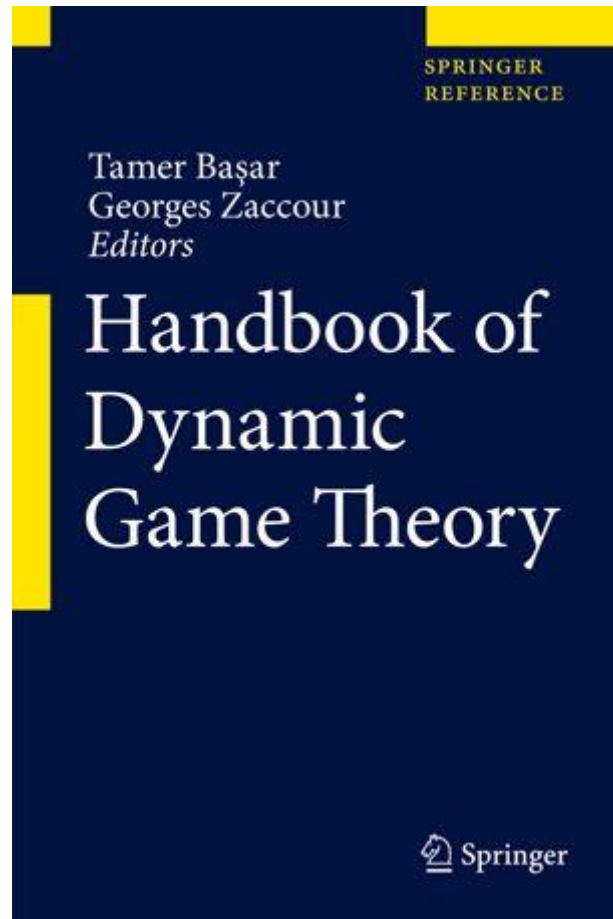
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Handbook of Dynamic Game Theory

A BOOK REVIEW



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1. Introduction

The book **Handbook of Dynamic Game Theory**, 978-3-319-44373-7 (print), 978-3-319-44374-4 (online), DOI: <https://doi.org/10.1007/978-3-319-44374-4> edited by **Tamer Başar** and **Georges Zaccour**, a *Springer Reference* published by *Springer International Publishing*, collects 28 entries as follows:

1. Biology and Evolutionary Games

Mark Broom, Vlastimil Křivan

2. Communication Networks: Pricing, Congestion Control, Routing, and Scheduling

Srinivas Shakkottai, R. Srikant

3. Cooperative Differential Games with Transferable Payoffs

Leon A. Petrosyan, Georges Zaccour

4. Differential Games in Industrial Organization

Luca Colombo, Paola Labrecciosa

5. Dynamic Games in Finance

Michèle Breton

6. Dynamic Games in Macroeconomics

Łukasz Balbus, Kevin Reffett, Łukasz Woźny

7. Dynamic Games of International Pollution Control: A Selective Review

Aart de Zeeuw

8. Evolutionary Game Theory

Ross Cressman, Joe Apaloo

9. Game-Theoretic Learning in Distributed Control

Jason R. Marden, Jeff S. Shamma

10. Games in Aerospace: Homing Missile Guidance

Joseph Z. Ben-Asher, Jason L. Speyer

11. Infinite Horizon Concave Games with Coupled Constraints

Dean Carlson, Alain Haurie, Georges Zaccour

12. Introduction to the Theory of Games

Tamer Başar

13. Marketing

Steffen Jørgensen

14. Mean Field Games

Peter E. Caines, Minyi Huang, Roland P. Malhamé

15. Multistage Games

Jacek B. Krawczyk, Vladimir Petkov

16. Network Games

S. Rasoul Etesami, Tamer Başar

17. Non-Zero-Sum Stochastic Games

Anna Jaśkiewicz, Andrzej S. Nowak

18. Nontransferable Utility Cooperative Dynamic Games
David W.K. Yeung, Leon A. Petrosyan

19. Nonzero-Sum Differential Games
Tamer Başar, Alain Haurie, Georges Zaccour

20. Power System Analysis: Competitive Markets, Demand Management, and Security
Anibal Sanjab, Walid Saad

21. Pursuit-Evasion Games
Valerii Patsko, Sergey Kumkov, Varvara Turova

22. Resource Economics
Ngo Van Long

23. Robust Control and Dynamic Games
Pierre Bernhard

24. Social Networks
Sadeqh Bolouki, Angelia Nedić, Tamer Başar

25. Stackelberg Routing on Parallel Transportation Networks
Walid Krichene, Jack D. Reilly, Saurabh Amin, Alexandre M. Bayen

26. Trends and Applications in Stackelberg Security Games
Debarun Kar, Thanh H. Nguyen, Fei Fang, Matthew Brown, Arunesh Sinha, Milind Tambe et al.

27. Zero-Sum Differential Games
Pierre Cardaliaguet, Catherine Rainer

28. Zero-Sum Stochastic Games
A. Jaśkiewicz, A. S. Nowak

In the editorial on the presentation page, is specified it is:

- The first handbook on dynamic game theory
- Edited by two of the biggest names internationally in game theory
- A quick reference to topics in dynamic games for a broad community of researchers

We intend to review this work here, which works to present it to readers in a critical and comprehensive way.

2. The Review

Game Theory has always had an intuitive character in its developments and affirmations, motivating a great adherence and curiosity for its study and application, namely in the modeling of human behaviors, but not only.

At certain times, this led to an illusion of ease that contributed to some errors in its applications that led to some disenchantment.

However, these moments of disenchantment were successively overtaken, and followed by periods of renewed and increased interest in the study and applications of Game Theory.

In this way, greatly increased the diversity of fields and sophistication reached by Game Theory, making their applications immense.

This context perfectly justifies the appearance of an almost encyclopedic work: "Handbook of Dynamic Game Theory" on dynamic / differential games. Indeed, Dynamic Game Theory is an advanced and expanding field either in theoretical development or in the multiplicity of applications.

In accordance, "Handbook of Dynamic Game Theory" is composed of two parts:

-Part I: **Theory of Dynamic Games**

Corresponding to the first volume, with the first 14 entries, focused on fundamentals and theory,

- Part II: **Application of Dynamic Games**

Corresponding to the second volume, with the next 14 entries focused on applications in various fields such as economics, management science, engineering, and biology.

Thus, "Handbook of Dynamic Game Theory" is built as a solid building, seating sturdy foundations that hold the entire body up to the roof. Written by renowned experts, in a simple and clear language, and very rigorous, it is interesting for a wide range of readers both by the solidity of its theoretical construction and by the variety of applications presented.

"Handbook of Dynamic Game Theory", a true handbook, can serve either as a study book or as a reference book. Required reading for scientists, academics and high-level professionals. Accessible to anyone curious about this fascinating and socially so important subject.