

## Preface

Modern dynamic game theory has its roots in pioneering works on differential games by R. Isaacs and L.S. Pontryagin, in seminal papers on extensive form games by H.W. Kuhn, and in works on stochastic games by L.S. Shapley. Since those early developments, dynamic game theory has evolved enormously and has branched out in many directions, spanning such diverse disciplines as applied mathematics, economics, system theory, engineering, operations research, biology, ecology, and the environmental sciences.

This edited volume is an outgrowth of selected papers presented at the 12th International Symposium on Dynamic Games (ISDG) and Applications that was held July 3-6, 2006, at Sophia Antipolis, France. It provides state-of-the-art information about new developments in theoretical and numerical analysis of dynamic games and their applications

The papers selected for the volume cover a variety of topics ranging from purely theoretical game-theoretic developments, to numerical analysis of various dynamic games, and to dynamic games applications in economics, finance, and energy supply. The list of contributors contains both well-known names and names of young researchers from all over the world. All papers included in the volume went through a stringent reviewing process, and collected together, they represent a state-of-the-art of the theory of dynamic games and their applications.

The volume is divided into eight parts (chapters), each including papers devoted to a certain topic. Part I (five papers) is devoted to theoretical developments in general dynamic and differential games. The topic of Part II (three papers) is pursuit-evasion games. Part III (five papers) deals with numerical approaches to dynamic and differential games. Part IV (two papers) is on applications of dynamic games in economics and option pricing. Parts V, VI, VII and VIII (each containing two papers) are devoted to search games, evolutionary games, stopping games, and stochastic games and "large neighborhood" games, respectively.

The Editors are indebted to many colleagues involved in the reviewing process and to Miss Giang Nguyen for her help in editing and formatting the volume.

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October 2008

Advances in Dynamic Games and Their Applications

Analytical and Numerical Developments

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2009, XIV, 462 p. 94 illus., 9 illus. in color., Hardcover

ISBN: 978-0-8176-4833-6

A product of Birkhäuser Basel