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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, the dynamic games theory evolved enormously and 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 a selection of papers presented at 12th International Symposium on Dynamic Games (ISDG) and Applications that was held in July 3-6, 2006, at Sophia Antipolis, France. It provides the 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 famous names and names of young researchers from all around the world. All papers included in the volume passed through a stringent reviewing process, and being collected together, they represent a state-of-the-art of the theory of dynamic games and its 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 to Stochastic Games and “Large Neighbourhood” Games (respectively)

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