

Preface

This volume presents a collection of papers by friends and colleagues of Professor Onésimo Hernández-Lerma in his honor. The first idea to compile the book arose during Onésimo's Fest Symposium held in San Luis Potosí, Mexico, during March 16–18, 2011, to honor the 65th birthday of Professor Onésimo Hernández-Lerma, who has been an important contributor to stochastic optimal control.

Thereafter, a group of colleagues whose research interests are in the areas of stochastic optimal control, optimization theory, and probability were invited to collaborate on this project. As a result, 33 authors from all over the world have contributed 18 chapters to the book. All papers have been peer-reviewed and give a general view on the state-of-the-art of the art of several topics on the covered fields. In particular, the book presents recent developments on discrete-time Markov control or decision processes under different contexts: discounted and average criterion as well as sample-path and constrained optimality; continuous-time controlled problems for diffusion processes, jump Markov processes, and semi-Markov processes; optimal stopping problems; global optimization; and the existence of solutions of stochastic partial differential equations. Additionally the book contains important applications to inventory control problems and financial systems. Chapters are presented in alphabetical order by first author.

We express our deep gratitude to all the people who have collaborated to make this special volume a success. Mainly, we thank all the authors for their excellent and important contributions, as well as all the reviewers for their time and effort. We would also like to thank the Centro de Investigación en Matemáticas (CIMAT) and the Departamento de Matemáticas, Universidad de Sonora.

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Optimization, Control, and Applications of Stochastic
Systems

In Honor of Onésimo Hernández-Lerma

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2012, XXVII, 309 p. 8 illus., 7 illus. in color., Hardcover

ISBN: 978-0-8176-8336-8

A product of Birkhäuser Basel