



Dynamic Programming and Optimal Control (2 Vol Set)

By Dimitri P. Bertsekas

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Editorial Review

Review

Review of Vol. I, 3rd Edition: In addition to being very well written and organized, the material has several special features that make the book unique in the class of introductory textbooks on dynamic programming. For instance, it presents both deterministic and stochastic control problems, in both discrete- and continuous-time, and it also presents the Pontryagin minimum principle for deterministic systems together with several extensions. It contains problems with perfect and imperfect information, as well as minimax control methods (also known as worst-case control problems or games against nature). I also has a full chapter on suboptimal control and many related techniques, such as open-loop feedback controls, limited lookahead policies, rollout algorithms, and model predictive control, to name a few. ... In conclusion the book is highly recommendable for an introductory course on dynamic programming and its applications. --Onesimo Hernandez Lerma, in Math Reviews

In this two-volume work Bertsekas caters equally effectively to theoreticians who care for proof of such concepts as the existence and the nature of optimal policies and to practitioners interested in the modeling and the quantitative and numerical solution aspects of stochastic dynamic programming. --Michael Caramanis, in Interfaces

In conclusion, this book is an excellent source of reference ... The main strengths of the book are the clarity of the exposition, the quality and variety of the examples, and its coverage of the most recent advances. --T. W. Archibald, in IMA Jnl. of Mathematics

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About the Author

Dimitri Bertsekas is Professor of Electrical Engineering and Computer Science at the Massachusetts Institute of Technology, and a member of the US National Academy of Engineering. He is the recipient of the 2001 A. R. Ruggazini AACC education award, the 2009 INFORMS expository writing award, the 2014 Kachiyan Prize, the 2014 AACC Bellman Heritage Award, and the 2015 Dantzig Prize. He has researched a broad variety of subjects from optimization theory, control theory, parallel and distributed computation, systems analysis, and data communication networks. He has written numerous papers in each of these areas, and he has authored or coauthored sixteen textbooks.

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