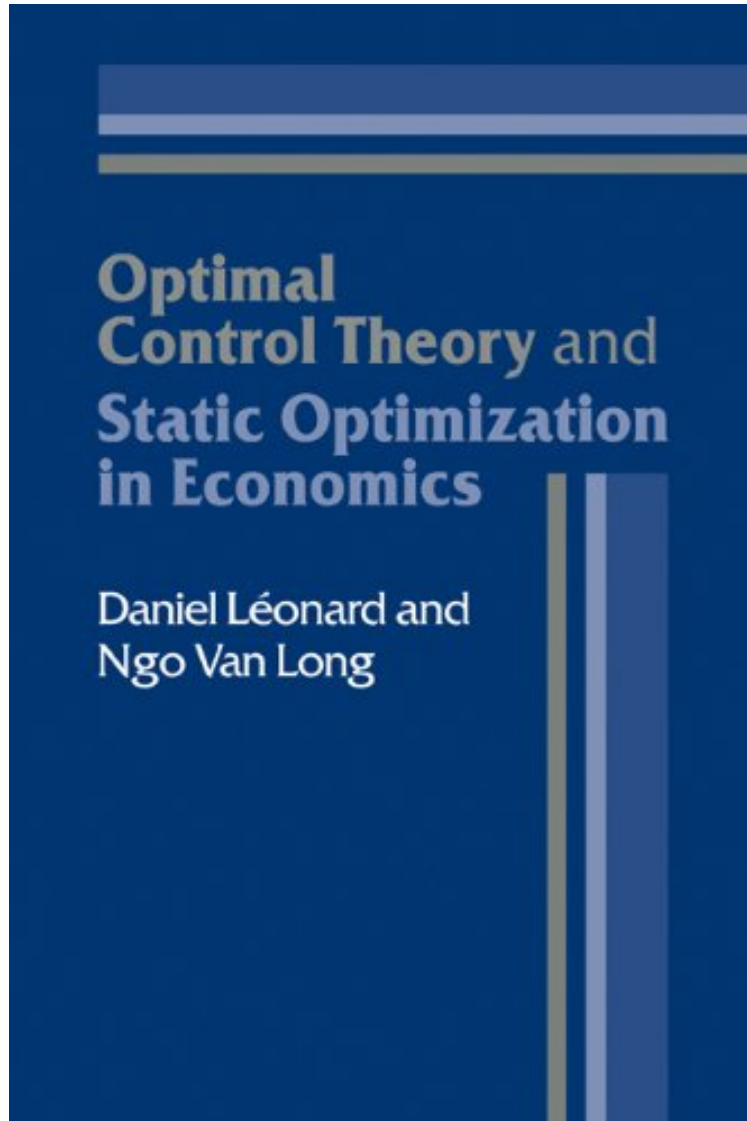


Optimal Control Theory and Static Optimization in Economics

Daniel Leacut;onard, Ngo van Long
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Daniel Leacut;onard, Ngo van Long : Optimal Control Theory and Static Optimization in Economics before purchasing it in order to gage whether or not it would be worth my time, and all praised Optimal Control Theory and Static Optimization in Economics:

5 of 5 people found the following review helpful. One of the more useful textsBy Yang WangPurchased this text for a graduate dynamic optimization in economics course at Rice. It is very well written with excellent examples. Did quite a few problems, they are well designed to illuminate the topics covered. Almost no useful coverage of numerical methods, which is what I most wanted to take away from the course. The emphasis is on theory, there is a decent section on static optimization and differential equations. Wish we could have used this text for math-econ rather than

Rudin, it is more practical for applied economists (I'm doing a marketing PhD) who don't do heavy theory work that require the real-analysis machinery. Overall, an excellent text if you are not looking for numerical methods. I would suggest Adda and Cooper and Judd for application with numerical methods. 12 of 18 people found the following review helpful. marvellousBy A CustomerI am almost sure that mathematicians and "orthodox" economists do not like this book but for graduates with a lousy background in and a certain degree of fear of mathematics it is a perfect tool to begin and get affected.

Optimal control theory is a technique being used increasingly by academic economists to study problems involving optimal decisions in a multi-period framework. This textbook is designed to make the difficult subject of optimal control theory easily accessible to economists while at the same time maintaining rigour. Economic intuitions are emphasized, and examples and problem sets covering a wide range of applications in economics are provided to assist in the learning process. Theorems are clearly stated and their proofs are carefully explained. The development of the text is gradual and fully integrated, beginning with simple formulations and progressing to advanced topics such as control parameters, jumps in state variables, and bounded state space. For greater economy and elegance, optimal control theory is introduced directly, without recourse to the calculus of variations. The connection with the latter and with dynamic programming is explained in a separate chapter. A second purpose of the book is to draw the parallel between optimal control theory and static optimization. Chapter 1 provides an extensive treatment of constrained and unconstrained maximization, with emphasis on economic insight and applications. Starting from basic concepts, it derives and explains important results, including the envelope theorem and the method of comparative statics. This chapter may be used for a course in static optimization. The book is largely self-contained. No previous knowledge of differential equations is required.