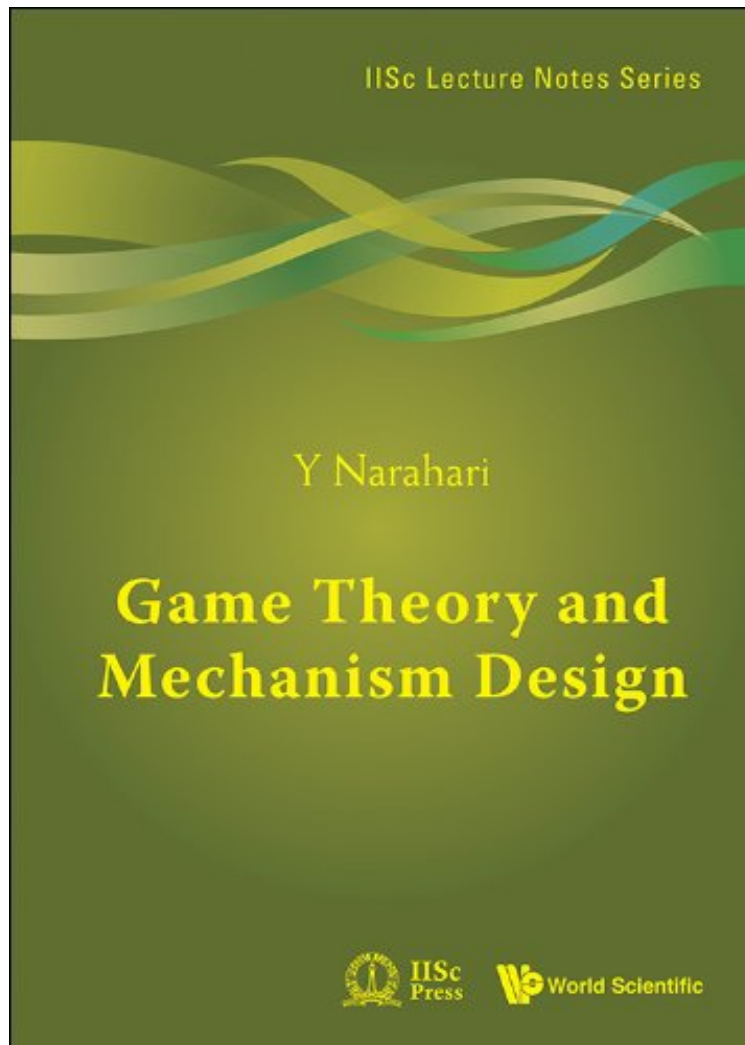


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## Game Theory and Mechanism Design: 4 (IISc Lecture Notes Series)

Y Narahari

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**Y Narahari : Game Theory and Mechanism Design: 4 (IISc Lecture Notes Series)** before purchasing it in order to gage whether or not it would be worth my time, and all praised Game Theory and Mechanism Design: 4 (IISc Lecture Notes Series):

3 of 4 people found the following review helpful. This Textbook is SuperbBy Brent M. EastwoodY Narahari is a hero of mine. He is doing heroic work. His lecture notes on mechanism design theory and computer science led me to a career breakthrough in my own research on mechanism design, computer science, machine learning, international relations, econometrics, economics, data science and political science. Professor Narahari dedicated this textbook to Leonid Hurwicz, Eric Maskin and Roger Myerson. In this textbook, Professor Narahari has built a ladder for me and many others to climb up and stand on the shoulders of giants.

This book offers a self-sufficient treatment of a key tool, game theory and mechanism design, to model, analyze, and solve centralized as well as decentralized design problems involving multiple autonomous agents that interact strategically in a rational and intelligent way. The contents of the book provide a sound foundation of game theory and mechanism design theory which clearly represent the "science" behind traditional as well as emerging economic applications for the society. The importance of the discipline of game theory has been recognized through numerous Nobel prizes in economic sciences being awarded to game theorists, including the 2005, 2007, and 2012 prizes. The book distills the marvelous contributions of these and other celebrated game theorists and presents it in a way that can be easily understood even by senior undergraduate students. A unique feature of the book is its detailed coverage of mechanism design which is the art of designing a game among strategic agents so that a social goal is realized in an equilibrium of the induced game. Another feature is a large number of illustrative examples that are representative of both classical and modern applications of game theory and mechanism design. The book also includes informative biographical sketches of game theory legends, and is specially customized to a general engineering audience. After a thorough reading of this book, readers would be able to apply game theory and mechanism design in a principled and mature way to solve relevant problems in computer science (esp, artificial intelligence/machine learning), computer engineering, operations research, industrial engineering and microeconomics.

"I am very pleased that Y Narahari has written this lovely text, which presents the fundamentals of game theory and mechanism design clearly and concisely. In doing so, Dr Narahari has performed a great service to students and researchers interested in the lively interface between engineering sciences and economics." -- Professor Eric Maskin, Harvard University, Nobel Laureate in Economic Sciences, 2007 "The theory of Games and Mechanism Design find today wide applications in Economics, Engineering, and Operations Research. This is one of the few books which present a detailed account of both Non-Cooperative and Cooperative Games as well as Mechanism Design, all under one cover. Proofs of important theorems are given in a clear and succinct manner and the bibliographical and biographical references are particularly valuable. The book can serve both as a graduate text as well as a reference volume. I highly recommend it." -- Sanjoy K Mitter, Massachusetts, Institute of Technology, Cambridge, MA, USA "This is a splendid book for engineers by an engineer. It has the ideal choice of topics and emphasis that reflects the driving themes in game theory, such as mechanism design, that have lead the revival of game theory in recent times and its multifarious applications in cybercommerce and allied areas. The lucidly written byte-sized chapters rich with examples and historical details make it an exciting read. This is the right book at the right time." -- Vivek Borkar, Indian Institute of Technology-Bombay, Mumbai, India "This book covers a subject which now straddles at least three subjects mdash; Economics, Mathematics and Computer Science. It is a comprehensive presentation for a wide range of readers from the novice to experts in related areas who want to inform themselves of Game Theory and Mechanism Design. The book has a very readable from-first-principles approach to topics which commendably illuminates while not sacrificing rigor." -- Ravi Kannan, Microsoft Research and Indian Institute of Science, Bangalore, India "Narahari's book is a beautifully written text that handles both introductory material and advanced topics well." -- Preston McAfee, Google, Mountain View, CA, USA "This marvelous book on Game Theory and Mechanism Design is an essential reference for beginners and practitioners alike. The book covers the basic concepts needed to understand game theory and powerful practical implications of the theory embodied in mechanism design. Narahari excels at elucidating the essentials of game theory, while motivating the reader with a number of illustrative examples and real-world applications from engineering, economics and networks. It is fun to read and should be on the shelf of any student or practitioner interested in the practical applications of game theory." -- Krishna Pattipati, University of Connecticut, Storrs, CT, USA "Game Theory is the formal analysis of strategic behavior. It originated with the classic book of von Neumann and Morgenstern in the 1940's and over the last 70 years, has become a vital ingredient in both the social and engineering sciences. Professor Narahari is a leading expert in the burgeoning area of game theoretic applications to computer science. His lucid and elegant book, packed with examples and historical background, is a wonderful introduction to modern Game Theory. It clearly lays out the central concepts and results of the theory while conveying its potential for providing insights to a range of interesting practical problems. The book will be invaluable to students from diverse backgrounds such as economics, mathematics, and engineering. " -- Arunava Sen, Indian Statistical Institute, New Delhi, India "Game Theory and Mechanism Design is impressive in its broad coverage of cooperative games, non-cooperative games and mechanism design from an engineering perspective. The book is rich in examples and exercises, and couples historical appraisals of the evolution of the field with careful mathematical proofs. It should be valuable both as a graduate text and for reference." -- Chris Dance, Xerox Research Centre, Europe, Grenoble, France

From the Inside Flap

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