1. Record Nr. UNINA9910255021703321 Autore Chakrabarti Bikas K Titolo Econophysics of the Kolkata Restaurant Problem and Related Games: Classical and Quantum Strategies for Multi-agent, Multi-choice Repetitive Games / / by Bikas K. Chakrabarti, Arnab Chatterjee, Asim Ghosh, Sudip Mukherjee, Boaz Tamir Cham: .: Springer International Publishing: .: Imprint: Springer. . Pubbl/distr/stampa 2017 **ISBN** 3-319-61352-9 Edizione [1st ed. 2017.] Descrizione fisica 1 online resource (XI, 208 p. 43 illus., 33 illus. in color.) Collana New Economic Windows, , 2039-411X Disciplina 004.1 Soggetti Economic theory Sociophysics **Econophysics** Mathematical physics Quantum computers **Spintronics** Economic Theory/Quantitative Economics/Mathematical Methods Data-driven Science, Modeling and Theory Building Theoretical, Mathematical and Computational Physics Quantum Information Technology, Spintronics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Introduction -- Kolkata Paise Restaurant problem -- Phase transition in the Kolkata Paise Restaurant problem -- Zipf's law from Kolkata Paise Restaurant problem -- Minority Game and Kolkata Paise Restaurant problem -- From classical games, the Kokata Paise Restaurant game, to Quantum Games -- Some recent developments: A brief discussion. Sommario/riassunto This book provides the first comprehensive introduction to multiagent, multi-choice repetitive games, such as the Kolkata Restaurant Problem and the Minority Game. It explains how the tangible formulations of these games, using stochastic strategies developed by

statistical physicists employing both classical and quantum physics, have led to very efficient solutions to the problems posed. Further, it

includes sufficient introductory notes on information-processing strategies employing both classical statistical physics and quantum mechanics. Games of this nature, in which agents are presented with choices, from among which their goal is to make the minority choice, offer effective means of modeling herd behavior and market dynamics and are highly relevant to assessing systemic risk. Accordingly, this book will be of interest to economists, physicists, and computer scientists alike.