Record Nr. UNINA9910795624003321 Autore McEachern Andrew **Titolo** Game Theory [[electronic resource]]: A Classical Introduction, Mathematical Games, and the Tournament / / by Andrew McEachern Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2017 **ISBN** 3-031-02118-5 Edizione [1st ed. 2017.] Descrizione fisica 1 online resource (XIV, 103 p.) Collana Synthesis Lectures on Games and Computational Intelligence, , 2573-6493 510 Disciplina Soggetti Mathematics Engineering Computational intelligence Popular Culture Artificial intelligence Technology and Engineering Computational Intelligence Artificial Intelligence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Preface -- Acknowledgments -- Introduction: The Prisoner's Dilemma Nota di contenuto and Finite State Automata -- Games in Extensive Form with Complete Information and Backward Induction -- Games in Normal Form and the Nash Equilibrium -- Mixed Strategy Nash Equilibria and Two-Player Zero-Sum Games -- Mathematical Games -- Tournaments and Their Design -- Afterword -- Bibliography -- Author's Biography. Sommario/riassunto This book is a formalization of collected notes from an introductory game theory course taught at Queen's University. The course introduced traditional game theory and its formal analysis, but also moved to more modern approaches to game theory, providing a broad introduction to the current state of the discipline. Classical games, like the Prisoner's Dilemma and the Lady and the Tiger, are joined by a procedure for transforming mathematical games into card games. Included is an introduction and brief investigation into mathematical

games, including combinatorial games such as Nim. The text examines techniques for creating tournaments, of the sort used in sports, and demonstrates how to obtain tournaments that are as fair as possible with regards to playing on courts. The tournaments are tested as inclass learning events, providing a novel curriculum item. Example tournaments are provided at the end of the book for instructors interested in running a tournament in their own classroom. The book is appropriate as a text or companion text for a one-semester course introducing the theory of games or for students who wish to get a sense of the scope and techniques of the field.