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Nota di contenuto	Adding Expert Knowledge and Exploration in Monte-Carlo Tree Search -- A Lock-Free Multithreaded Monte-Carlo Tree Search Algorithm -- Monte-Carlo Tree Search in Settlers of Catan -- Evaluation Function Based Monte-Carlo LOA -- Monte-Carlo Kakuro -- A Study of UCT and Its Enhancements in an Artificial Game -- Creating an Upper-Confidence-Tree Program for Havannah -- Randomized Parallel Proof-

Number Search -- Hex, Braids, the Crossing Rule, and XH-Search -- Performance and Prediction: Bayesian Modelling of Fallible Choice in Chess -- Plans, Patterns, and Move Categories Guiding a Highly Selective Search -- 6-Man Chess and Zugzwangs -- Solving Kriegspiel Endings with Brute Force: The Case of KR vs. K -- Conflict Resolution of Chinese Chess Endgame Knowledge Base -- On Drawn K-In-A-Row Games -- Optimal Analyses for 3×n AB Games in the Worst Case -- Automated Discovery of Search-Extension Features -- Deriving Concepts and Strategies from Chess Tablebases -- Incongruity-Based Adaptive Game Balancing -- Data Assurance in Opaque Computations.

Sommario/riassunto

This book contains the papers of the 12th Advances in Computer Games C- ference (ACG 2009) held in Pamplona, Spain. The conference took place during th th May 11-13,2009 in conjunction with the 13 Computer Olympiad and the 16 World Computer Chess Championship. The Advances in Computer Games conference series is a major international forum for researchers and developers interested in all aspects of arti'cial int- ligence and computer game playing. The Pamplona conference was de'nitively characterized by fresh ideas for a large variety of games. The Program Committee (PC) received 41 submissions. Each paper was i- tiallysenttoatleastthreereferees. Ifcon'ictingviewsonapaperwerereported, it was sent to an additional referee. Out of the 41 submissions, one was wi- drawn before the ?nal decisions were made. With the help of many referees (see after the preface), the PC accepted 20 papers for presentation at the conference and publication in these proceedings. Theabove-mentionedsetof20paperscoversawiderangeofcomputergames. The papers deal with many di'erent research topics. We mention: Monte-Carlo Tree Search, Bayesian Modeling, SelectiveSearch, theUseofBruteForce,C- ?ict Resolution, Solving Games, Optimization, Concept Discovery, Incongruity Theory, and Data Assurance. The 17 games that are discussed are: Arimaa, Breakthrough, Chess, Chinese Chess, Go, Havannah, Hex, Kakuro, k-in-a-Row, Kriegspiel, LOA, 3 x n AB Games,Poker,Roshambo,SettlersofCatan,SumofSwitches, andVideoGames. We hope that the readers will enjoy the research e'orts performed by the authors. Below we provide a brief characterization of the 20 contributions, in the order in which they are published in the book.