Record Nr. UNINA9910809110603321 Autore Chen Chun-hung Titolo Stochastic simulation optimization: an optimal computing budget allocation / / Chun-Hung Chen, Loo Hay Lee Singapore; ; Hackensack, N.J., : World Scientific, c2011 Pubbl/distr/stampa **ISBN** 1-62870-230-3 1-283-14386-0 9786613143860 981-4282-65-0 Edizione [1st ed.] Descrizione fisica 1 online resource (248 p.) System engineering and operations research;; v. 1 Collana Altri autori (Persone) LeeLoo Hay 519.2 Disciplina Soggetti Systems engineering - Simulation methods Stochastic processes Mathematical optimization Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references (p. 219-224) and index. Nota di contenuto Foreword; Preface; Acknowledgments; Contents; 1. Introduction to Stochastic Simulation Optimization; 2. Computing Budget Allocation; 3. Selecting the Best from a Set of Alternative Designs: 4. Numerical Implementation and Experiments; 5. Selecting An Optimal Subset; 6. Multi-objective Optimal Computing Budget Allocation; 7. Large-Scale Simulation and Optimization; 8. Generalized OCBA Framework and Other Related Methods; Appendix A: Fundamentals of Simulation; Appendix B: Basic Probability and Statistics; Appendix C: Some Proofs in Chapter 6; Appendix D: Some OCBA Source Codes; References Index Sommario/riassunto With the advance of new computing technology, simulation is becoming very popular for designing large, complex, and stochastic engineering systems, since closed-form analytical solutions generally do not exist for such problems. However, the added flexibility of simulation often creates models that are computationally intractable. Moreover, to obtain a sound statistical estimate at a specified level of confidence, a large number of simulation runs (or replications) is usually required for

each design alternative. If the number of design alternatives is large,