1. Record Nr. UNISA996495167603316

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Titolo	Maximum-entropy sampling : algorithms and application / / Marcia Fampa and Jon Lee
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2022] ©2022
ISBN	3-031-13078-2
Descrizione fisica	1 online resource (206 pages)
Collana	Springer series in operations research
Disciplina	519.3
Soggetti	Mathematical optimization Maximum entropy method Mathematical optimization - Methodology Optimització matemàtica Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references (pages 183-191) and index.
Nota di contenuto	Intro -- Preface -- Overview -- Notation -- Contents -- The problem and basic properties -- Differential entropy -- The MESP and the CMESP -- Hardness -- A solvable case -- The complementary problem -- Scaling -- Masks -- Submodularity -- Branch-and-bound -- The branch-and-bound algorithmic framework for MESP -- Global upper bound for early termination -- Good lower bounds -- Greedy -- Swapping -- Approximation algorithm -- The branch-and-bound algorithmic framework for CMESP -- Upper bounds -- Spectral bounds -- Unconstrained -- Constrained -- Integer linear optimization -- An ILP-based diagonal bound for CMESP -- An ILP-based partition bound for MESP -- linx bound -- Convexity of linx -- Duality for linx -- Fixing variables in linx -- Computing linx and Dlinx solutions -- Scaling for linx -- The complementary problem of linx-gamma -- Factorization bound -- The Lagrangian dual of Fact -- Duality for DFact -- Fixing variables in DDFact -- Computing DDFact and DFact solutions -- Properties of the factorization bound -- NLP bound -- Convexity of NLP -- Scaling for NLP -- Good parameters for NLPgamma -- Strategies to select parameters for NLPgamma -- Duality and the

logarithmic-barrier problem for gNLP -- Fixing variables in gNLP -- The logarithmic-barrier algorithm for gNLP -- NLP-gamma in the branch-and-bound algorithm -- BQP bound -- Convexity of BQP -- Duality for BQP -- Fixing variables in BQP -- A good feasible solution of DBQP from BQP -- Scaling for BQP -- Mixing bounds -- The mixing framework -- Optimizing the mixing parameters -- Duality for mixing -- Fixing variables in mix -- A good feasible solution of Dmix from mix -- Mixing the BQPgamma bound with the complementary BQPgamma bound -- Duality for smBQP -- Fixing variables in smBQP -- A good feasible solution of DsmBQP from smBQP -- Comparison of bounds -- Environmental monitoring.
The setting -- MESP within statistics and optimal experimental design -- MESP and environmental statistics -- From raw data to covariance matrices -- An example -- Opportunities -- Developing algorithmic advances for MESP/CMESP -- Variable fixing and branch-and-bound: state of the art -- Optimizing gamma for NLPgamma -- Solvable cases of MESP and mask optimization -- OA for CMESP -- MESP/CMESP variations and cousins -- Applications -- Basic formulae and inequalities -- Preliminary miscellany -- Square matrices -- Symmetric matrices -- Positive definite and semidefinite matrices -- References -- Index.