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Titolo	Regularization, optimization, kernels, and support vector machines // edited by Johan A.K. Suykens, KU Leuven, Belgium, Marco Signoretto, KU Leuven, Belgium, Andreas Argyriou, Ecole Centrale Paris, France
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Descrizione fisica	1 online resource (522 p.)
Collana	Chapman and Hall/CRC Machine Learning & Pattern Recognition
Classificazione	COM021030COM037000TEC007000
Disciplina	511.8 511/.8
Soggetti	Mathematical models Mathematical statistics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	A Chapman and Hall book.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Front Cover; Contents; Preface; Contributors; Chapter 1: An Equivalence between the Lasso and Support Vector Machines; Chapter 2: Regularized Dictionary Learning; Chapter 3: Hybrid Conditional Gradient-Smoothing Algorithms with Applications to Sparse and Low Rank Regularization; Chapter 4: Nonconvex Proximal Splitting with Computational Errors; Chapter 5: Learning Constrained Task Similarities in Graph-Regularized Multi-Task Learning; Chapter 6: The Graph-Guided Group Lasso for Genome-Wide Association Studies Chapter 7: On the Convergence Rate of Stochastic Gradient Descent for Strongly Convex Functions Chapter 8: Detecting Ineffective Features for Nonparametric Regression; Chapter 9: Quadratic Basis Pursuit; Chapter 10: Robust Compressive Sensing; Chapter 11: Regularized Robust Portfolio Estimation; Chapter 12: The Why and How of Nonnegative Matrix Factorization; Chapter 13: Rank Constrained Optimization Problems in Computer Vision; Chapter 14: Low-Rank Tensor Denoising and Recovery via Convex Optimization; Chapter 15: Learning Sets and Subspaces; Chapter 16: Output Kernel Learning Methods Chapter 17: Kernel-Based Identification of Systems with Multiple

Outputs Using Nuclear Norm Regularization Chapter 18: Kernel Methods for Image Denoising; Chapter 19: Single-Source Domain Adaptation with Target and Conditional Shift; Chapter 20: Multi-Layer Support Vector Machines; Chapter 21: Online Regression with Kernels

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Sommario/riassunto

Obtaining reliable models from given data is becoming increasingly important in a wide range of different applications fields including the prediction of energy consumption, complex networks, environmental modelling, biomedicine, bioinformatics, finance, process modelling, image and signal processing, brain-computer interfaces, and others. In data-driven modelling approaches one has witnessed considerable progress in the understanding of estimating flexible nonlinear models, learning and generalization aspects, optimization methods, and structured modelling. One area of high impact both in theory and applications is kernel methods and support vector machines. Optimization problems, learning, and representations of models are key ingredients in these methods. On the other hand, considerable progress has also been made on regularization of parametric models, including methods for compressed sensing and sparsity, where convex optimization plays an important role. At the international workshop ROKS 2013 Leuven, 1 July 8-10, 2013, researchers from diverse fields were meeting on the theory and applications of regularization, optimization, kernels, and support vector machines. At this occasion the present book has been edited as a follow-up to this event, with a variety of invited contributions from presenters and scientific committee members. It is a collection of recent progress and advanced contributions on these topics, addressing methods including.--

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