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Soggetti	Information theory Fourier analysis Computer science—Mathematics Computer mathematics Machine learning Signal processing Image processing Speech processing systems Information and Communication, Circuits Fourier Analysis Mathematical Applications in Computer Science Machine Learning Signal, Image and Speech Processing
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	An Introduction to Compressed Sensing -- Quantized Compressed Sensing: a Survey -- On reconstructing functions from binary measurements -- Classification scheme for binary data with extensions -- Generalization Error in Deep Learning -- Deep learning for trivial inverse problems -- Oracle inequalities for local and global empirical risk minimizers -- Median-Truncated Gradient Descent: A Robust and Scalable Nonconvex Approach for Signal Estimation -- Reconstruction

Methods in THz Single-pixel Imaging.

Sommario/riassunto

The chapters in this volume highlight the state-of-the-art of compressed sensing and are based on talks given at the third international MATHEON conference on the same topic, held from December 4-8, 2017 at the Technical University in Berlin. In addition to methods in compressed sensing, chapters provide insights into cutting edge applications of deep learning in data science, highlighting the overlapping ideas and methods that connect the fields of compressed sensing and deep learning. Specific topics covered include: Quantized compressed sensing Classification Machine learning Oracle inequalities Non-convex optimization Image reconstruction Statistical learning theory This volume will be a valuable resource for graduate students and researchers in the areas of mathematics, computer science, and engineering, as well as other applied scientists exploring potential applications of compressed sensing.
