1. Record Nr. UNINA9910741174903321

Autore	Rostami Mohammad
Titolo	Compressed sensing with side information on the feasible region / / Mohammad Rostami
Pubbl/distr/stampa	Cham [Germany] ; ; New York, : Springer, 2013
ISBN	3-319-00366-6
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (77 p.)
Collana	Springer briefs in electrical and computer engineering, , 2191-8112
Disciplina	005.746
Soggetti	Coding theory Data compression (Telecommunication) Signal processing - Digital techniques Sampling (Statistics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Compressed Sensing -- Compressed Sensing with Side Information on Feasible Region -- Application: Image Deblurring for Optical Imaging -- Application: Surface Reconstruction in Gradient Field -- Conclusions and Future Work.
Sommario/riassunto	This book discusses compressive sensing in the presence of side information. Compressive sensing is an emerging technique for efficiently acquiring and reconstructing a signal. Interesting instances of Compressive Sensing (CS) can occur when, apart from sparsity, side information is available about the source signals. The side information can be about the source structure, distribution, etc. Such cases can be viewed as extensions of the classical CS. In these cases we are interested in incorporating the side information to either improve the quality of the source reconstruction or decrease the number of samples required for accurate reconstruction. In this book we assume availability of side information about the feasible region. The main applications investigated are image deblurring for optical imaging, 3D surface reconstruction, and reconstructing spatiotemporally correlated sources. The author shows that the side information can be used to improve the quality of the reconstruction compared to the classic compressive sensing. The book will be of interest to all researchers

working on compressive sensing, inverse problems, and image processing.