

1. Record Nr.	UNINA9910619276503321
Titolo	Compressed Sensing in Information Processing // edited by Gitta Kutyniok, Holger Rauhut, Robert J. Kunsch
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2022
ISBN	3-031-09745-9
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (549 pages)
Collana	Applied and Numerical Harmonic Analysis, , 2296-5017
Disciplina	621.3678 621.3822
Soggetti	Harmonic analysis Mathematics - Data processing Signal processing Image processing Abstract Harmonic Analysis Computational Mathematics and Numerical Analysis Digital and Analog Signal Processing Image Processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Hierarchical compressed sensing (G. Wunder) -- Proof Methods for Robust Low-Rank Matrix Recovery (T. Fuchs) -- New Challenges in Covariance Estimation: Multiple Structures and Coarse Quantization (J. Maly) -- Sparse Deterministic and Stochastic Channels: Identification of Spreading Functions and Covariances (Dae Gwan Lee) -- Analysis of Sparse Recovery Algorithms via the Replica Method (A. Berezhi) -- Unbiasing in Iterative Reconstruction Algorithms for Discrete Compressed Sensing (F.H. Fischer) -- Recovery under Side Constraints (M. Pesavento) -- Compressive Sensing and Neural Networks from a Statistical Learning Perspective (E. Schnoor) -- Angular Scattering Function Estimation Using Deep Neural Networks (Y. Song) -- Fast Radio Propagation Prediction with Deep Learning (R. Levie) -- Active Channel Sparsification: Realizing Frequency Division Duplexing Massive MIMO with Minimal Overhead (M. B. Khalilsarai) -- Atmospheric Radar

Imaging Improvements Using Compressed Sensing and MIMO (J. O. Aweda) -- Over-the-Air Computation for Distributed Machine Learning and Consensus in Large Wireless Networks (M. Frey) -- Information Theory and Recovery Algorithms for Data Fusion in Earth Observation (M. Fornasier) -- Sparse Recovery of Sound Fields Using Measurements from Moving Microphones (A. Mertins) -- Compressed Sensing in the Spherical Near-Field to Far-Field Transformation (C. Culotta-López).

---

Sommario/riassunto

This contributed volume showcases the most significant results obtained from the DFG Priority Program on Compressed Sensing in Information Processing. Topics considered revolve around timely aspects of compressed sensing with a special focus on applications, including compressed sensing-like approaches to deep learning; bilinear compressed sensing - efficiency, structure, and robustness; structured compressive sensing via neural network learning; compressed sensing for massive MIMO; and security of future communication and compressive sensing.

---