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Greedy algorithms for compressed sensing / Thomas Blumensath, Michael E. Davies, and Gabriel Rilling -- ; 9. Graphical models concepts in compressed sensing / Andrea Montanari -- ; 10. Finding needles in compressed haystacks / Robert Calderbank and Sina Jafarpour -- ; 11. Data separation by sparse representations / Gitta Kutyniok -- ; 12. Face recognition by sparse representation / Arvind Ganesh, Andrew Wagner, Zihan Zhou, Allen Y. Yang, Yi Ma, and John Wright.

Sommario/riassunto	Compressed sensing is an exciting, rapidly growing field, attracting considerable attention in electrical engineering, applied mathematics, statistics and computer science. This book provides the first detailed introduction to the subject, highlighting recent theoretical advances and a range of applications, as well as outlining numerous remaining research challenges. After a thorough review of the basic theory, many cutting-edge techniques are presented, including advanced signal modeling, sub-Nyquist sampling of analog signals, non-asymptotic analysis of random matrices, adaptive sensing, greedy algorithms and use of graphical models. All chapters are written by leading researchers in the field, and consistent style and notation are utilized throughout. Key background information and clear definitions make this an ideal resource for researchers, graduate students and practitioners wanting to join this exciting research area. It can also serve as a supplementary textbook for courses on computer vision, coding theory, signal processing, image processing and algorithms for efficient data processing.