Starck, Jean-Luc and Murtagh, Fionn and Fadili, Jalal M. *Sparse Image and Signal Processing: Wavelets and Related Geometric Multiscale Analysis Second Edition.* **Cambridge New York, New York: Cambridge University Press, 2015, 428 pp. $89.99 (Hardbound).**

This thoroughly updated new edition presents state-of-the-art sparse and multiscale image and signal processing. It covers linear multiscale geometric transforms, such as wavelet, ridgelet, or curvelet transforms, and nonlinear multiscale transforms based on the median and mathematical morphology operators. Along with an up-to-the-minute description of required computation, it covers the latest results in inverse problem solving and regularization, sparse signal decomposition, blind source separation, inpainting, and compressed sensing. New chapters and sections cover multiscale geometric transforms for three-dimensional data (data cubes), data on the sphere (geolocated data), dictionary learning, and nonnegative matrix factorization.

The authors wed theory and practice in examining applications in areas such as astronomy, including recent results from the European Space Agency's Herschel mission, biology, fusion physics, cold dark matter simulation, medical MRI, digital media and forensics. MATLAB® and IDL code, available online at www.SparseSignalRecipes.info, accompany these methods and all applications.

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