

List of Publications

Herwig Wendt

1 International Journals

- [1] P. Abry, H. Wendt, S. Jaffard, G. Didier, "Multivariate scale-free temporal dynamics: From spectral (Fourier) to fractal (wavelet) analysis," *Comptes Rendus de l'Académie des Sciences*, 2019. *To appear*.
- [2] S. Jaffard, S. Seuret, H. Wendt, R. Leonarduzzi, P. Abry, "Multifractal formalisms for multivariate analysis," *Proc. Royal Society A*, 2019. *To appear*.
- [3] R. Leonarduzzi, P. Abry, H. Wendt, S. Jaffard, H. Touchette, "A Generalized Multifractal Formalism for the Estimation of Nonconcave Multifractal Spectra," *IEEE T. Signal Proces.*, vol. 67, no. 1, pp. 110-119, 2019. [.pdf](#)
- [4] H. Wendt, P. Abry, K. Kiyono, J. Hayano, E. Watanabe, Y. Yamamoto, "Wavelet p-Leader Non Gaussian Multiscale Expansions for Heart Rate Variability Analysis in Congestive Heart Failure Patients," *IEEE T. Biomedical Engineering*, vol. 66, no. 1, pp. 80-87, 2019. [.pdf](#)
- [5] S. Jaffard, S. Seuret, H. Wendt, R. Leonarduzzi, S. Roux, P. Abry, "Multivariate multifractal analysis," *Applied and Computational Harmonic Analysis*, vol. 46, no. 3, pp. 653-663, 2019. [.pdf](#)
- [6] H. Wendt, S. Combexelle, Y. Altmann, J.-Y. Tourneret, S. McLaughlin, P. Abry, "Multifractal analysis of multivariate images using gamma Markov random field priors," *SIAM J. on Imaging Sciences (SIIMS)*, vol. 11, no. 2, pp. 1294-1316, 2018. [.pdf](#)
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- [9] H. Wendt, G. Didier, S. Combexelle, P. Abry, "Multivariate Hadamard self-similarity: testing fractal connectivity," *Physica D*, vol. 356-357, pp. 1-36, 2017. [.pdf](#)
- [10] J. Frecon, N. Pustelnik, N. Dobigeon, H. Wendt, P. Abry, "Bayesian selection for the l2-Potts model regularization parameter: 1D piecewise constant signal denoising," *IEEE T. Signal Proces.*, vol. 65, no. 19, pp. 5215-5224, 2017. [.pdf](#)
- [11] R. Leonarduzzi, H. Wendt, P. Abry, S. Jaffard, C. Melot, "Finite resolution effects in p-leader multifractal analysis," *IEEE T. Signal Proces.*, 2017, vol. 65, no. 13, pp. 3359-3368. [.pdf](#)
- [12] R. Fontunge, P. Abry, K. Fukuda, D. Veitch, K. Cho, P. Borgnat, H. Wendt, "Scaling in Internet Traffic: a 14 year and 3 day longitudinal study, with multiscale analyses and random projections," *IEEE/ACM T. Networking*, vol. 25, no. 4, 2017. [.pdf](#)

- [13] N. Pustelnik, H. Wendt, P. Abry, N. Dobigeon, "Combining local regularity estimation and total variation optimization for scale-free texture segmentation," *IEEE T. Computational Imaging*, vol. 2, no. 4, pp. 468–479, 2016. [.pdf](#)
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2 National Journals

- [31] H. Wendt, P. Abry, S.G. Roux, S. Jaffard, B. Vedel, “Analyse multifractale d’image: l’apport des coefficients dominants,” *Revue Traitement du Signal*, vol. 25, no. 4–5, 2009. [.pdf](#)

3 International Conferences with Selection Panels

- [32] M. Dimiccoli, H. Wendt, “Enhancing Temporal Segmentation by Nonlocal Self-Similarity,” *IEEE Int. Conf. Image Proces. (ICIP)*, Taipei, Taiwan, Oct. 2019. *To appear.*
- [33] P. Abry, Y. Malevergne, H. Wendt, M. Senneret, L. Jaffrès, B. Liaustrat, “Shuffling for Understanding Multifractality - Application to Asset Price Time Series,” *European Signal Processing Conference (EUSIPCO)*, A Coruna (Spain), Sept. 2019. [.pdf](#)
- [34] B.C. Boniece, G. Didier, H. Wendt, P. Abry, “On Multivariate non-Gaussian Scale Invariance: Fractional Lévy Processes and Wavelet Estimation,” *European Signal Processing Conference (EUSIPCO)*, A Coruna (Spain), Sept. 2019. [.pdf](#)
- [35] V. Catrambone, H. Wendt, E. P. Scilingo, R. Barbieri, P. Abry, G. Valenza, “Heartbeat Dynamics Analysis under Cold-Pressure Test using Wavelet p-Leader Non-Gaussian Multiscale Expansions,” *International IEEE EMBS Conference (EMBC)*, Berlin (Germany), July 2019. [.pdf](#)
- [36] V. Catrambone, G. Valenza, E. P. Scilingo, N. Vanello, H. Wendt, R. Barbieri, P. Abry, “Wavelet p-Leader Non-Gaussian Multiscale Expansions for EEG series: an Exploratory Study on Cold-Pressor Test,” *International IEEE EMBS Conference (EMBC)*, Berlin (Germany), July 2019. [.pdf](#)
- [37] H. Wendt, P. Abry, G. Didier, “Bootstrap-based bias reduction for the estimation of the self-similarity exponents of multivariate time series,” *IEEE Int. Conf. Acoust., Speech, and Signal Proces. (ICASSP)*, 2019. [.pdf](#)
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- [43] K. Basinet, A. Klein, P. Abry, S. G. Roux, H. Wendt, P. Messier, "Performance of two multiscale texture algorithms in classifying silver gelatine paper via k-nearest neighbors," *IEEE Int. Conf. Image Proces. (ICIP)*, Athens, Greece, Oct. 2018. [.pdf](#)
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