

# List of Publications

Herwig Wendt

## 1 International Journals

- [1] H. Wendt, S. Combrexelle, Y. Altmann, J.-Y. Tourneret, S. McLaughlin, P. Abry “Multifractal analysis of multivariate images using gamma Markov random field priors,” 2017. *submitted*.
- [2] H. Wendt, G. Didier, S. Combrexelle, P. Abry, “Multivariate Hadamard self-similarity: testing fractal connectivity,” 2017. *to appear*. [.pdf](#)
- [3] 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., 2017. *to appear*. [.pdf](#)
- [4] 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](#)
- [5] 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](#)
- [6] 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](#)
- [7] T. Nakamura, K. Kiyono, H. Wendt, P. Abry, Y. Yamamoto, “Multiscale Analysis of Intensive Longitudinal Biomedical Signals and its Clinical Applications,” Proc. IEEE, vol. 104, no. 2, pp. 242–261, 2016. [www](#)
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- [10] H. Wendt, N. Dobigeon, J.-Y. Tourneret, M. Albinet, C. Goldstein, N. Karouche, “Detection and Correction of Glitches in a Multiplexed Multi-channel Data Stream - Application to the MADRAS Instrument,” IEEE T. Geoscience and Remote Sensing, vol. 54, no. 5, pp. 2803–2811, 2016. [www](#) | [.pdf](#)
- [11] F. Andersson, M.V. de Hoop, H. Wendt, “Multi-scale reverse-time-migration type imaging using the dyadic parabolic decomposition of phase space,” SIAM J. on Imaging Sciences (SIIMS), vol. 8, no. 4, pp. 2383–2411, 2015. [.pdf](#)

- [12] S. Combrexelle, H. Wendt, N. Dobigeon, J.-Y. Tourneret, S. McLaughlin, P. Abry, “Bayesian Estimation of the Multifractality Parameter for Image Texture Using a Whittle Approximation,” *IEEE Trans. Image Proc.*, vol. 24, no. 8, pp. 2540–2551, Aug. 2015. [.pdf](#)
- [13] P. Abry, S. G. Roux, H. Wendt, P. Messier, A. G. Klein, N. Tremblay, P. Borgnat, S. Jaffard, B. Vedel, J. Coddington, L. Daffner, “Multiscale Anisotropic Texture Analysis and Classification of Photographic Prints: Art scholarship meets image processing algorithms,” *IEEE Signal Proc. Mag.*, vol. 32, no. 4, pp. 18–27, July 2015. [.pdf](#)
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- [22] H. Wendt, P. Abry, S. Jaffard, “Bootstrap for empirical multifractal analysis,” *IEEE Signal Proc. Mag.*, vol. 24, no. 4, pp. 38–48, 2007. [.pdf](#)
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## 2 National Journals

- [24] 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

- [25] P. Ciuciu, H. Wendt, S. Combrexelle, P. Abry, "Spatially regularized multifractal analysis for fMRI Data," *International IEEE EMBS Conference (EMBC)*, Jeju (South Korea), July 2017. [.pdf](#)
- [26] G. Valenza, H. Wendt, K. Kiyono, J. Hayano, E. Watanabe, Y. Yamamoto, P. Abry, R. Barbieri, "Multiscale Properties of Instantaneous Parasympathetic Activity in Severe Congestive Heart Failure: A Survivor vs Non-Survivor Study," *International IEEE EMBS Conference (EMBC)*, Jeju (South Korea), July 2017. [.pdf](#)
- [27] M. Le Goff, J.-Y. Tourneret, H. Wendt, M. Ortner, M. Spigai, "Deep Learning for Cloud Detection," *International Conference on Pattern Recognition Systems (ICPRS)*, Madrid (Spain), July 2017. [.pdf](#)
- [28] S. Combrexelle, H. Wendt, G. Didier, P. Abry, "Multivariate Scale-free dynamics: Testing Fractal Connectivity," *IEEE Int. Conf. Acoust., Speech, and Signal Proces. (ICASSP)*, New Orleans (USA), March 2017. [.pdf](#)
- [29] R. Leonarduzzi, P. Abry, S. Jaffard, H. Wendt, L. Gournay, T. Kyriacopoulou, C. Martineau, C. Martinez, "P-Leader Multifractal Analysis for Text Type Identification," *IEEE Int. Conf. Acoust., Speech, and Signal Proces. (ICASSP)*, New Orleans (USA), March 2017. [.pdf](#)
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- [31] P. Abry, A.G. Klein, P. Messier, S. Roux, M.H. Ellis, W.A. Sethares, D. Picard, Y. Zhai, D.L. Neuhoff, H. Wendt, S. Jaffard, C.R. Johnson Jr., "Wave Paper Analysis through Texture Similarities," *IEEE Asilomar Conf. Signals, Systems and Computers*, Pacific Grove (USA), Nov. 2016. [.pdf](#)
- [32] R. Leonarduzzi, P. Abry, H. Wendt, K. Kiyono, Y. Yamamoto, E. Watanabe, J. Hayano, "Scattering Transform of Heart Rate Variability for the Prediction of Ischemic Stroke in Patients with Atrial Fibrillation," *Int. Workshop Biosignal Interpretation (BSI)*, Osaka, Japan, Nov. 2016. [.pdf](#)
- [33] S. Combrexelle, H. Wendt, Y. Altmann, J.-Y. Tourneret, S. McLaughlin, P. Abry, "Bayesian joint estimation of the multifractality parameter of image patches using Gamma Markov Random Field priors," *IEEE Int. Conf. Image Proces. (ICIP)*, Phoenix (USA), Sept. 2016. [.pdf](#)
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- [36] F. Andersson, M. Carlsson, H. Wendt, "On a fixed-point algorithm for structured low-rank approximation and estimation of half-life parameters," *European Signal Processing Conference (EUSIPCO)*, Budapest (Hungary), Sept. 2016. [.pdf](#)
- [37] J. Frecon, N. Pustelnik, H. Wendt, L. Condat, P. Abry, "Multifractal-based texture segmentation using variational procedure," *IEEE IVMSWP Workshop*, Bordeaux (France), July 2016. [.pdf](#)
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- [47] G. Valenza, H. Wendt, K. Kiyono, J. Hayano, E. Watanabe, Y. Yamamoto, P. Abry, R. Barbieri, "Point-Process High-Resolution Representations of Heartbeat Dynamics for Multiscale Analysis: a CHF Survivor Prediction Study," *37th Annual International IEEE EMBS Conference (EMBC)*, Milano (Italy), Aug. 2015. [.pdf](#)
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## 4 National Conferences with Selection Panels

- [79] S. Combrexelle, H. Wendt, J.-Y. Tournaret, N. Dobigeon, S. McLaughlin, P. Abry, "Estimation bayésienne locale du paramètre de multifractalité à l'aide d'un algorithme de Monte Carlo Hamiltonien," *Coll. Sur le Traitement du Signal et des Images GRETSI 15*, Lyon (F), 2015. [.pdf](#)
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## 5 Book Chapters

- [88] P. Abry, S. Jaffard, R. Leonarduzzi, C. Melot, H. Wendt, “New exponents for pointwise singularities classification,” in *Proc. Fractals and Related Fields III*, 19-26 September 2015, Porquerolles, France, S. Seuret and J. Barral, Eds., 2017. *to appear*.
- [89] S. Jaffard, P. Abry, C. Melot, R. Leonarduzzi, H. Wendt, “Multifractal analysis based on p-exponents and lacunarity exponents,” in *Fractal Geometry and Stochastics V*, C. Bandt et al., Eds., *Series Progress in Probability*, Vol. 70, pp. 279–313, Birkhäuser, 2015. [.pdf](#)
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## 6 Patents

- [95] J.-Y. Tourneret, H. Wendt, N. Dobigeon, "Procédé de détection et/ou de correction automatique d'erreurs dans un flux de données multiplexées : Method for automatic detection and/or correction of errors in multiplexed data stream," French Patent Nr. 13 55645, filed 17/06/2013, published 19/12/2014, delivered 17/02/2017. [.pdf](#)

## 7 Technical Reports

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