List of Publications

Thomas Trigano

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Journal papers

[1] T. TRIGANO and Z. FRADKIN, *Fast Algorithm for Time Decay Estimation with Applications to Electrostatic Ion Beam Traps*, in Measurement Science and Technology, Vol 34(2), pp. 025701, 2023, Q2.

[2] T. TRIGANO and D. LUENGO, *Intracardiac ECG Pulse Localization using Overlapping Block Sparse Reconstruction*, in Biomedical Signal Processing and Control, Vol 73(1), pp. 103921, Jan. 2023, Q1.

[3] M. KHAYAT, S. DERI, D. WOLF, T. TRIGANO, O. MEDALIA and K. BEN-HARUSH, *Biomimetic nuclear lamin fibers with remarkable toughness and stiffness*, in International Journal of Biological Macromolecules, Vol 163, pp. 2060-2067, Nov. 2020, Q2.

[4] T. TRIGANO, S. VAKNIN and D. LUENGO, *Fast Proximal Optimization for Sparse Reconstruction with Dictionaries Based on Translated Waveforms*, in Signal Processing, Vol 169(4), 107379, 2020, Q1.

[5] T. TRIGANO and Y. BECHOR, *Fast Background Removal of JPEG Images Based on HSV Polygonal Cuts for a Foot Scanner Device*, in Journal of Real-Time Image Processing, 17(4), pp. 981-992, 2019, Q2.

[6] D. LUENGO, D. MELTZER and T. TRIGANO, *An Efficient Method to Learn Overcomplete Multi-Scale Dictionaries of ECG Signals*, in Applied Science, 8(12), pp. 2569, 2018, Q2.

[7] T. TRIGANO and Y. SEPULCRE, *Data-driven Parameter Selection for Activity Estimation in Nuclear Spectroscopy*, in Signal Processing, 151, 99-106, Oct. 2018, Q1.

[8] D. BYKHOVSKY and T. TRIGANO, *Numerical Generation of Compound Random Processes with Arbitrary Autocorrelation Functions*, in Fluctuation and Noise Letters, Nov. 2017, Q3.

[9] T. TRIGANO, I. SHEVTSOV and D. LUENGO, *CoSA: An Accelerated ISTA Algorithm for Dictionaries Based on Translated Waveforms*, in Signal Processing, 139, 131-135, Oct. 2017, Q1.

[10] T. TRIGANO and Y. COHEN, *Intensity Estimation of Spectroscopic Signals with an Improved Sparse Reconstruction Algorithm*, in IEEE Signal Processing Letters 24(5), 530-534, 2017, Q1.

[11] T. TRIGANO, Y. SEPULCRE, and Y. RITOV, *Sparse Reconstruction Algorithm for Nonhomogeneous Counting Rate Estimation*, in IEEE Transactions in Signal Processing 65(2), 372-385, 2017, Q1.

[12] T. TRIGANO, I. GILDIN and Y. SEPULCRE, *Pile-up Correction Using an Iterated Sparse Reconstruction Method*, in IEEE Signal Processing Letters 22(9), 1392-1395, 2015, Q1.

[13] T. TRIGANO, E. BARAT and T. DAUTREMER, *Fast Digital Filtering of Spectrometric Data for Pile-up Correction*, in IEEE Signal Processing Letters, 22(7), 973-977, 2015, Q1.

[14] D. LUENGO, S. MONZON, T. TRIGANO, J. VIA and A. ARTES-RODRIGUES, *Blind Analysis of Atrial Fibrillation Electrograms: Sparsity-Aware Formulation*, in Integrated Computer-Aided Engineering 22(1), 77-85, 2015, Q1.

[15] Y. SEPULCRE, T. TRIGANO and Y. RITOV, *Sparse Regression Algorithm for Counting Rate Estimation in Gamma Spectrometry*, in IEEE Transactions in Signal Processing 61(17), 4347-4359, 2013, , Q1.

[16] J. Gavan, T. Trigano, S. Tapuchi and A. Kuperman, *Mitigation of Mobile Radio Parasitic Radiation Effects: A Review*, in Journal of Communication Engineering & Systems 2(1), 2012.

[17] R. Goot, T. Trigano, S. Tapuchi and J. Gavan, *Adaptative Allocation of Power Transmission for HAPs*, in Annals of Telecommunications, Vol 67, 1-7 pages, 2012.

[18] T. Trigano, U. Isserles and Y. Ritov, *Semiparametric curve alignment and shift density estimation for biological data*, in IEEE Transactions in Signal Processing 59(5), 1970-1984, 2011, Q1.

[19] T. Trigano, T. Montagu, E. Moulines, F. Roueff and A. Souloumiac, *Analytical Pile-Up Correction Method for HPGe Detectors*, in IEEE Transactions on Signal Processing 55(10), 4871-4881, 2007, Q1.

[20] E. Moulines, F. Roueff, A. Souloumiac and T. Trigano, *Nonparametric Inference about Photon Energy from Indirect Measurements*, in Bernoulli 13(2), 365-388, 2007, Q1. http://isi.cbs.nl/bernoulli/future.htm)

Book Chapters

[1] D. Meltzer, D. Luengo and T. Trigano, *ECG-based Biometric Recognition*, in Teaching and Subjects on Biomedical Engineering, 157-171 pages, Acco CV, Leuven, Belgium, 2021

[2] D. Luengo, D. Oses and T. Trigano, *Digital Signal Processing of ECG and PCG signals*, in Teaching and Subjects on Biomedical Engineering, 132-156 pages, Acco CV, Leuven, Belgium, 2021

[3] T. Trigano, U. Isserles, T. Montagu and Y. Ritov, *Semiparametric Curve Alignment and Density Estimation: ECG Data Processing Revisited*, in Signal Processing, 217-240, 2010. http://www.intechweb.org)

Patents

[1] L. Schwartz, Y. Bechor and T. Trigano, *Process to isolate object of interest in image*, US patent US10417772B2 Process to isolate object of interest in image, 2018. https://patents.google.com/patent/US10417772B2/en.

[2] T. Trigano, M. Tal, Y. Mashiach and Y. Sepulcre, *A Method of Improving the Precision of Counting Rate Estimation of Radioactive Sources*, Israeli patent, 2013.

[3] E. Barat, T. Dautremer, T. Trigano and T. Brisset, *System and apparatus of processing of a signal consisting in pileups of individual pulses*, French patent 2870603, 2005, European extension 2005773039, 2007, 49 pages. http://www.wipo.int/pctdb/en/wo.jsp?wo=2005121835.

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[1] D. Luengo, A. Treytl, P. Arras, K. Kornijenko, G. Tabunshchyk and T. Trigano, *Improving Quality of Life through the Engineering Education. Case Study*, in E-TEMS, 5 pages, 2022.

[2] D. Luengo, J. Via and T. Trigano, *Efficient Iteratively Rewighted LASSO Algorithm for Cross-Products Penalized Sparse Solutions*, in EURASIP Signal Processing Conference (EUSIPCO) 2020, 5 pages, 2020.

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[4] D. Luengo, D. Meltzer and T. Trigano, *Sparse ECG Representation with a Multi-Scale Dictionary Derived from Real-World Signals*, in 41st International Conference on Telecommunications and Signal Processing, 5 pages, 2018.

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[6] D. Luengo Garcia, J. Via, S. Monzon, T. Trigano and A. Artes-Rodrigues, *Cross-Products LASSO*, in IEEE International Conference on Acoustics, Speech and Signal Processing, 4 pages, 2013.

[7] M. Lopatin, N. Moskovitch, T. Trigano and Y. Sepulcre, *Pileup Attenuation for Spectroscopic Signals Using A Sparse Reconstruction*, in Proceedings of 27th IEEE Convention of Electrical and Electronics Engineers in Israel, 5 pages, 2013.

[8] S. Monzon, T. Trigano ,D. Luengo and A. Artes-Rodrigues, *Sparse Spectral Analysis Of Atrial Fibrillation Electrograms*, in 2012 IEEE International Workshop on Machine Learning for Signal Processing, 5 pages, 2013.

[9] Y. Sepulcre and T. Trigano, *Iterated Sparse Reconstruction for Activity Estimation in Nuclear Spectroscopy* , in EURASIP Signal Processing Conference, 5 pages, 2012.

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[13] T. Trigano, U. Isserles and Y. Ritov, *Semiparametric Density Estimation of Shifts for alignment of ECG data*, in EURASIP Signal Processing Conference, 5 pages, 2008. http://www.eusipco2008.org

[14] T. Dautremer, E. Barat and T. Trigano, *Nonparametric Bayesian Estimation of Censored counters Intensity from the indicator data*, in 26th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering, 8 pages, 2006. http://djafari.free.fr/maxent2006/

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Technical reports

[1] T. TRIGANO, *Deconvolution methods for discrete histograms: multiplicative gradient algorithm for denoising energy spectra*, CEA Saclay report 05-031 (French), 29 pages, 2005.

[2] T. TRIGANO, *Numerical inversion of the Laplace transform: application for pileup correction of continuous-time signals for γ spectrometry*, CEA Saclay report 04-015 (French), 44 pages, 2004.

[3] E. BARAT, T. DAUTREMER and T. TRIGANO, *Stochastic modeling for the photonic signal: pileup correction algorithm for discrete-time signals from spectrometry*, CEA Saclay report 03-018 (French), 44 pages, 2003.

Theses

[1] T. TRIGANO, *Statistical spectromatric signal processing: pileup correction algorithms for gamma spectrometry*, PhD thesis (French), 159 pages, 2005.

[2] T. TRIGANO, *On the asymptotic properties of Hill's estimator*, M.S. thesis, Paris 6 University, 47 pages, 2001.