

# Julien Marot

## Liste de Publications

Mes travaux de recherche ont donné lieu à la publication de :

**19 articles (dont 18 JCR) publiés dans des revues internationales avec comité de lecture dont 6 avant la thèse,**  
**30 articles publiés dans des conférences internationales avec comité de lecture dont 3 avant la thèse,**  
**2 chapitre de livre.**

### Liste classée des publications (celles-ci ne doivent pas être jointes)

Mon nom est en **gras**, le nom de mes doctorants est souligné. Quand l'un de mes doctorants est co-auteur, il est toujours premier auteur.

Mots-clés : classification, reconnaissance de formes, segmentation, télédétection

*Articles dans revues internationales à comité de lecture*

[R20] F. Zidane, V.L. Coli, J. Lanteri, **J. Marot**, L. Brochier, D. Binder and C. Migliaccio, “Artificial Intelligence-Based Low-Terahertz Imaging for Archaeological Shards”, IEEE Trans. On Antennas and Propagation.

*Soumis, en revision mineure*

[R19] R. Aznavourian, S. Guenneau, B. Ungureanu, and **J. Marot**, “Morphing for faster computations with finite difference time domain algorithms”, EPJ Applied Metamaterials, vol. 9, no 2, 19 pages, February 2022.

doi: 10.1051/epjam/2021011

IF: 1.8

Q3 dans le domaine Condensed Matter Physics

[R18] **J. Marot**, C. Migliaccio, J. Lanteri, P. Lauga, S. Bourennane, and L. Brochier, “Joint design of the hardware and the software of a radar system with a bio-inspired optimizer: application to security check”, Remote sensing, vol. 12, no 18 (3097), 37 pages, Sept. 2020.

doi: 10.3390/rs12183097

IF: 4.5

Q1 dans le domaine earth and planetary sciences

[R17] F. Zidane, J. Lanteri, **J. Marot**, L. Brochier, N. Joachimowicz, H. Roussel and C. Migliaccio, “Non-destructive control of fruit quality via mm-waves and classification technique”, IEEE Antennas and Propagation Magazine, vol. 62, no 5, pp. 43-54, Oct. 2020.

doi: 10.1109/MAP.2020.3003222

IF : 3.7

Q1 dans le domaine electrical and electronic engineering

[R16] B. Martin, **J. Marot**, and S. Bourennane, “Mixed grey wolf optimizer for the joint denoising and unmixing of multispectral images”, Applied Soft Computing, vol. 74, pp. 385-

410, January 2019.

doi: 10.1016/j.asoc.2018.10.019

IF: 5.4

Q1 dans le domaine software

[R15] A. Zidi, **J. Marot**, S. Bourennane, and K. Spinnler, "Bio-Inspired Optimization Algorithms for Automatic Estimation of Multiple Subspace Dimensions in a Tensor-Wavelet Denoising Algorithm", Journal of Remote Sensing Technology, bowenpublishing, vol. 4, Issue 1, pp. 90-114, December 2016.

doi: 10.18005/JRST0401008

Non JCR

[R14] N. Boughnim, **J. Marot**, C. Fossati and S. Bourennane, "Hand posture recognition using jointly optical flow and dimensionality reduction", EURASIP Journal on Advances in Signal Processing. 2013:167, November 2013

doi: 10.1186/1687-6180-2013-167

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R13] H. Jiang, **J. Marot**, C. Fossati, and S. Bourennane, "Strongly concave star-shaped contour characterization by algebra tools", Elsevier Signal Processing, vol. 92, pp. 1567-1579, January 2012

doi:10.1016/j.sigpro.2011.10.002

IF : 4.3

Q1 dans le domaine electrical and electronic engineering et dans le domaine Signal Processing

[R12] H. Jiang, **J. Marot**, C. Fossati, and S. Bourennane, "Circular contour retrieval in real-world conditions by higher order statistics and an alternating-least squares algorithm", EURASIP Journal on Advances in Signal Processing 2011, 2011:112, November 2011

doi:10.1186/1687-6180-2011-112

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R11] S. Bourennane, C. Fossati, and **J. Marot**, "Contour Estimation in Image Using Virtual Signal", optical engineering, Opt. Eng. 49(5), 057002, May 2010.

doi:10.1117/1.3421576

IF: 1.1

Q1 dans le domaine engineering

[R10] S. Bourennane, C. Fossati, and **J. Marot**, "Localization of narrow-band sources in unknown spatially correlated noise," EURASIP Journal on Advances in Signal Processing, vol. 2010, Article ID 732591, 11 pages, April 2010.

doi:10.1155/2010/732591

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R9] **J. Marot**, C. Fossati, and S. Bourennane, "About advances in tensor data denoising methods", EURASIP Journal on Advances in Signal Processing, Volume 2008, Article ID 235357, 12 pages. doi:10.1155/2008/235357, Sept. 2008.

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R8] S. Bourennane, C. Fossati, and **J. Marot**, "About Noneigenvector Source Localization Methods," EURASIP Journal on Advances in Signal Processing, vol. 2008, Article ID 480835, 13 pages, May 2008.

doi:10.1155/2008/480835.

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R7] D. Muti, S. Bourennane and **J. Marot**, "Lower-Rank Tensor Approximation and Multiway Filtering", SIAM Journal on Matrix Analysis and Applications (SIMAX), vol. 30, no. 3, pp. 1172-1204, Sept 2008.

doi: 10.1137/060653263.

IF: 1.9

Q2 dans le domaine analysis

[R6] **J. Marot** and S. Bourennane, "Propagator method for an application to contour estimation", Pattern recognition letters, vol. 28, no. 12, pp. 1556-1562, Sept. 2007.

doi:10.1016/j.patrec.2007.03.013.

IF: 4.7

Q1 dans le domaine computer vision and pattern recognition

[R5] **J. Marot** and S. Bourennane, "Phase Distortion Estimation by DIRECT and spline interpolation algorithms", IEEE Signal Processing Letters, Vol. 14, no. 7, pp. 461-464, July 2007. doi: 10.1109/LSP.2006.891317.

IF: 4.4

Q1 dans le domaine Signal processing

[R4] **J. Marot** and S. Bourennane, "Array processing and fast Optimization Algorithms for Distorted Circular Contour Retrieval", EURASIP Journal on Advances in Signal Processing, Volume 2007, Article ID 57354, 13 pages, February 2007.

doi:10.1155/2007/57354.

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R3] **J. Marot** and S. Bourennane, "Subspace-Based and DIRECT Algorithms for Distorted Circular Contour Estimation", IEEE Trans. on Image Processing, vol. 16, no. 9, pp. 2369-2378, Sept. 2007.

doi: 10.1109/TIP.2007.903907.

IF: 10.5

Q1 dans le domaine software

[R2] S. Bourennane and **J. Marot**, "Contour estimation by array processing methods", EURASIP Journal on Applied Signal Processing, Volume 2006, Article ID 95634, 15 pages, December 2006. doi:10.1155/ASP/2006/95634.

IF: 1.4

Q2 dans le domaine electrical and electronic engineering

[R1] S. Bourennane and **J. Marot**, "Estimation of straight line offsets by a high-resolution method", IEE Proceedings Vision Image and Signal Processing, vol. 153, no. 2, pp. 224-229, April 2006.

doi: 10.1049/ip-vis:20050149.  
IF: 1.6  
Q2 dans le domaine signal processing

*Ouvrages individuels et direction d'ouvrages collectifs*

[Editorial]

Editorial Board

S. Bourennane, **J. Marot**, C. Fossati, A. Bouridane, and K. Spinnler, "Special Issue : Multidimensional Signal Processing and Applications", Guest Editors: Salah Bourennane, Julien Marot, Caroline Fossati, Ahmed Bouridane, and Klaus Spinnler, The Scientific World Journal, Article ID 365126, Hindawi, April 2014.

Revue indexée JCR.

IF: 1.6

doi.org/10.1155/2014/365126

*Chapitres d'ouvrages*

[B2] S. Bourennane, C. Fossati and **J. Marot**, "Array Processing: Underwater Acoustic Source Localization, Underwater Acoustics", edited by Prof. Salah Bourennane, InTech. ISBN: 978-953-51-0441-4, Pp 13-40, March 2012

doi: 10.5772/33146

[B1] **J. Marot**, C. Fossati, and Y. Caulier, "About array processing methods for image segmentation", "Recent Advances in Signal Processing", edited by Ashraf A. Zaher, INTECH, ISBN 978-953-307-002-5. Pp 15-36, November 2009.

doi: 10.5772/7456

*Brevets, licences, logiciels*

Logiciel sous Licence CeCILL-B libre

<https://www.fresnel.fr/perso/marot/#Softwares>

*Actes publiés de conférences internationales avec comité de lecture*

[C33] F. Zidane, J. Lanteri, **J. Marot**, and C. Migliaccio, "Impact of the Pre-Processing in AI-Based Classification at Mm-Waves", IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science (URSI) 2022, Denver, July 2022.

*Accepté, à paraître*

[C32] R. Aznavourian, J. Lanteri, C. Migliaccio, and **J. Marot**, "Improved AI-based tool for radar image denoising", 12th International Conference on Elastic, Electrical, Transport, and Optical Properties of Inhomogeneous Media, ETOPIIM 12, Besançon, France, July 2022.

*Accepté, à paraître*

[C31] F. Zidane, J. Lanteri, L. Brochier, **J. Marot**, and C. Migliaccio, "Fruit Sorting with Amplitude-only Measurements", EuMW 2021, London, Feb. 2022.

*Accepté, à paraître*

[C30] F. Zidane, J. Lanteri, C. Migliaccio, and **J. Marot**, "System measurement optimized for damages detection in fruit", *2021 IEEE Conference on Antenna Measurements & Applications (CAMA)*, pp. 550-554, Nov. 2021.  
doi: 10.1109/CAMA49227.2021.9703658.

[C29] W. Chekkar, J. Lanteri, **J. Marot** and C. Migliaccio, "Clutter Removal for Detection of Slow-moving Targets with a 76-81 GHz FMCW Radar," *2021 IEEE Conference on Antenna Measurements & Applications (CAMA)*, 2021, pp. 409-412,  
doi: 10.1109/CAMA49227.2021.9703653.

[C28] F. Zidane, J. Lanteri, C. Migliaccio and **J. Marot**, "Early detection of damages in fruits with amplitude-only measurements," *2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI)*, 2021, pp. 2010-2011,  
doi: 10.1109/APS/URSI47566.2021.9703755.

[C27] **J. Marot** and M. Bensoam, " Telepresence robot, nano-computers and advanced cameras as educational tools ", *ICIT 2021*, Valence, Spain, pp. 1246-1251, 10-12 March 2021.  
doi: 10.1109/ICIT46573.2021.9453588

[C26] **J. Marot**, C. Migliaccio, J. Lantéri, P. Lauga and S. Bourennane, "Co-engineering of a radar system with mixed grey wolf optimizer: application to concealed object classification," *2020 17th European Radar Conference (EuRAD)*, Utrecht, Netherlands, pp. 370-373, Jan. 2021.  
doi: 10.1109/EuRAD48048.2021.00101.

[C25] C. Migliaccio, L. Brochier, J. Lantéri, P. Lauga, **J. Marot** and B. Cosson, "MMW Imaging using polarimetric measurements," *2019 16th European Radar Conference (EuRAD)*, Paris, France, pp. 265-268, Oct. 2019.  
ISBN: 978-1-7281-3733-9

[C24] B. Martin, **J. Marot** and S. Bourennane, " Improved discrete grey wolf optimizer ", *EUSIPCO'18*, Rome, Italy, pp. 494-498, September 2018.  
doi: 10.23919/EUSIPCO.2018.8552925

[C23] **J. Marot** and S. Bourennane, "Raspberry Pi for Image Processing Education", *EUSIPCO'17*, Kos, Greece, pp. 2428-2432, Augst 26- September 1, 2017.  
doi 10.23919/EUSIPCO.2017.8081633

[C22] A. Zidi, K. Spinnler, **J. Marot** and S. Bourennane, "Multispectral image denoising in wavelet domain with unsupervised tensor subspace-based method," *2016 6th European Workshop on Visual Information Processing (EUVIP)*, Marseille, pp. 1-6, October 2016.  
doi: 10.1109/EUVIP.2016.7764599

[C21] A. Zidi, **J. Marot**, S. Bourennane, and K. Spinnler, "Automatic rank estimation of Parafac decomposition and application to multispectral image wavelet denoising" *IEEE ICIP'16*, Phoenix, USA, pp. 3101-3105, Sept. 2016.  
doi: 10.1109/ICIP.2016.7532930

[C20] **J. Marot**, and S. Bourennane, “Improvement of a Wavelet-Tensor Denoising Algorithm by Automatic Rank Estimation” In: Battiato S et al. Advanced Concepts for Intelligent Vision Systems: 16<sup>th</sup> Int. Conf. ACIVS 2015, Catania, Italy. Proceedings. Cham: Springer International Publishing; p. 779–790. October 2015.  
doi: 10.1007/978-3-319-25903-1\_67

[C19] A. Zidi, **J. Marot**, K. Spinnler, and S. Bourennane, “Unmixing of Hyperspectral Images with Pure Prior Spectral Pixels”, In Proceedings of the 10th International Conference on Computer Vision Theory and Applications (VISAPP-2015), pp. 153-158, March 2015.  
doi: 10.5220/0005311101530158

[C18] A. Zidi, J. Juan, **J. Marot**, and S. Bourennane, “Nonnegative matrix factorization with spatial prior and reference spectra application to remote hyperspectral image understanding”, Visual Information Processing (EUVIP), 2014 5th European Workshop on , (EUVIP’14), pp. 1-6, December 10-12 2014.  
doi: 10.1109/EUVIP.2014.7018397

[C17] **J. Marot** and S. Bourennane, "Recent advances on tensor models and their relevance for multidimensional data processing," 2014 48th Asilomar Conference on Signals, Systems and Computers, ASILOMAR’14, Pacific Grove, CA, pp. 586-590, Nov. 2014.  
doi: 10.1109/ACSSC.2014.7094513 (*Invitation*)

[C16] **J. Marot** and S. Bourennane, “Particle Swarm Optimization For Blurred Contour Retrieval”, EUSIPCO’14, pp. 810-814, Lisbon, September 2-5 2014.  
INSPEC : 14775521

[C15] T. Lin, **J. Marot**, and S. Bourennane, “ Small Target Detection Improvement in Hyperspectral Image ”, ACIVS’13, Lecture Notes in Computer Science, vol. 8192, pp. 460-469, October 2013.  
doi: 10.1007/978-3-319-02895-8\_41

[C14] **J. Marot** and S. Bourennane, “Leaf marker spectra identification by hyperspectral image acquisition and vertex component analysis”, EUVIP’13, pp. 190-195, June 2013.  
ISBN : 978-82-93269-13-7  
INSPEC: 13838830

[C13] N. Boughnim, **J. Marot**, C. Fossati, S. Bourennane, and F. Guérault, « Fast and improved hand classification using dimensionality reduction and test set reduction », ICASSP’13, pp. 1971-1975, May 2013.  
doi : 10.1109/ICASSP.2013.6637998

[C12] N. Boughnim, **J. Marot**, C. Fossati, and S. Bourennane, « Hand Posture Classification by Means of a New Contour Signature», ACIVS’12, pp. 384-394, September 2012.  
doi: 10.1007/978-3-642-33140-4\_34.

[C11] H. Jiang, **J. Marot**, C. Fossati, and S. Bourennane, « Fuzzy triangle contour characterization by subspace based methods of array processing », SAM’10, pp. 165–168, October 2010.  
doi : 10.1109/SAM.2010.5606727

[C10] **J. Marot**, S. Bourennane, and K. Spinnler, «Metal Surface Control System Based on Successive Contour Estimation», ICIP'10, pp. 2293-2296, September 2010.  
doi : 10.1109/ICIP.2010.5654115

[C9] **H. Jiang**, **J. Marot**, C. Fossati, and S. Bourennane, « Fuzzy contour characterization by subspace based methods of array processing and DIRECT method », EUSIPCO'10, pp. 1344 – 1348, Aalborg, August 23-27, 2010.  
ISSN : 2076-1465

[C8] **J. Marot**, C. Fossati, and S. Bourennane, « Fast Subspace Based Tensor Data Filtering », ICIP'09, pp. 3869-3872, november 2009.  
doi : 10.1109/ICIP.2009.5414048.

[C7] **J. Marot**, Y. Caulier, A. Kuleschov, K. Spinnler, and S. Bourennane, “Contour Detection for Industrial Image Processing by Means of Level Set Methods”, Proceedings of ACIVS conf., pp. 655-663, October 2008.  
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[C6] **J. Marot** and S. Bourennane, « Array processing for intersecting circle retrieval », EUSIPCO'08, pp. 1-5, Lausanne, Switzerland, August 26- September 1, 2008.  
ISSN: 2219-5491  
INSPEC: 15038333

[C5] **J. Marot**, C. Fossati, and S. Bourennane, “Fast subspace-based source localization methods”, IEEE SAM' 08 Sensor Array and Multichannel Signal Processing Workshop, pp. 203-206, July 2008.  
doi: 10.1109/SAM.2008.4606855

[C4] **J. Marot** and S. Bourennane, "Fast tensor signal filtering using fixed point algorithm", IEEE ICASSP'08, pp. 921-924, Apr. 2008.  
doi: 10.1109/ICASSP.2008.4517761.

[C3] **J. Marot**, S. Bourennane, and M. Adel, "Array processing approach for object segmentation in images", IEEE ICASSP'07, Vol. 1, pp. 621-624, Apr. 2007.  
doi: 10.1109/ICASSP.2007.365984

[C2] S. Bourennane and **J. Marot**, "Optimization and interpolation for distorted contour estimation", IEEE ICASSP'06, Vol. 2, pp. 717-20, Apr. 2006.  
doi: 10.1109/ICASSP.2006.1660443

[C1] S. Bourennane and **J. Marot**, "Line parameters estimation by array processing methods", IEEE ICASSP'05, Vol. 4, pp. iv/965- iv/ 968, Mar. 2005.  
doi: 10.1109/ICASSP.2005.1416171

*Actes publiés de conférence internationale francophone avec comité de lecture*

[CN2] **B. Martin**, **J. Marot** and S. Bourennane, “ Real-time face detection and tracking for vending machine data management ”, GRETSI 2017, 26<sup>ème</sup> colloque, Juan Les Pins, 5-8 Sept. 2017. 4 pages.

[CN1] B. Martin, **J. Marot** and S. Bourennane, “ Reconnaissance de genre optimisée par GWO adaptatif”, GRETSI 2017, 26<sup>ème</sup> colloque, Juan Les Pins, 5-8 Sept. 2017. 4 pages.

Autres :

F. Zidane, J. Lanteri, L. Brochier, N. Joachimowicz, H. Roussel, C. Migliaccio, et **J. Marot**, "Tri de pommes par imagerie microonde. Huitième conférence plénière biennale du GDR ONDES", Gif-sur-Yvette, France, Oct 2019.  
hal-02309155.

Manuscrit de thèse

**J. Marot**, ‘Méthodes par sous-espaces et d’optimisation: application en traitement d’antenne, analyse d’image et traitement du signal tensoriel’, Novembre 2007, 200 pages.

Manuscrit d’Habilitation à Diriger des Recherches

**J. Marot**, ‘Méthodes déterministes et méta-heuristiques d’estimation de paramètres pour le traitement des images multidimensionnelles’, Juillet 2019, 200 pages.

Rapport de contrat industriel

**J. Marot**, P. Lauga, S. Bourennane, « Projet Fond Unique Interministériel FUI F14014U: Scanner corporel innovant à hautes performances de détection, Rapport concernant le processus de classification des images radar », 25 pages, Novembre 2019.