

# **PUBLICATIONS**

## **J. ZERUBIA**

### **Theses and HdR**

- [1] J. Zerubia: Contribution à la modélisation et à l'analyse statistique de signaux. Habilitation (HdR), Nice-Sophia Antipolis University, September 1994.
- [2] J. Zerubia: La représentation et le traitement de signaux bruités. PhD, Nice-Sophia Antipolis University, July 1988.
- [3] J. Zerubia: Modélisation d'un signal à partir d'observations bruitées, application à la réduction du bruit pour des signaux de parole. Doctor-Engineer Thesis, Nice-Sophia Antipolis University, October 1986.

### **Books and monographs**

- [1] Z. Kato and J. Zerubia: Markov random fields in image segmentation. Foundation and Trends in Signal Processing Series, Now Pub., World Scientific, September 2012.
- [2] A. Rangarajan, M. Figueiredo and J. Zerubia (Eds): Energy Minimization Methods in Computer Vision and Pattern Recognition. Lecture Notes in Computer Science, number 2683. Springer Verlag, July 2003.
- [3] M. Figueiredo, J. Zerubia and A. K. Jain (Eds): Energy minimization methods in computer vision and pattern recognition. Lecture Notes in Computer Science, number 2134. Springer Verlag, 2001.

### **Book chapters**

- [1] P. Craciun and J. Zerubia: "High-resolution satellite imaging", in Mathematics of Planet Earth: Mathematicians Reflect on How to Discover, Organize, and Protect Our Planet. Society for Industrial and Applied Mathematics (SIAM), 2015.
- [2] P. Pankajakshan, G. Engler, L. Blanc-Féraud and J. Zerubia: "Decovolution and Denoising for Confocal Microscopy", in Modeling in Computational Biology and Biomedicine, pp. 117-163. Springer-Verlag, 2013.

- [3] V. Krylov, G. Moser, S. B. Serpico and J. Zerubia: "Probability Density Function Estimation for Classification of High-Resolution SAR Images", in Signal Processing for Remote Sensing, second edition, pp. 339-363. CRC-Press. 2012.
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- [5] X. Descombes, I. H. Jermyn and J. Zerubia: "Détection d'objets dans une scène", in Problèmes inverses en imagerie et en vision, pages 167-204. Tr. IC2. Ed. Hermès, 2009.
- [6] A. Jalobeanu, J. Zerubia and L. Blanc-Féraud: "Bayesian estimation of blur and noise in remote sensing imaging", in Blind image deconvolution: theory and applications. CRC Press, 2007.
- [7] M. Ortner, X. Descombes and J. Zerubia: "A Reversible Jump MCMC Sampler for Object Detection in Image Processing", in Monte Carlo Methods and Quasi-Monte Carlo Methods. Springer Verlag, 2005.
- [8] J. Zerubia, A. Jalobeanu and Z. Kato: "Markov random fields in image processing, application to remote sensing and astrophysics", in Journal de Physique, volume IV. 2002.
- [9] R. Stoica, X. Descombes, M. N. M. Van Lieshout and J. Zerubia: "An application of marked point process to the extraction of linear networks for images", in Spatial statistics through applications. WITPress, 2002.
- [10] C. Graffigne and J. Zerubia: "Segmentation région : approches statistiques", in Analyse d'images : Filtrage et segmentation. Masson, 1995.
- [11] J. Zerubia and C. Graffigne: "Segmentation contour : approches statistiques", in Analyse d'images : Filtrage et segmentation. Masson, 1995.
- [12] J. Zerubia and C. Graffigne: "Quelques précisions sur l'application des champs markoviens à la segmentation", in Analyse d'images : Filtrage et segmentation. Masson, 1995.

## **International journal publications**

- [1] V. Krylov, G. Moser, S. B. Serpico and J. Zerubia: False Discovery Rate Approach to Unsupervised Image Change Detection. IEEE Transactions on Image Processing, Institute of Electrical and Electronics Engineers, accepted in July 2016.

- [2] I. Hedhli, G. Moser, J. Zerubia and S. Serpico: A New Cascade Model for the Hierarchical Joint Classification of Multitemporal and Multiresolution Remote Sensing Data. IEEE Transactions on Geoscience and Remote Sensing, accepted in April 2016.
- [3] H.-C. Li, V. A. Krylov, P.-Z. Fan, J. Zerubia and W. J. Emery: Unsupervised Learning of Generalized Gamma Mixture Model with Application in Statistical Modeling of High-Resolution SAR Images. IEEE Trans. on Geoscience and Remote Sensing, 54 (4), pp.2153-2170, 2016.
- [4] C. Benedek, M. Shadaydeh, Z. Kato, T. Szirányi and J. Zerubia: Multilayer Markov Random Field Models for Change Detection in Optical Remote Sensing Images. ISPRS Journal of Photogrammetry and Remote Sensing, Elsevier, Special Issue on Multitemporal Remote Sensing Change Detection, 107, pp.22-37, 2015.
- [5] Z. Liu and J. Zerubia: Skin image illumination modeling and chromophore identification for melanoma diagnosis. Physics in Medicine and Biology, Institute of Physics: Hybrid Open Access, 60 (9), pp.3415-3431, 2015.
- [6] A. Voisin, V. Krylov, G. Moser, S. B. Serpico and J. Zerubia: Supervised Classification of Multi-sensor and Multi-resolution Remote Sensing Images with a Hierarchical Copula-based Approach. IEEE Trans. on Geoscience and Remote Sensing, 52 (6), pp.3346-3358, 2014.
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## National journal publications

- [1] P. Craciun and J. Zerubia: Unsupervised marked point process model for boat extraction and counting in harbors from high resolution optical remotely sensed images. *Revue Française de Photogrammétrie et de Télédétection (SFPT)*, 207, pp.33-44, 2014.

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## Fully reviewed conference publications

- [1] I. Hedhli, G. Moser, S. Serpico and J. Zerubia: Contextual Multi-Scale Image Classification on Quadtree. *IEEE International Conference on Image Processing (ICIP)*, Phoenix, United States, September 2016.
- [2] P. Craciun and J. Zerubia: Stochastic Geometry for Multiple Object Tracking in Fluorescence Microscopy. *IEEE International Conference on Image Processing (ICIP)*, Phoenix, United States, September 2016.
- [3] N. Batoool and J. Zerubia: Image-based evaluation of treatment responses of facial wrinkles using LDDMM registration and Gabor features. *Proc. IEEE International Conference on Image Processing (ICIP)*, Québec, Canada, September 2015.
- [4] S.-G. Jeong, Y. Tarabalka and J. Zerubia: Stochastic model for curvilinear structure reconstruction using morphological profiles. *Proc. IEEE International Conference on Image Processing (ICIP)*, Quebec City, Canada, September 2015.
- [5] I. Hedhli, G. Moser, S. B. Serpico and J. Zerubia: New hierarchical joint classification method of SAR-optical multiresolution remote sensing data. *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, August 2015.
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International Geoscience and Remote Sensing Symposium (IGARSS), Milan, Italy, July 2015.

- [7] S.-G. Jeong, Y. Tarabalka and J. Zerubia: Marked Point Process Model for Curvilinear Structures Extraction. pp.436-449, LNCS 8932. Proc. Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR), Hong Kong, Hong Kong SAR China, January 2015.
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- [11] A. Boisbunon, R. Flamary, A. Rakotomamonjy, A. Giros and J. Zerubia: Large Scale Sparse Optimization for Object Detection in High Resolution Images. Proc. IEEE Workshop on Machine Learning for Signal Processing (MLSP), Reims, France, September 2014
- [12] A. Boisbunon and J. Zerubia: Estimation of the Weight Parameter with SAEM for Marked Point Processes Applied to Object Detection. Proc. European Signal Processing Conference (EUSIPCO), Lisbonne, Portugal, September 2014.
- [13] P. Singh, Z. Kato and J. Zerubia: A Multilayer Markovian Model for Change Detection in Aerial Image Pairs with Large Time Differences. Proc. International Conference on Pattern Recognition (ICPR), Stockholm, Sweden, August 2014.
- [14] I. Hedhli, G. Moser, J. Zerubia and S. B. Serpico: Fusion of multitemporal and multiresolution remote sensing data and application to natural disasters. Proc. IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Québec, Canada, July 2014.
- [15] P. Craciun and J. Zerubia: Towards efficient simulation of marked point process models for boat extraction from high resolution optical remotely sensed images. Proc. IEEE International Geoscience and Remote Sensing Symposium (IGARSS), Québec, Canada, July 2014.

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