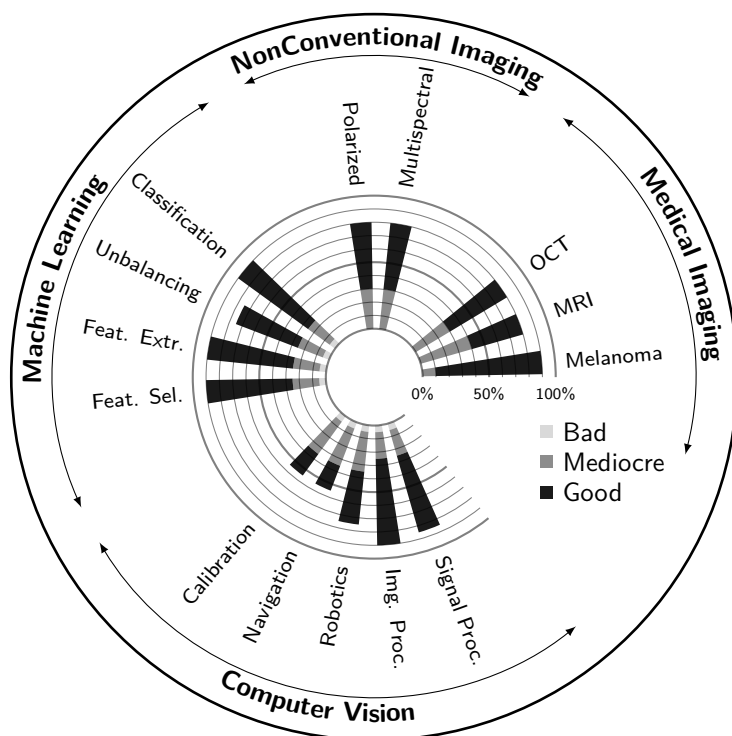




# Mojdeh Rastgo

*Le2i - Laboratoire Electronique, Informatique et Image*

## Research Interests



## Education

### Research

2016 - 2018 **Post-doctoral research**, *Université de Bourgogne, Le2i, Le Creusot(France).*

Title *Polarimetric Vision Applied to Robotics Navigation*

### Studies

2012 - 2016 **Co-joined PhD candidate**, *Universitat de Girona, Girona (Spain), Université de Bourgogne, Le Creusot (France).*

Supervisors Dr. Franck Marzani, Dr. Rafael Garcia, Dr. Olivier Morel

Title *An Approach to Melanoma Classification Exploiting Polarization Information*

Description Developing a classification framework for automatic detection of melanoma lesions while exploiting polarization properties beyond cross-polarized dermoscopes. Using our new polarized dermoscope it was our interest to find new features for classification of melanoma and new techniques for screening of this pigmented lesion.

Soutenue 13 juin 2016

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Mention Trés honorable

2009 - 2011 **Erasmus Mundus Master in Vision and Robotics (ViBOT)**, *Heriot -Watt University, Edinburgh (Scotland); Univeristat de Girona, Girona (Spain); Université de Bourgogne, Le Creusot (France).*

- **2:1 Class Hounor (Mention Bien)**

- Master thesis (Universitat de Girona):

Title *Change Detection in Epiluminescent Microscopy for Early Detection of Skin Cancer*

Supervisor Dr. Rafael Garcia

Description Implementing a new computer aided system in order to detect changes, segment and characterize epiluminescent microscopy images

2005 - 2009 **Bachelor of Electrical and Electronics Engineering**, *University Teknologi PETRONAS, Ipoh (Malaysia).*

- **1<sup>st</sup> Class Hounor, CGPA: 3.64/4.00**

Summer schools

July 2014 **Medical Imaging Summer School (MISS)**, *Favignana, Italy.*

Scholarships

2009-2011 **Erasmus Mundus Master Scholarship.**

European master in Vision and Robotics

2005- 2009 **PETRONAS Bachelor scholarship.**

Bachelor of Electrical and Electronics Engineering

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## Experience

2016-2017 **Vacations**, *Introduction to Image Processing, Digital Signal Processing, Maple*, Université de Bourgogne - Le Creusot - (France).

2012-2014 **Vacations**, *Imagerie médicale*, Universitat de Girona - Girona - (Spain).

- Introduction des méthodes de mise en correspondance et d'alignement en utilisant ITK.
- Introduction à la segmentation en utilisant MevisLab.
- Segmentation and delineation of melanoma lesions.

2011-2012 **Emploi intérimaire**, *Data mining and classification*, Barcelona Digital - Barcelona (Spain).

- Developing a method for continous learning and pruning the classifiers.

2010 **Emploi intérimaire**, *Astronomical image analysis, segmentation and localization of astronomical objects.*, Universitat de Girona - Girona (Spain).

2007 **Emploi intérimaire**, *Oil and Gas platform designers*, Ranhill Worley Parsons Sdn Bhd - Kuala Lumpur (Malaysia).

- Power and electrical department.
- Designing lightning protections systems for structures.

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## Languages

English Fluent in all skills

French intermédiaire

Spanish Basic- Level 2

Arabic Basic

Persian Advanced Level

Mother tongue

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## Habileté informatique

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OS Linux/Unix, Windows, DOS

Programmation C/C++, Python, Java, VHDL, Assembly

Environnement Emacs, QT, VisualStudio.NET, Dev C++, Scientifique Matlab, Maple, OpenCV, ITK  
Eclipse

Typographie L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, Open Office

## Publication

### Journal

**M. Rastgoo, O. Morel, F. Marzani and R. Garcia**, "Automatic Differentiation of Melanoma from Dysplastic Nevi", *Computerized Medical Imaging and Graphics*, vol.43, pp 44-52, 2015

**D. Sidibe, S. Sankar, G. Lemaitre, M. Rastgoo, J. Massich, C. Y. Cheung, G. S. W. Tan, D. Milea, E. Lamoureux, T. Y. Wong, and F. Meriaudeau**, "An anomaly detection approach for the identification of DME patients using SD-OCT images", *Computer Methods and Programs in Biomedicine*, To be appear 2017

**G. Lemaitre, M. Rastgoo, J. Massich, C. Y. Cheung, T. Y. Wong, E. Lamoureux, D. Milea, F. Meriaudeau, and D. Sidibe**, "Classification of SD-OCT Volumes using Local Binary Patterns: Experimental Validation for DME detection", *Journal of Ophthalmology*, vol. 2016, May 2016

### International Conferences

**J. Massich, M. Rastgoo, G. Lemaitre, C. Cheung, T. Y. Wong, D. Sidibe, and F. Meriaudeau**, "Classifying DME vs normal SD-OCT volumes: A review", *ICPR, 2016*, Cancun: Mexico (December 2016)

**D. Sidibe, M. Rastgoo, F. Meriaudeau**, "On Spatio-Temporal Saliency Detection in Videos using Multilinear PCA", *ICPR, 2016*, Cancun: Mexico (December 2016)

**K. Alsaih, G. Lemaitre, J. Massich, M. Rastgoo, D. Sidibe, T. Y. Wong, E. Lamoureux, D. Milea, C. Leung, and F. Meriaudeau**, "Classification of SD-OCT volumes with multi-pyramids, LBP and HoG descriptors: Application to DME detection", *EMBC, 2016*, Orlando: USA (August 2016)

**M. Rastgoo, G. Lemaitre, J. Massich, O. Morel, F. Marzani, R. Garcia and F. Meriaudeau**, "Study of Data Imbalancing for Melanoma Classification", *3<sup>rd</sup> International Conference on BIOIMAGING 2016*. Rome: Italy (February 2016)

**M. Rastgoo, G. Lemaitre, O. Morel, J. Massich, F. Marzani, R. Garcia and D. Sidibe**, "Classification of melanoma lesions using sparse coded features and random forests", *SPIE Medical Imaging 2016*. San Diego: USA (February 2016)

**G. Lemaitre, M. Rastgoo, J. Massich, J. C. Vilanova, P. M. Walker, J. Freixenet, A. Meyer-Baese, F. Meriaudeau, and R. Marti**, "Normalization of T2W-MRI prostate images using Rician a priori", *SPIE Medical Imaging 2016*. San Diego: USA (February 2016)

**A. Meyer-Baese, J. Massich, G. Lemaitre, and M. Rastgoo**, "Real-Time Optical Flow with Theoretically Justified Warping Applied to Medical Imaging", *Breast Image Analysis Workshop (BIA), Medical Image Computing and Computer Assisted Interventions (MICCAI) 2015*. Munich: Germany (October)

**J. Massich, G. Lemaitre, M. Rastgoo, A. Meyer-Baese, J. Marti and F. Meriaudeau**, "An Optimization Approach to Segment Breast Lesions in Ultra-Sound Images using Clinically Validated Visual Cues", *Breast Image Analysis Workshop (BIA), Medical Image Computing and Computer Assisted Interventions (MICCAI) 2015*. Munich: Germany (October)

**G. Lemaitre, M. Rastgoo, J. Massich, S. Sankar, F. Meriaudeau and D. Sidibe**, "Classification of SD-OCT volumes with LBP: application to DME detection", *Ophthalmic Medical Image Analysis Workshop (OMIA), Medical Image Computing and Computer Assisted Interventions (MICCAI) 2015*. Munich: Germany (October)

**M. Rastgoo, O. Morel, F. Marzani and R. Garcia**, "Ensemble Approach for Differentiation of Malignant Melanoma", *International Conference on Quality Control and Artificial Vision (QCAV) 2015*. Le Creusot: France (June 2015)

**M. Rastgoo, G. Lemaitre, X. Rafael, F. Miralles and P. Casale**, "Pruning AdaBoost for Continuous Sensors Mining Applications", *Ubiquitous Data Mining Workshop, 20th European Conference in Artificial Intelligence 2012*. Montpellier: France (August 2012)

**P. Casale, J.M Fernandez, X. Rafael, S. Torrellas, M. Rastgoo, F. Miralles**, "Enhancing User Experience with Brain Neural Computer Interface in Smart Home Environment", *8th IEEE International Conference of Intelligent Environments 2012*. INTENV12, June 2012

#### Technical Reports

**M. Rastgoo**, "An Approach to Melanoma Classification Exploiting Polarization Information", *Universitat de Girona, Université de Bourgogne*. 2016

**M. Rastgoo and R. Garcia**, "Change Detection in Epiluminescent Microscopy for Early Detection of Skin Cancer", *Universitat de Girona, Université de Bourgogne, Heriot Watt University*. 2011