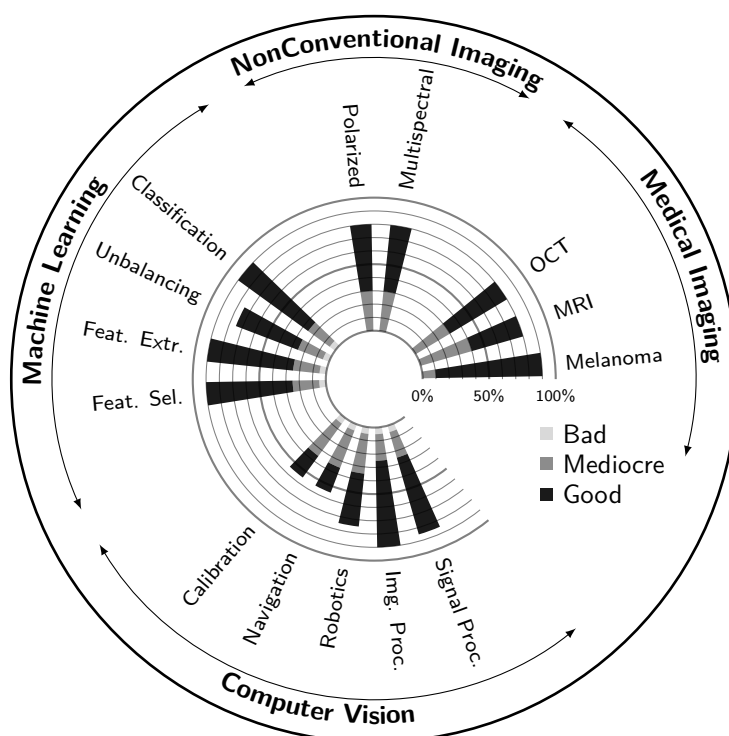




# Mojdeh Rastgoo

*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.

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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

OS Linux/Unix, Windows, DOS

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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

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## 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