Mojdeh Rastgoo-Lemaitre

Data Scientist- Saint-Gobain Research Paris

Career

2018 - present **Research Engineer**, *Saint-Gobain Research Paris.*

2016 - 2018 **Post-doc**, ANR project - Polarimetric Vision Applied to Robotics Navigation (VIPeR), Université de Bourgogne - Le Creusot - (France).

Education

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

Supervisors Dr. Franck Marzani, Dr. Rafael Garcia and 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.

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^{st} Class Hounor, CGPA: 3.64/4.00

Experience

2017-2018 **Teaching MSc-BSc**, *Introduction to Image Processing, Machine learning, SymPy*, Université de Bourgogne - Le Creusot - (France).

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

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https://mrastgoo.github.io.

2012-2014 **Teaching MSc**, *Medical Imaging*, Universitat de Girona - Girona - (Spain).

2011-2012 **External researcher**, *Data mining and classification*, Barcelona Digital - Barcelona (Spain).
- Developing a method for continous learning and pruning the classifiers.

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

2007 **Internship**, *Oil and Gas platform designers*, Ranhill Worley Parsons Sdn Bhd - Kuala Lumpur (Malaysia).
- Power and electrical department.
- Designing lightning protections systems for structures.

Selected 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*, vol. 139, pp. 109-117, February 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

K. Alsaih, G. Lemaitre, M. Rastgoo, J. Massich, D. Sidibe, and F. Meriaudeau, "Machine learning techniques for diabetic macular edema (DME) classification on SD-OCT images ", *BioMedical Engineering online*, vol. 16(1), pp. 68-80, June 2017

International Conferences

M. Rastgoo, G. Lemaitre, J. Massich, O.Morel, F. Marzani, R. Garcia and F. Meriaudeau, "Study of Data Imbalancing for Melanoma Classification", 3^{rd} *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 radnom forests", *SPIE Medical Imaging 2016.* San Diego: USA (February 2016)

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)

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

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)

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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)

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)

G. Lemaitre, R. Marti,M. Rastgoo, and F. Meriaudeau,"Computer-Aided Detection for Prostate Cancer Detection based on Multi-Parametric Magnetic Resonance Imaging", *EMBC, 2017*, Jeju Island: Korea (August 2017)

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)

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)

Technical Reports

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

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

`https://scholar.google.fr/citations?user=lPIo6ucAAAAJ&hl=en&oi=ao`

Languages

English	Fluent in all skills
French	Intermediate
Spanish	Basic - Level 2
Arabic	Basic
Persian	Advanced Level *Mother tongue*

Computer skills

OS	Linux/Unix, Windows
Programming	Python, C/C++, Matlab
Libraries	ROS, OpenCV, scikit-learn/image, ...
Typography	LATEX, Microsoft Office, Open Office

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