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Duke University

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PERSONAL INFORMATION

Place / Date of birth Nationality

Montevideo, Uruguay / August 27th, 1982 Uruguayan

CURRENT POSITION

Duke University, Durham, US

July 2014 - present

Postdoc at Guillermo Sapiro's Lab, Electrical and Computer Engineering Department

EDUCATION

Télécom ParisTech, France and Universidad de la Rep'ublica, Uruguay

Ph.D. Informatique, Télécom. et Électronique

2011 - 2014

- Dissertation Title: "On the Generation of High Dynamic Range Images: Theory and Practice from a Statistical Perspective"
- Advisors: Prof. Julie Delon, Prof. Yann Gousseau and Prof. Pablo Musé.

École Normale Sup'erieure de Cachan, Cachan, France

M2 - MVA: Mathématiques / Vision / Apprentissage

Engineering School - Universidad de la Rep'ublica, Montevideo, Uruguay

Electrical Engineering Master Degree, March 2011

2009 - 2011

2010 - 2011

- Dissertation Title: "A study of the image formation model and noise characterization in SPECT imaging. Applications to denoising and epileptic foci localization"
- Advisors: Prof. Julie Delon and Prof. Pablo Musé.

Electrical Engineering Degree, October 2006

2001 - 2006

- Dissertation Title: "Aguará: Automatic Face Recognition"
- Advisors: Prof. A. Fernández and Prof F. Lecumberry

RESEARCH INTERESTS Signal processing, Image processing, Computational Photography, Computer Vision, Biomedical Imaging.

Publications

- Simultaneous High Dynamic Range and Super-Resolution Imaging Without Regularization, Yann Traonmilin and Cecilia Aguerrebere. Accepted at SIAM Journal on Imaging Sciences in April 2014.
- "Single Shot High Dynamic Range Using Piecewise Linear Estimators", Cecilia Aguerrebere, Julie Delon, Andrés Almansa, Yann Gousseau, Pablo Musé. International Conference on Computational Photography. Santa Clara, CA, U.S, 2014.
- "Best algorithms for HDR image generation: A study of performance bounds", Cecilia Aguerrebere, Julie Delon, Yann Gousseau, Pablo Musé. SIAM Journal on Imaging Sciences, 7 (2014), pp. 1-34.

- "Simultaneous HDR image reconstruction and denoising for dynamic scenes", Cecilia Aguerrebere, Julie Delon, Yann Gousseau, Pablo Musé. International Conference on Computational Photography. Boston, Massachusetts, U.S, 2013.
- Exemplar-based Texture Synthesis: the Efros-Leung Algorithm, Cecilia Aguerrebere, Yann Gousseau and Guillaume Tartavel. Image Processing On Line, vol. 3, pp. 223-241, 2013, doi 10.5201/ipol.2013.59
- "Localization of epiloptogenic zones in SPECT images using an a-contrario based algorithm. Evaluation with virtual phantoms and patients", Rodolfo Ferrando, Cecilia Aguerrebere, Germán Albín, Alvaro Gómez, Alicia Fernández, Franco Miceli, Alejandro Mottini, Pablo Musé, Margarita Núñez and Pablo Sprechmann. Journal of Nuclear Medicine, Meeting Abstracts, 2010.
- "A-contrario localization of epileptogenic zones in SPECT images", Cecilia Aguerrebere, Pablo Sprechmann, Pablo Musé, Rodolfo Ferrando. IEEE International Symposium on Biomedical Imaging, Boston, Massachusetts, U.S, 2009.
- "Aguará: An Improved Face Recognition Algorithm through Gabor Filter Adaptation", Cecilia Aguerrebere, Germán Capdehourat, Mauricio Delbracio, Matías Mateu, Alicia Fernández, Federico Lecumberry. IEEE Workshop on Automatic Identification Advanced Technologies, AutoID 2007, Alghero, Italy, 2007.

ACADEMIC EXPERIENCE

Télécom ParisTech, Paris, France

Teaching Assistant

2011 - 2014

Lectured undergraduate level courses for the Electrical Engineering program (practical sessions).

- Analyse des images (SI241)
- Introduction au traitement d'images (SI390) Enseignement ATHENS

Universidad de la Rep'ublica, Montevideo, Uruguay

Teaching Assistant

2008 - 2010

Lectured undergraduate and postgraduate level courses for the Electrical Engineering program (practical sessions and laboratories).

- Statistical Signal Processing, 2009
- Digital Filters Laboratory, 2008

Academic Advising

2008 - 2009

Academic advisor of Electrical Engineering Graduate's Degree Thesis

- Dissertation Title: "Proyecto HDFE. Herramienta de detección de Focos Epileptógenos"
- Students: Alejandro Mottini, Franco Miceli, Germán Albín
- Co-Advisor: Prof. Alicia Fernández

Research Assistant

2008 - 2010

Participation in projects:

 "Algorithm development for statistical comparison of two functional neuroimages of the same individual. Application to MRI corregistered SPECT ictal and interictal subtraction for refractory epilepsy.", 2008-2009 (biomedical imaging, image processing)

Professional Experience

Ledefyl S.A.

2005 - 2009

- GSM/GPRS network operation and maintenance for Uruguay local telecommunications provider (Antel, Uruguay). Specialized in GPRS backbone maintenance and development. May 2005 February 2009.
- CDMA network deployment, operation and maintenance for foreign telecommunications provider (Open Mobile, Puerto Rico). May December 2007.
- LAN/WAN network management for Ledefyl S.A. May 2005 February 2009.

LANGUAGES

Spanish (native language)

English (fluent)

French (fluent)