

Angélique Drémeau

PhD. Candidate

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born the 1st of July 1982
french, unmarried

Educational Background

- 2007-2010 PhD. Candidate within TEMICS project, INRIA (Institut National de Recherche en Informatique et Automatique), Rennes, France.
Supervisors : Dr. Christine Guillemot and Pr. Jean-Jacques Fuchs.
My research interests cover sparse representations and their application to image compression. Among others, I focus on the problem of dictionary learning and the design of efficient pursuit algorithms.
- 2006-2007 Master Degree in Signal and Image Processing at Université de Rennes 1, Rennes, France.
Thesis co-supervised by Violette Ollier (Thales Airborne Systems) and Pr. René Garello (Telecom Bretagne) : *Development of a radar for oil detection on sea surface.*
- 2003-2007 Engineering Degree at Telecom Bretagne, Brest, France.
Thesis co-supervised by Nathalie Becker (Robert Bosch GmbH) and Dr. Raymond Chevallier (Telecom Bretagne) : *Requalification of lead-free electronic components.*

Professional Background

- August 2005-
August 2006 One-year internship at Robert Bosch GmbH, Reutlingen, Germany.
- September
2007- June 2009 Teaching Assistant : Engineering Degree in Computer Science and Telecommunications.
Practical works (8h) :
Fourier transform, subsampling (aliasing effect, Nyquist sampling theorem), image processing (histograms, filters), image compression standards.
- September
2007- June 2008 Teaching Assistant : Bachelor's degree.
Tutorials and practical works (30h) :
Human visual system, digital image (pixel, binary encoding, color representations), image processing (histograms, filters, segmentation).

Languages

- French Native Language.
- German Good knowledge. (Stay of one year in Germany)
- English Good knowledge.

Miscellaneous

- I have been elected at the Scientific Council of the Université de Rennes 1 since 2008.
- I have been playing piano since the age of 6.

Publications

Cédric Herzet, Angélique Drémeau - **Bayesian Pursuit Algorithms** - *European Signal Processing Conference (EUSIPCO)* - Aalborg, August, 2010.

Angélique Drémeau, Cédric Herzet, Christine Guillemot, Jean-Jacques Fuchs - **Sparse Optimization with Directional DCT Bases for Image Compression** - *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)* - Dallas, Mars, 2010.

Angélique Drémeau, Cédric Herzet - **An EM-Algorithm Approach for the Design of Orthonormal Bases adapted to Sparse Representations** - *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)* - Dallas, Mars, 2010.

Cédric Herzet, Angélique Drémeau - **Sparse Representation Algorithms based on Mean-Field Approximations** - *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)* - Dallas, Mars, 2010.

Angélique Drémeau, Cédric Herzet, Christine Guillemot, Jean-Jacques Fuchs - **Anisotropic Multi-scale Sparse Learned Bases for Image Compression** - *IS&T/SPIE Electronic Imaging* - San Jose, January, 2010.

Angélique Drémeau, Cédric Herzet, Christine Guillemot, Jean-Jacques Fuchs - **Spatial intra-prediction based on mixtures of sparse representations** - *Submitted to IEEE International Workshop on Multimedia Signal Processing (MMSP)* - Saint-Malo, October, 2010.