

Grégoire MERCIER

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Engineer in telecommunications

Doctor in signal processing, entitled to direct research

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Grégoire MERCIER, IEEE SM'07, was born in France in 1971. He received the Engineer Degree from the *Institut National des Télécommunications*, Evry, France in 1993, his Ph.D. degree from the University of Rennes I, Rennes, France in 1999 and his *Habilitation à Diriger des Recherches* from the University of Rennes I in 2007. Since 1999, he has been with Télécom Bretagne, where he is currently an Associate Professor in the Image and Information Processing department (ITI). His research interests are in remote sensing image compression and segmentation, especially in hyperspectral and Synthetic Aperture Radar. Actually, his research is dedicated to change detection and combating pollution. He was a visiting researcher at DIBE (University of Genoa, Italy) from March to May 2006 where he developed change detection technique for heterogeneous data. He was also a visiting researcher at CNES (France) from April to June 2007 to take part of the Orfeo Toolbox development. He is an Associate Editor for the IEEE Geoscience and Remote Sensing Letters.

Teaching Activities

Regular Lectures

- Signal processing;
- Remote sensing;
- Image/video compression.

Scientific training

- Signal Processing;
- Image Processing with matlab/scilab;
- Image Compression and watermarking;
- Image Processing Programming in C/C++.

Research Activities

Publications (details on the next page)

- International Journals: 15
- Conferences: 54
- Participation in Books: 4
- Directed PhDs: 8 (+1 under progress)

Topics

Remote sensing (SAR, optic multispectral and hyperspectral, fluorescence laser), Signal and Image Processing (Kernel machines, Markov Models, Wavelets, Neural net, Diffusion filtering, Independent Component Analysis, Edgeworth, Copula Theory...)

Projects

- CARNOT / superTemp *Change detection in long time series with high spatial / temporal resolution*. 2007-2009.
- CNES R&T / *Similarity measure between SAR: application to change detection*, 2003, 2005-2006, 2006-2007 and 2007-2009.
- PNTS / *Land use change detection in farming area through multisource data fusion*. In collaboration with COSTEL, 2004-2006.
- DéCA: *Abrupt Change Detection* (head of project). In collaboration with Telecom Paris, Telecom Sud-Paris, Institut Fresnel and CNES, 2005.
- RITMER / DETECUIV, *Detection and monitoring of oil slick from remotely sensed data* (including SAR, hyperspectral and FLS data). Scientific head of project, in collaboration with SAS Actimar, 2003-2005.
- CIS: *SAR Image Compression* for military purpose (DGA). Co-headed with SAS IPSIS, 2004.
- PNTS / *Land use and cover change detection in intensive farming area*, collaboration with COSTEL who head the project, 2000-2002.
- MOSS: *Multiresolution Oil Slicks Segmentation*. In collaboration with CNES, Telecom Sud-Paris and Institut Fresnel, 2003.
- MARS AIS (*MARine Sar Analysis and Interprétation System for application to the coastal zones*). European project dedicated to promote the knowledge in SAR image processing of the ocean. 2001-2003.
- PNTS / *Land use evolution in intensive agricultural region*. LUCC labelled project, in collaboration with COSTEL, 2001-2002.
- IF RTP (French Polar Institute) / *Sea-ice SAR Image segmentation for ship routing*, 2001.
- PNTS / *SAR Image Processing*. Head of the topic *Compression*, 1998-2000.

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