2018

Articles in international peer-reviewed journals

- H. Yahia, V. Garçon, J. Sudre, C. Maes
  Effect of wind stress forcing on ocean dynamics at air-sea interface
  Frontiers of Information Technology & Electronic Engineering, 2018. [HAL](#).

- A. Tamim et al.
  Automatic Detection of Moroccan Coastal Upwelling Zones using Sea Surface Temperature Images

- I. Hernandez-Carrasco, V. Garçon, J. Sudre, C. Garbe, H. Yahia
  Increasing the Resolution of Ocean pCO₂ Maps in the South Eastern Atlantic Ocean Merging Multifractal Satellite-Derived Ocean Variables

- G. Attuel et al.
  Multifractal desynchronization of the cardiac excitable cell network during atrial fibrillation. II. Modeling gap junctions dynamically

International peer-reviewed conferences

  Search for filamentary accretion through low velocity shocks
  2018 Science for the Atacama Pathfinder Experiment (APEX). [HAL](#).

  Coherent Vortex Detection from Particles Trajectories Analysis
  2018 SIAM Conference on Nonlinear Waves and Coherent Structures. [HAL](#).

  Surface Mixing and Biological Activity in The North African Upwelling
  AGU Ocean Sciences Meeting 2018. [HAL](#).

- G. S. Phartiyal, N. Brodu, D. Singh, H. Yahia
A mixed spectral and spatial Convolutional Neural Network for Land Cover Classification using SAR and Optical data

- G. Li, K. Daoudi, J. Klempir, J. Rusz
Linear classification in speech-based objective differential diagnosis of Parkinsonism
ICASSP’2018.  

2017

Articles in international peer-reviewed journals

- G. Attuel et al.
Multifractal desynchronization of the cardiac excitable cell network during atrial fibrillation. I. Multifractal analysis of clinical data
Frontiers in Physiology.  

- N. Brodu
Super-resolving multiresolution images with band-independant geometry of multispectral pixels

- F. Frappart, L. Bourrel, N. Brodu, X. Salazar, F. Baup, J. Darrozes, R. Pombosa
Monitoring of the Spatio-Temporal Dynamics of the Floods in the Guayas Watershed (Ecuadorian Pacific Coast) Using Global Monitoring ENVISAT ASAR Images and Rainfall Data

- O. Yelekçi et al.
Spatial and Seasonal Distributions of Frontal Activity over the French Continental Shelf in the Bay of Biscay

International peer-reviewed conferences

- V. J.-L. Ralaiarisoa, A. Valance, N. Brodu, R. Delannay
High speed confined granular flows down inclined: numerical simulations
EPJ Web of Conferences, 2017.  [HAL](#).

- A. El Aouni et al.
  Surface Mixing and Biological Activity in The North African Upwelling
  AGU Ocean Sciences Meeting 2018, Feb 2018, Portland, USA.  [HAL](#).

- G. Attuel, H. Yahia
  Cardiac arrhythmias and Griffiths phase: desynchronization of excitable cells
  STATPHYS 26.  [HAL](#).

- J. Sudre, H. Yahia, C. Maes, V. Garçon,
  Effect of wind stress forcing on ocean dynamics at Air-Sea Interface
  SOLAS Conference, 15-18 May 2017, Cargese.  [HAL](#).

2016

Book chapter

- G. Attuel, O. Pont, B. Xu, H. Yahia
  Sudden Cardiac Death and Turbulence
  in Ferdinand Verhulst & Christos H. Skiadas Eds. The Foundations of Chaos
  Revisited: From Poincaré to Recent Advancements, Springer, 2016.  [HAL](#).

Articles in international peer-reviewed journals

- H. Badri, H. Yahia
  A Non-Local Low-Rank Approach to Enforce Integrability
  IEEE Transactions on Image Processing, 2016.  [HAL](#).

- H. Badri, H. Yahia, D. Aboutajdine
  Low-Rankness Transfer for Realistic Denoising
  IEEE Transactions on Image Processing, 2016.  [HAL](#).

- S. Kumar Maji, H. Yahia, T. Fusco
  A Multifractal-based Wavefront Phase Estimation Technique for Ground-based
  Astronomical Observations
  IEEE Transactions on Geoscience and Remote Sensing, 2016.  [HAL](#).
International peer-reviewed conferences

- •A. Garg et al.  
  A novel approach for optimal weight factor of DT-CWT coefficients for land cover classification using MODIS data  
  Geoscience and Remote Sensing Symposium (IGARSS), 2016 IEEE International, Beijing, China. [HAL](#).

- •O. Pont et al.  
  Complexity in Electrophysiological Dynamics. Emergence and measures of organization  
  2nd BCAM Workshop on Nonlinear Dynamics in Biological Systems, September 2016, Bilbao, Spain. [HAL](#).

- •A. El Aouni et al.  
  An improved method for accurate computation of coastal upwelling index using Sea Surface Temperature Images  
  AICCSA 2016. [HAL](#).

- •A. El Aouni et al.  
  Detection of Moroccan coastal upwelling using sea surface chlorophyll concentration  
  AICCSA 2015. [HAL](#).

- •N. Brodu, D. Singh, A. Garg  
  A sub-pixel resolution enhancement model for multiple-resolution multispectral images  
  European Geophysical Union General Assembly 2016, Apr 2016, Vienne, Austria. 2016. [HAL](#).

- •L. Bourrel, N. Brodu, F. Frappart  
  Land cover in the Guayas Basin using SAR images from low resolution ASAR Global mode to high resolution Sentinel-1 images  
  European Geophysical Union General Assembly 2016, Apr 2016, Vienne, Austria. 2016. [HAL](#).

- •G. Rosi et al.  
  Caractérisation de la Réponse Ultrasonore d’Implant Dentaire : Simulation Numérique et Analyse des Signaux  
  Congrès Français d'Acoustique 2016, Le Mans. [HAL](#).

- •Z. Galaz et al.  
  Degree of Parkinson's Disease Severity Estimation Based on Speech Signal
Processing

IEEE 39th International Conference on Telecommunications and Signal Processing, Jun 2016, Vienna, Austria . HAL .

- •K. Daoudi, N. Brodu, J. Rusz, J. Klempir
  Objective discrimination between Progressive Supranuclear Palsy and Multiple System Atrophy using speech analysis

- •A. Garg, N. Brodu, H. Yahia, D. Singh
  An Approach to optimize the fusion coefficients for land cover information enhancement with multisensor data
  EGU General Assembly 2016, session: Thermo-hydro-mechanical couplings and deep geothermal energy , 2016. HAL .

- •H. Yahia et al.
  General methodology for the derivation of high resolution oceanic data through information fusion at different scales
  ESA Living Planet Symposium, 2016. HAL .

- •G. Attuel, H. Yahia
  The role of abnormal inhibitory transmission at the gap junctions of cardiac cells in fibrillation
  Physical Principles of Biological and Active Systems, IOP Institute of Physics, Topical Meeting Edinburgh, United Kingdom , January 2016. HAL .

- •O. Yelekçi et al.
  Wintertime Submesoscale River Plumes in the Bay of Biscay

- •J. Sudre, H. Yahia, O. Pont and V. Garçon
  How to obtain ocean turbulent dynamics at super resolution from optimal multiresolution analysis and multiplicative cascade?

- •O. Yelekçi et al.
  Spatial and Seasonal Distributions of Frontal Activity over the Continental Shelf in the Bay of Biscay, Focus on Density Fronts in Winter
  AGU Ocean Science Meeting, New Orleans, 21-26 , February 2016. HAL .
Invited sessions

- **H. Badri, H. Yahia**
  Non-convex sparsity. Applications in Image processing.
  IEEE ICCS 2016, Roorkee, India.

- **N. Brodu**
  Super-resolving multiresolution images with band-independent geometry of multispectral pixels.
  IEEE ICCS 2016, Roorkee, India. [HAL](#).

Arxiv

- **B. Xu, R. Dubois, O. Pont, H. Yahia**
  Nonlinear trend removal should be carefully performed in heart rate variability analysis
  Arxiv, 2016. [HAL](#).

2015

PhD thesis

- **H. Badri**
  Sparse and Scale-Invariant Methods in Image Processing
  defended December 1st, 2015. [HAL](#).

- **A. Tamim**
  Segmentation et classification des images satellitaires : application à la détection des zones d’upwelling côtier marocain et mise en place d’un applicatif de suivi spatio-temporel
  defended September 22, 2015. [HAL](#).

Book chapter
Articles in international peer-reviewed journals

- • S. Jacquir, B. Xu, S. Binczak, J.-M. Bilbault
  Détection d'anomalie dans les signaux physiologiques
  in N. Glade & A. Stéphanou (dir.) Le vivant critique et chaotique, Editions Matériologiques, collection “Modélisations Simulations Systèmes Complexes”
  .
  HAL

International peer-reviewed conferences
- H. Yahia et al.  
General methodology for the derivation of high resolution oceanic data through information fusion at different scales  
ESA Living Planet Symposium, Prague, Czech Republic 2016.  [HAL](#).

- G. Attuel, O. Pont, B. Xu, H. Yahia  
Sudden cardiac death and Turbulence  
The 8th International Conference (CHAOS2015) on Chaotic Modeling, Simulation and Applications, Paris, France 2015.  [HAL](#).

- B. Xu, S. Jaquir, S. Binczak, H. Yahia, R. Dubois  
Classification of Cardiac Arrhythmia in vitro based on Multivariate Complexity Analysis  
Computing in Cardiology 2015.  [HAL](#).

Spatial and Seasonal Distributions of Frontal Activity over the French continental shelf in the Bay of Biscay observed from satellite Sea Surface Temperature  

- A. Tamim, K. Minaoui, K. Daoudi, A. Atillah, D. Aboutajdine  
Detection of Moroccan Coastal Upwelling in SST images using the Expectation-Maximization  
10th International Symposium on Visual Computing (ISVC'14), 2014.  [HAL](#).

2014

Articles in international peer-reviewed journals

- A. Tamim, K. Minaoui, K. Daoudi, H. Yahia, A. Atillah, D. Aboutajdine  
An Efficient Tool for Automatic Delimitation of Moroccan Coastal Upwelling Using SST Images  

- B. Xu, S. Jacquir, G. Laurent, S. Binczak, O. Pont, H. Yahia  
In vitro arrhythmia generation by mild hypothermia - a pitchfork bifurcation type process  
Physiological Measurement, 2014.  [HAL](#).
- • V. Khanagha, K. Daoudi, O. Pont, H. Yahia
  Phonetic segmentation of speech signal using local singularity analysis
  Digital Signal Processing, Elsevier, 2014. [HAL](#).

- • V. Khanagha, K. Daoudi, H. Yahia
  Detection of Glottal Closure Instants based on the Microcanonical Multiscale Formalism
  IEEE Transactions on Audio, Speech and Language Processing, 2014. [HAL](#).

- • B. Xu, S. Jacquir, G. Laurent, J.-M. Bilbault, S. Binczak
  Analysis of an experimental model of in vitro cardiac tissue using phase space reconstruction
  Biomedical Signal Processing & Control, 2014. [HAL](#).

International peer-reviewed conferences

- • N. Brodu
  Approaches for automated feature detection
  9th IEEE International Conference on Industrial and Information Systems (ICIIS2014), Gwalior, India 2014. [HAL](#).

- • H. Badri, H. Yahia
  Handling noise in image deconvolution with local/non-local priors
  ICIP 2014. [HAL](#).

- • N. Brodu, J. Dijksman, R. Behringer
  Quantitative DEM of dense granular packings with a multiple contacts force model
  Modeling Granular Media Across Scales 2014, [HAL](#), [Web site](#).

- • I. Hernandez-Carrasco et al.
  Validation of inferred high resolution ocean pCO2 and air-sea fluxes with in-situ and remote sensing data.
  [HAL](#).

- • A. Garg, S. Vardan Naidu, H. Yahia, D. Singh
  Wavelet Based Resolution Enhancement for Low Resolution Satellite Images
IEEE ICIIS2014.  [HAL](#) 
- • O. Pont  
  Singularity analysis: a method for properly characterizing complexity in cardiodynamics  
  International Conference on Complex Systems and Applications ICCSA2014.  [HAL](#)  
  Web site

- • K. Daoudi, B. Bertrac  
  On classification between normal and pathological voices using the MEEI-KayPENTAX database: Issues and consequences  
  Interspeech 2014.  [HAL](#) 

- • H. Badri, H. Yahia, K. Daoudi  
  Fast and Accurate Texture Recognition with Multilayer Convolution and Multifractal Analysis  
  ECCV 2014.  [HAL](#) 

- • H. Badri, H. Yahia, D. Aboutajdine  
  Robust surface reconstruction via triple sparsity  
  CVPR, 2014.  [HAL](#) 

- • A. Tamim, K. Minaoui, K. Daoudi, A. Atillah, H. Yahia, D. Aboutajdine  
  An Efficient Tool for Automatic Delimitation of Moroccan Coastal Upwelling Using SST Images  
  ISIVC, Marrakech, Morroco, 2014.  [HAL](#) 

- • A. Tamim, K. Minaoui, K. Daoudi, A. Atillah, D. Aboutajdine  
  On Detectability of Moroccan Coastal Upwelling in Sea Surface Temperature Satellite Images  
  ISVC, Las Vegas, USA, 2014.  [HAL](#) 

- • B. Xu, S. Binczak, S. Jacquir, O. Pont, H. Yahia  
  Parameters Analysis of FitzHugh-Nagumo Model for a Reliable Simulation  

- • O. Pont, B. Xu  
  Cardiodynamic Complexity: Electrocardiographic Characterization of Arrhythmic Foci  
  22nd International Conference on Nonlinear Dynamics of Electronic Systems 2014.  [HAL](#)
- • S. Kumar Maji, T. Fusco, H. Yahia
  Cross-scale inference and wavefront reconstruction

- • K. Daoudi, S. Mrad
  A novel nonlinear approach to speech perturbation measure for pathological voice classification

- • A. Tamim et al.
  A Simple Tool for Automatic Extraction of Moroccan Coastal Upwelling from Sea Surface Temperature Images

- • B. Xu, S. Binczak, S. Jaquir, O. Pont, H. Yahia
  Complexity analysis of experimental cardiac arrhythmia
  IEEE Tensymp, 2014. HAL. Best paper award .

  Observing submesoscale activity in the Bay of Biscay with satellite-derived SST and Chlorophyll concentration

- • I. Hernandez-Carrasco et al.
  Inference of super-resolution ocean pCO2 and air-sea CO2 fluxes from non-linear and multiscale processing methods

- • B. Xu, S. Jacquir, S. Binczak, J.-M. Bilbault
  Phase Space Reconstruction of an Experimental Cardiac Electrical Signal
  HAL .

Invited sessions papers
• H. Yahia

Edges, transitions, criticality: novel nonlinear characterizations of low-level transition features in signal processing and applications to cross-scale inference in complex signals
ISIVC 2014.

National peer-reviewed conferences

• J.-M. Bilbault, S. Jacquir, B. Xu, G. Laurent, S. Binczak

Dynamical analysis for an in vitro model signal
34ème Séminaire de la Société Francophone de Biologie Théorique 2013, HAL.
Web site

• N. Brodu, J. Dijksman, R. Behringer

Structure and forces in stressed 3D packings
Présentation au GDR Phenix: Driven disordered systems, Laboratoire interdisciplinaire de physique 2014, HAL, GDR Phenix web site, Conference web site

2013

Articles in international peer-reviewed journals

• S. K. Maji, H. Yahia

Edges, Transitions and Criticality
Pattern Recognition 47(6) 2104-2115, Elsevier, June 2014. HAL, Direct access.

• S. K. Maji, H. Yahia, H. Badri

Reconstructing an image from its edge representation
Digital Signal Processing, Elsevier, 2013. HAL.

• V. Khanagha, K. Daoudi, O. Pont, H. Yahia, A. Turiel

Non-linear speech representation based on local predictability exponents
Neurocomputing, Elsevier, 2013. HAL.
International peer-reviewed conferences

- • H. Badri, H. Yahia, D. Aboutajdine
  Fast Multi-Scale Detail Decomposition via Accelerated Iterative Shrinkage
  SIGGRAPH ASIA, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .  [ACM Digital Library](https://dl.acm.org/)

- • O. Pont, B. Xu
  Characterizing Complexity of Atrial Arrhythmias through Effective Dynamics from Electric Potential Measures
  Computing in Cardiology, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • R. Jourani, K. Daoudi, R. André-Obrecht and D. Aboutajdine
  Combination of SVM and Large Margin GMM modeling for speaker identification
  Eusipco, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • M. Al Mashrgy, N. Bouguila and K. Daoudi
  A statistical framework for positive data clustering with feature selection : application to object detection
  Eusipco, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • A. Tamim, K. Minaoui, K. Daoudi, H. Yahia, A. Atillah, M. F. Smiej, D. Aboutajdine
  A simple and efficient approach for coarse segmentation of moroccan coastal upwelling
  Eusipco, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • B. Xu, O. Pont, G. Laurent, S. Jacquir, S. Binczak, H. Yahia
  Experimental study of arrhythmia due to mild therapeutic hypothermia after resuscitation of cardiac arrest
  Computing in Cardiology, 2013.  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • J. Sudre, H. Yahia, V. Garçon
  Analyse multirésolution opérée sur des exposants de singularité en formalisme microcanonique: détermination de la dynamique océanique et des échanges océan/atmosphère submésoéchelle
  XXIVe Colloque Gretsi - Traitement du Signal et des Images - Brest - 3 au 6 Sept 2013 .  [HAL](https://hal.archives-ouvertes.fr/hal-00866131) .

- • B. Xu, S. Jacquir, G. Laurent, J.-M. Bilbault, S. Binczak
  Phase space reconstruction of an experimental model of cardiac field potential in
normal and arrhythmic conditions


• J. Sudre, H. Yahia, O. Pont, C. Pottier, C. Maes, V. Garçon
  Validation of high and super resolution ocean dynamics products

• V. Khanagha, K. Daoudi
  Efficient GCI detection for efficient sparse linear prediction
  Non-Linear Speech Processing (NOLISP 2013), June 19-21, Mons, Belgium, 2013. HAL.

• B. Xu, S. Jacquir, O. Pont, H. Yahia
  Cardiac arrhythmia induced by hypothermia in a cardiac model in vitro
  40th International Congress on Electrocardiology (ICE 2013), Glasgow, UK, 2013. HAL.

Invited sessions papers

• O. Pont, H. Yahia, B. Xu
  Arrhythmic dynamics from singularity analysis of electrocardiographic maps

• H. Yahia, D. Singh
  Advanced nonlinear approaches for handling complex datasets and acquisitions in Earth Observations and Universe Sciences
  India-CEFIPRA workshop in ICST “Challenges in overcoming complexity, from big data to cyberphysical systems”, April 4 - 5, 2013, New Delhi- India, Bhagirathi Building - IIT Delhi. HAL.
National peer-reviewed conferences

- • B. Xu, O. Pont, G. Laurent, S. Jacquir, S. Binczak, H. Yahia
  Arrhythmia due to mild therapeutic hypothermia - a study in vitro
  LIRYC Workshop, 2013, [HAL](#).

- • O. Pont, B. Xu, H. Yahia
  Complexity in cardiodynamics - where arrhythmias emerge and measures of organization
  LIRYC Workshop, 2013, [HAL](#).

Doctoral thesis (PhDs)

- • V. Khanagha
  Novel Multiscale Methods for Nonlinear Speech Analysis
  Bordeaux 1 University, 2013. [pdf](#), [Archive ouverte TEL](#).

- • S. Kumar Maji
  Multiscale Methods in Signal Processing for Adaptive Optics
  Bordeaux 1 University, 2013. [pdf](#), [Archive ouverte TEL](#).

- • J. Sudre
  Circulation submésoéchelle et comportements des prédateurs marins supérieurs : Apport de l'analyse multi-échelles et multi-capteurs
  Toulouse, Université de Toulouse III Paul Sabatier, 2013. [Archive ouverte TEL](#).

Reports

- • N. Vinuesa
  Internship report [HAL](#).

- • B. Bertrac
  Internship report [HAL](#).

- • S. Mrad
  Internship report [HAL](#).
2012

Articles in international peer-reviewed journals

- • O. Pont, A. Turiel, H. Yahia
  Singularity analysis of digital signals through the evaluation of their Unpredictable Point Manifold

- • R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Discriminative speaker recognition using Large Margin GMM

- • V. Khanagha, K. Daoudi
  An Efficient Solution to Sparse Linear Prediction Analysis of Speech

- • O. Pont, M. Haissaïguerre, H. Yahia, N. Derval, M. Hocini
  Microcanonical processing methodology for ECG and intracardial potential: application to atrial fibrillation
  Transactions on Mass-Data Analysis of Images and Signals (ISSN:1868-6451), 4(1), 2012. HAL.

International peer-reviewed conferences

- • O. Pont, H. Yahia, R. Dubois, M. Haissaguerre
  A Singularity-analysis Approach to characterize Epicardial Electric Potential
  Computing in Cardiology, vol. 39, 2012, ISSN 0276-6574. HAL.

- • S. K. Maji, O. Pont, H. Yahia, J. Sudre
  Inferring Information across Scales in Acquired Complex Signals
- V. Khanagha, K. Daoudi
  Efficient multipulse approximation of speech excitation using the most singular manifold
  Interspeech 2012, Portland, USA. [HAL](#).

- S. K. Maji, H. Yahia, O. Pont, J. Sudre, T. Fusco, V. Michau
  Towards Multiscale Reconstruction of Perturbated Phase from Hartmann-Shack Acquisitions
  IEEE NASA/ESA Conference on Adaptive Hardware and Systems (AHS-2012) [HAL](#).
  [pdf](#).

- C. Garbe et al.
  Climatically-active gases in the Eastern Boundary Upwelling and Oxygen Minimum Zone (OMZ) systems
  Geoscience and Remote Sensing Symposium (IGARSS), 2012 IEEE International. [HAL](#).

- C. Garbe et al.
  Climatically-active gases in the Eastern Boundary Upwelling and Oxygen Minimum Zone (OMZ) systems
  European Geophysical Union, general assembly, EGU 2012, Vienna, Austria. [HAL](#).

- J. Sudre, H. Yahia, O. Pont, C. Pottier, C. Maes, V. Garçon
  Towards high-resolution mapping of ocean dynamics: multiscale fusion between low-resolution altimetry and high resolution sst
  Globcurrents, Needs for Ocean Surface Current Data from Space, ESA DUE GlobCurrent User Consultation meeting Agenda, ESA Ifremer, March 7-9 2012, Brest, France. [pdf](#) [HAL](#).

- O. Pont, H. Yahia, R. Dubois
  Microcanonical multifractal analysis of electric potential maps on the heart surface
  FisEs 2012. [pdf](#) [HAL](#).

National peer-reviewed conference

- O. Pont
Analyse multiéchelles du potentiel électrique épicardique
Biologie, Médecine et Systèmes Complexes, Rencontres du GdR "Dynamique et Contrôle des Systèmes Complexes" (DYCOEC) en partenariat avec le GdR "STIC-Santé", Rouen, 26-28 Novembre 2012.

HAL.

Invited speaker sessions

- • H. Yahia, J. Sudre, V. Garçon, C. Pottier
  High-Resolution Ocean Dynamics from Microcanonical Formulations in Nonlinear Complex Signal Analysis
  European Geosciences Union Geneeral Assembly (EGU), Vienna, Austria, April 22-27, 2012. Session NP3.1 "Nonlinear, scaling and Complex Physical and Biogeophysical Processes in the Atmosphere and Ocean".
  EGU 2012 web site session

  HAL.
  Link.

Report

- • H. Badri
  Informatique graphique dans le domaine du gradient et formalisme des systèmes reconstructibles
  Internship report. HAL.

Doctoral thesis (PhD)
- R. Jourani
  Reconnaissance automatique du locuteur par des GMM à grande marge
  Université de Rabat, 2012. Archive ouverte TEL.

2011

Article in international peer-reviewed journal

- O. Pont, A. Turiel, C. Perez-Vicente
  On Optimal Wavelet Bases for the Realization of Microcanonical Cascade Processes
  HAL.

International peer-reviewed conferences

- V. Khanagha, H. Yahia, K. Daoudi, O. Pont, A. Turiel
  Reconstruction of Speech Signals from their Unpredictable Points Manifold
  Link to Springer on-line version.
  HAL.

- K. Daoudi, R. Jourani, R. André-Obrecht, D. Aboutajdine
  Speaker identification using discriminative learning of large margin GMM
  ICONIP 2011 (2011 International Conference on Neural Information Processing)
  November 14-17, 2011, Shanghai, China.
  Published in LNCS, vol. 7063, pp. 300-307, Springer Verlag.
  HAL.

- R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Fast Training of Large Margin Diagonal Gaussian Mixture Models for Speaker
Identification

SpeD 2011 (6th Conference on Speech Technology and Human-Computer Dialogue)
2011  . HAL  .

- R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Speaker Verification using Large Margin GMM Discriminative Training

- O. Pont, M. Haissaguerre, H. Yahia, N. Derval, M. Hocini
  A Microcanonical Multifractal Approach to the Characterization of Heartbeat Dynamics
  FisEs 2011, June 2011, Barcelona, Spain. HAL .

- M. Al Mashrgy, N. Bouguila, K. Daoudi
  A robust approach for multivariate binary vectors clustering and feature selection
  ICONIP 2011 (2011 International Conference on Neural Information Processing)
  November 14-17, 2011, Shanghai, China  . HAL .

- S. Kumar Maji, H. Yahia, O. Pont, T. Fusco, V. Michau, J. Sudre
  A multiscale approach to phase reconstruction for Adaptive Optics

- J. Winebarger, K. Daoudi, H. Yahia
  Improving SVF with DISTBIC for phoneme segmentation

- O. Pont, M. Haissaguerre, H. Yahia, N. Derval, M. Hocini
  Heartbeat dynamics from a microcanonical multiscale approach

- H. Kumar, H. Yahia, D. Singh
  A detailed analysis of multi-sensor fusion of moderate resolution imaging spectroradiometer with advanced spaceborne thermal emission and reflection radiometer on classification accuracy for improved land cover classification

- O. Pont, M. Haissaguerre, H. Yahia, N. Derval and M. Hocini
  A novel analysis method to characterize heartbeat dynamics through the Microcanonical Multiscale Formalism
6th International Conference on Mass Data Analysis of Images and Signals in Medicine, Biotechnology and Chemistry, August 30 - September 3, 2011, New York, USA.

HAL.

- O. Pont, A. Turiel, H. Yahia
  An optimized algorithm for the evaluation of local singularity exponents in digital signals

- V. Khanagha, K. Daoudi, O. Pont, H. Yahia
  Improving text-independant phonetic segmentation based on the microcanonical multiscale formalism
  2011 International Conference on Acoustics, Speech and Signal Processing (ICASSP 2011), May 22-27, Prague, Czech Republic. HAL.

- J. Sudre, H. Yahia, O. Pont, C. Pottier, V. Garçon
  Inferring fluid motion at submesoscale from high resolution remotely sensed data
  2011 Ocean Surface Topography Science Team Meeting, October 17-21, San Diego, USA. Conference web site HAL.

Invited conferences

- H. Yahia, J. Sudre, V. Garçon, C. Pottier
  High-resolution ocean dynamics from microcanonical formulations in non linear complex signal analysis
  AGU Fall Meeting, December 5-9, San Francisco, USA. HAL.

- H. Yahia
  Local Predictability Exponents and universality classes in the framework of reconstructible complex systems
  Assyst Workshop on: Mathematics in Network Science: Implications to Socially Coupled Systems, Torino, Italy, November 21-23, Italy. HAL.
National conferences

- V. Khanagha, O. Pont, K. Daoudi, H. Yahia
  Une nouvelle approche non-linéaire pour la segmentation phonétique
  XXIIIe Colloque GreTSI, Bordeaux, 5-8 Septembre 2011. [HAL](https://hal.archives-ouvertes.fr).

- R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Apprentissage discriminant des GMM à grande marge pour la vérification automatique du locuteur
  XXIIIe Colloque GreTSI, Bordeaux, 5-8 Septembre 2011. [HAL](https://hal.archives-ouvertes.fr).

- J. Sudre, H. Yahia, V. Garçon, C. Pottier
  Évaluation de la dynamique océanique à haute résolution satellitaire SST par fusion de données à différentes échelles spatiales
  Atelier sur la fusion de données, Météo France, 18 Octobre 2011, Toulouse. [Works hop web site](https://works-hop-web-site.github.io/)

Reports

- J. Winebarger
  Phoneme segmentation and Voice activity detection
  Internship report, [HAL](https://hal.archives-ouvertes.fr).

2010

Article in international peer-reviewed journal

- H. Yahia, J. Sudre, C. Pottier, V. Garçon
  Motion analysis in oceanographic satellite images using multiscale methods and the
energy cascade
Pattern Recognition, 2010  
direct access . HAL . pdf .

International peer-reviewed conference/proceedings

- • O. Pont
  Universality in multiscale, turbulent-like self-organization: from algal blooms to heartbeat to stock market dynamics
  Emergence & Design of Robustness, General principles and Application to Biological, Social and Industrial Networks, IFISC, Palma de Mallorca, september 21-25, 2010, Spain  
  Link to conference page . HAL .

- • J. Sudre, O. Pont, H. Yahia, C. Pottier, V. Garçon
  Optimal decomposition for the evaluation of ocean dynamics
  OST-ST Meeting, Altimetry for Oceans and Hydrology, 18 - 22 October 2010, Lisbon - Portugal  
  HAL .

- • J. Sudre, O. Pont, H. Yahia, C. Pottier, V. Garçon
  Evidencing of multiplicative cascading and intermittency in real/synthetic oceanographic signals: application to the evaluation of ocean dynamics
  OST-ST Meeting, Altimetry for Oceans and Hydrology, 18 - 22 October 2010, Lisbon - Portugal  
  HAL .

- • V. Khanagha, K. Daoudi, O. Pont,H. Yahia
  A novel text-independant phonetic segmentation algorithm based on the microcanonical multiscale formalism
  Interspeech 2010, Makuhari, Japan, September 26-30. HAL .

- • R. Jourani, K. Daoudi, R. André-Obrecht, K. Aboutajdine
  Large Margin Gaussian mixture models for speaker identification
  Interspeech 2010, Makuhari, Japan, September 26-30. HAL .

- • J. Sudre, H. Yahia, C. Pottier, V. Garçon
  Inferring fluid motion at submesoscale from high resolution remotely sensed data
  Orflow10, Trends in Complex Systems, International Workshop on Living Organisms in Flows: From Small-scale Turbulence to Geophysical Flow , Palma de Majorca, Spain,  
  direct access . HAL .

- • V. Khanagha, K. Daoudi, O. Pont, H. Yahia
Application of the microcanonical multiscale formalism to segmentation of speech signals
European Signal Processing Conference (EUSIPCO 2010), August 23-27, 2010, Aalborg, Denmark, direct access
HAL.

National conferences

- • V. Khanagha, K. Daoudi, O. Pont, H. Yahia
  Segmentation indépendante du texte par le formalisme multiéchelles microcanonique
  MajecSTIC 2010, Bordeaux, France. HAL.

- • V. Khanagha, K. Daoudi, O. Pont, H. Yahia
  Application du formalisme multiéchelles microcanonique pour la segmentation des signaux de parole
  Coresa 2010, Lyon, France. HAL.

Reports

- • J. Winebarger
  Internship report pdf HAL.

2009

Articles in International peer-reviewed journals

- • A. Turiel, H. Yahia, C. Pérez-Vicente
  Microcanonical multifractal formalism—a geometrical approach to multifractal systems: Part I. Singularity analysis
  Journal of Physics A: Mathematical and Theoretical, 2008. HAL.

- • O. Pont, A. Turiel, C. J. Pérez-Vicente
Description, modeling and forecasting of data with optimal wavelets
in: Journal of Economic Interaction and Coordination, June 2009, vol. 4, no 1, p. 39–54. HAL.

- O. Pont, A. Turiel, C. Perez-Vicente
Empirical evidences of a common multifractal signature in economic, biological and physical systems

- E. Sanchez-Soto, A. Potamianos, K. Daoudi
Unsupervised Stream-Weights Computation in Classification and Recognition Tasks

International peer-reviewed conference/proceedings

- V. Khanagha, A. Khanagha, M. H. Kahaei
Selective Tap Training of FIR filters for Blind Source Separation of Convolutive Speech Mixtures

- V. Khanagha, A. Khanagha
Solving global permutation ambiguity of time domain BSS using speaker specific features of speech signals

- H. Yahia, J. Sudre, C. Pottier, V. Garçon
Determination of geostrophic vector field on high resolution SST images from the energy cascade

- M. Bouali, H. Yahia, A. Turiel, P. Henry
A Multifractal approach for sun glint in medium resolution satelite imagery

- N. Bouguila, K. Daoudi
A Statistical Approach for Binary Vectors Modeling and Clustering
in: 13th Pacific-Asia Conference on Knowledge Discovery and Data Mining
- N. Bouguila, K. Daoudi  
  Learning concepts from visual scenes using a binary probabilistic model  

- K. Daoudi, J. Louradour  
  A comparison between sequence kernels for SVM speaker verification  

Book chapter

- K. Daoudi  
  Iterated function systems and some generalizations: local regularity analysis and multifractal modeling of signals  

(PAKDD), 2009  

HAL