2019

Articles in international peer-reviewed journals

  A Fourier approach to Lagrangian vortex detection
  Chaos, American Institute of Physics, 29, 093106. [Link to Chaos] [HAL]

- S. Maji, H. Yahia
  A Feature based Reconstruction Model for Fluorescence Microscopy Image Denoising
  Scientific Reports, Nature Publishing Group, 2019, 9 (1). [Link to Nature Scientific Reports] [HAL]

- G. Attuel, E. Gerasimova, F. Argoul, H. Yahia and A. Arnéodo
  Multifractal desynchronization of the cardiac excitable cell network during atrial fibrillation. II. Modeling
  Frontiers in Physiology. [Link to Frontiers in Physiology article] [HAL]

- A. El Aouni, K. Daoudi, H. Yahia, K. Minaoui, A. Benazzouz
  Surface mixing and biological activity in the North-West African upwelling
  Chaos, American Institute of Physics, 29 (1), pp 0111042018, 2019. [HAL]

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- G. Attuel, H. Yahia
  The fall of the reentry paradigm of cardiac fibrillation
  Second international Summer Institute on Network Physiology. [Link to ISINP] [HAL]

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

International peer-reviewed conferences

- N. Brodu
  Low-rankness transfer for denoising Sentinel-1 SAR images
  ISIVC'2018 - 9th International Symposium on Signal, Image, Video and Communications, Nov 2018. [HAL](#).

  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](#).

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  AGU Ocean Sciences Meeting 2018. [HAL](#).

- G. S. Phartiyal, N. Brodù, D. Singh, H. Yahia
  A mixed spectral and spatial Convolutional Neural Network for Land Cover Classification using SAR and Optical data
  EGU General Assembly, Vienna, 2018. [HAL](#).

- G. Li, K. Daoudi, J. Klempir, J. Rusz
  Linear classification in speech-based objective differential diagnosis of Parkinsonism
ICASSP’2018. [HAL](#).

2017

Articles in international peer-reviewed journals

- • J. A. Dijksman, N. Brodu, R. Behringer
  Refractive index matched scanning and detection of soft particles
  Review of Scientific Instruments, American Institute of Physics. [HAL](#).

- • G. Attuel et al.
  Multifractal desynchronization of the cardiac excitable cell network during atrial fibrillation. I. Multifractal analysis of clinical data
  Frontiers in Physiology. [Link to Frontiers in Physiology article](#). [HAL](#).

- • 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
  Continental Shelf Research, Elsevier, 2017. [HAL](#).

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.
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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
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  Revisited: From Poincaré to Recent Advancements, Springer, 2016.  [HAL](#).

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- • 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](#).
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- • 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  
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- • A. El Aouni et al.  
  An improved method for accurate computation of coastal upwelling index using Sea Surface Temperature Images  
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- • A. El Aouni et al.  
  Detection of Moroccan coastal upwelling using sea surface chlorophyll concentration  
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- • 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  
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- • G. Rosi et al.  
  Caractérisation de la Réponse Ultrasonore d'Implant Dentaire : Simulation Numérique et Analyse des Signaux  
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- • Z. Galaz et al.  
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- •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**

- 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”

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- J. Sudre, H. Yahia, O. Pont, V. Garçon
  Ocean Turbulent Dynamics at Superresolution From Optimal Multiresolution Analysis and Multiplicative Cascade

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  Spanning the scales of granular materials through microscopic force imaging
  Nature Communications, 2015. HAL

- I. Hernandez-Carrasco et al.
  Reconstruction of super-resolution fields of ocean pCO2 and air-sea fluxes of CO2 from satellite imagery in the Southeastern Atlantic
  Biogeosciences, 2015. HAL

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  Fast Edge-Aware Processing via First Order Proximal Approximation
  IEEE Transactions on Visualization and Computer Graphics, 2015. HAL

  Detection of Moroccan coastal upwelling fronts in SST images using the microcanonical multiscale formalism
  Pattern Recognition Letters, 55, 2015. HAL

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information fusion at different scales
ESA Living Planet Symposium, Prague, Czech Republic 2016. HAL.

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  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.

- • O. Yelekci, G. Charria, X. Capet, G. Reverdin, J. Sudre, H. Yahia
  Spatial and Seasonal Distributions of Frontal Activity over the French continental shelf in the Bay of Biscay observed from satellite Sea Surface Temperature
  HAL.

- • 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.

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- 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.

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Validation of inferred high resolution ocean pCO2 and air-sea fluxes with in-situ and remote sensing data.

- 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.

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  An Efficient Tool for Automatic Delimitation of Moroccan Coastal Upwelling Using SST Images
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- • A. Tamim, K. Minaoui, K. Daoudi, A. Atillah, D. Aboutajdine
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  Parameters Analysis of FitzHugh-Nagumo Model for a Reliable Simulation
  36th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC’14) 2014. HAL.

- • 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
  IEEE 22nd Pacific Voice Conference, 2014. HAL.

- A. Tamim et al.
  A Simple Tool for Automatic Extraction of Moroccan Coastal Upwelling from Sea Surface Temperature Images
  SITA’14 - 9th International Conference on Intelligent Systems: Theories and Applications 2014. HAL.

- 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
  ICCSA 2014 : 4th International Conference on Complex Systems and Applications 2014. 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

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](http://hal.archives-ouvertes.fr/hal-01094971) . [ACM Digital Library](http://dl.acm.org/citation.cfm?id=251174).  

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  Characterizing Complexity of Atrial Arrhythmias through Effective Dynamics from Electric Potential Measures  
  Computing in Cardiology, 2013. [HAL](http://hal.archives-ouvertes.fr/hal-01098454).  

- R. Jourani, K. Daoudi, R. André-Obrecht and D. Aboutajdine  
  Combination of SVM and Large Margin GMM modeling for speaker identification  
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- 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](http://hal.archives-ouvertes.fr/hal-01098480).  

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  Eusipco, 2013. [HAL](http://hal.archives-ouvertes.fr/hal-01098495).  

- B. Xu, O. Pont, G. Laurent, S. Jacquier, S. Binczak, H. Yahia  
  Experimental study of arrhythmia due to mild therapeutic hypothermia after resuscitation of cardiac arrest  
  Computing in Cardiology, 2013. [HAL](http://hal.archives-ouvertes.fr/hal-01098518).  

- 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](http://hal.archives-ouvertes.fr/hal-01098525).  

- B. Xu, S. Jacquier, 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. Bertra
  Internship report  [HAL](#).

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

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- • O. Pont, A. Turiel, H. Yahia
  Singularity analysis of digital signals through the evaluation of their Unpredictable Point Manifold
  International Journal of Computer Mathematics, Taylor and Francis, 2012. [HAL](https://hal.archives-ouvertes.fr/hal-00708159) .

- • R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Discriminative speaker recognition using Large Margin GMM
  Neural Computing & Applications, doi:10.1007/s00521-012-1079-y, July 2012. [HAL](https://hal.archives-ouvertes.fr/hal-00708159) .

- • V. Khanagha, K. Daoudi
  An Efficient Solution to Sparse Linear Prediction Analysis of Speech
  EURASIP Journal on Audio, Speech, and Music Processing, 2012. [pdf](#) . [HAL](https://hal.archives-ouvertes.fr/hal-00708159) .

- • O. Pont, M. Haissaguerre, 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](https://hal.archives-ouvertes.fr/hal-00708159) .

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- • 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](https://hal.archives-ouvertes.fr/hal-00708159) .

- • S. K. Maji, O. Pont, H. Yahia, J. Sudre
  Inferring Information across Scales in Acquired Complex Signals
  European Conference on Complex Systems, ECCS’12, Brussels, 2012, Springer Proceedings in Complexity, ISSN 2213-8684 . [HAL](https://hal.archives-ouvertes.fr/hal-00708159) .
- 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.

- C. Garbe et al.  
Climatically-active gases in the Eastern Boundary Upwelling and Oxygen Minimum Zone (OMZ) systems  
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- 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.

- 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 General Assembly (EGU), Vienna, Austria, April  
  22-27, 2012  
  Session NP3.1 "Nonlinear, scaling and Complex Physical and  
  Biogeoophysical 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.

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Article in international peer-reviewed journal

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

International peer-reviewed conferences

- • V. Khanagha, H. Yahia, K. Daoudi, O. Pont, A. Turiel
  Reconstruction of Speech Signals from their Unpredictable Points Manifold

- • K. Daoudi, R. Jourani, R. André-Obrecht, D. Aboutajdine
  Speaker identification using discriminative learning of large margin GMM
  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


- • R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Speaker Verification using Large Margin GMM Discriminative Training
  ICMCS (International Conference on Multimedia Computing and Systems) 2011. HAL

- • 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
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- • J. Winebarger, K. Daoudi, H. Yahia
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- • O. Pont, M. Haissaguerre, H. Yahia, N. Derval, M. Hocini
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  Computing in Cardiology, 18-21 September, 2011, Zhejiang University, Hangzhou, China . Conference web site, HAL

- • H. Kumar, H. Yahia, D. Singh
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- • O. Pont, M. Haissaguerre, H. Yahia, N. Derval and M. Hocini
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- 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.

- • R. Jourani, K. Daoudi, R. André-Obrecht, D. Aboutajdine
  Apprentissage discriminant des GMM à grande marge pour la vérification
  automatique du locuteur
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- • J. Sudre, H. Yahia, V. Garçon, C. Pottier
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  de données à différentes échelles spatiales
  Atelier sur la fusion de données, Météo France, 18 Octobre 2011, Toulouse. Works
  hop web site
  HAL.

Reports

- • J. Winebarger
  Phoneme segmentation and Voice activity detection
  Internship report, HAL.

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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
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  Large Margin Gaussian mixture models for speaker identification
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- • 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]

- • 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,
Description, modeling and forecasting of data with optimal wavelets

- 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

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- V. Khanagha, A. Khanagha, M. H. Kahaei
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- 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 satellite 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
  [HAL]

• K. Daoudi, J. Louradour
  A comparison between sequence kernels for SVM speaker verification
  in: IEEE International Conference on Acoustics, Speech and Signal Processing
  (ICASSP), 2009. 
  [HAL]

Book chapter

• K. Daoudi
  Iterated function systems and some generalizations: local regularity analysis and
  multifractal modeling of signals
  [HAL]