

CR, HDR (2002), Head of project team GeoStat (Geometry and statistics in acquisition data), INRIA Bordeaux-Sud-Ouest (2010). GeoStat EPI created in 2011 (INRIA's CEO decision n. 7886, May 31, 2011) after international evaluation.

## HAL database publication export.

### Research and contributions

- **General research line: statistical physics methods in signal processing :**
- 
- determination of universality classes' signatures in acquisition signals,
- multiresolution analysis and optimal inference along the scales of complex signals, super-resolution
- sparsity, compact representations,
- measures of the predictability in complex and turbulent signals, reconstruction,
- determination of the transitions in signals using methods of statistical physics,
- new methods for analyzing ocean dynamics from remote sensing data

using nonlinear

methods in signal processing (with  
[SYSCO2 team, LEGOS](#))

- reconstruction of the optical phase perturbed by turbulent atmosphere

in astronomical imaging (adaptive optics),

- Analysis of turbulent signals in the interstellar medium (GENESIS project with Laboratoire d'Astrophysique de Bordeaux and Physik Inst. Köln University).

### Editorial boards



- Member of the editorial board of Elsevier's "*Digital Signal Processing*" journal. **From 2011 to mid 2014**



frontiers

Member of the editorial board of "*Frontiers in Fractal Physiology*" journal [\(link to invited speaker sessions\)](#)

- - Invited speaker, Colloquium SFB956, Université de Cologne, Physikalische Institute *Evidence of phase transitions HI/H2 in galactic molecular clouds*. May 2017.

[\(link to programme\)](#)

- - Invited speaker at the Workshop in "*Mathematics in Network Science: Implication to Socially Coupled Systems November 21-23, 2011*", Torino (Italy) organized and supported by the **Institute for Scientific Interchange (ISI) Foundation**

[\(link to website\)](#)

- - Invited speaker in the session "*Non linear physical and biogeophysical processes in the atmosphere and ocean*" at the AGU fall meeting, San Francisco, 5-9 December 2011.

- - Invited speaker at the 2012 EGU (European Geophysical Union) in Vienna, session "Nonlinear, scaling and complex Physical and Biogeophysical Processes in the Atmosphere and Ocean" for presenting the work: *High-resolution ocean dynamics from microcanonical formulations in non linear complex signal analysis*.

[Link to EGU page](#)

- - Invited speaker (with O. Pont and B. Xu) at IEEE EMBC 2013: 35th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Osaka, July 3-7, 2013. Presented paper: "Arrhythmic dynamics from singularity analysis of electrocardiographic maps".

- - Invited speaker (with D. Singh) at the 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. Title of presentation: "*Advanced nonlinear approaches for handling complex datasets and acquisitions in Earth Observations and Universe Sciences*". [HAL open archive](#)

:

- - Keynote speaker, ISIVC Conference (International Symposium on signal, Image, Video and Communications, ISIVC 2014), November 19 - 21, 2014, Marrakech, Morocco. Title of presentation: "*Edges, transitions, criticality: novel nonlinear characterizations of low-level transition features in signal processing and applications to cross-scale inference in complex signals*". [Keynote speakers conference web page](#)

- - Invited speaker and member of scientific committee, IEEE ICIIIS 2016 Conference,

Roorkee, India. [Conference web page](#) .

## Tutorial invited sessions, courses

- IEEE Oceans'2016 conference, Shanghai, April 2016. Tutorial's title: "**Novel Nonlinear Methods in Image Processing for Analyzing Ocean Datasets**" .

[IEEE-MTS Oceans 2016](#)

- GIAN courses, India, IIT Roorkee, 2016, title: "**Advances in signal procesing for Earth Observation**" .

## CNU (Conseil National des Universités)

- Member, titular, section 61.

## Conferences, workshops & meetings: organizing and technical program committees

- - Organization of the conference Signals & Physics in October 2016, Inria Paris.
- - INDIA CEFIPRA workshop in ICST, "Challenges in overcoming complexity, from big data to cyber-physical systems", April 4 - 5, 2013, New Delhi- India, (member of the organizing and technical program committees).
- - 12th International Conference on Analysis and Optimization of Systems: images, wavelets and PDEs (ICAOS 1996, Paris): member of the technical program committee.
- - Journées d'Etude sur les Méthodes pour les Signaux Complexes en Traitement d'Image, (INRIA, 2003): organizing and technical program committee.
- - Standards for Facial Animation (NFS Workshop, University of Pennsylvania, USA, 1993): member of the technical program committee.
- - ERCIM workshop on Environmental Modelling, (Versailles, 1990): member of the technical program committee.
- - WMC 2000 (San Diego, USA): member of the technical program committee.
- - RTRA-STAE Workshop on Geometrical and Multiscale approaches for predictability and analysis of complex data in astrophysics and geophysics (May 18-19, 2009, Montaigut-sur-save, France): organizing and technical program committee.
- - Member of scientific committee, IEEE ICIIIS 2016 Conference, Roorkee, India. [Confere nce web page](#)

## Reviewing panels

- ACM Siggraph conference (1993,1995), CVPR'97, IMACOM'93 (Bordeaux 1993), ICASSP and IGARSS (1999-2005), International Journal of Remote Sensing,

AFCET-GROPLAN 1988, Pixim 1989, Oceans 1998, Third Eurographics Workshop on Animation and Simulation (Cambridge, 1992), PRC Communication Homme-Machine working group, ORASIS 1997, International Journal for Computer-Aided Engineering and Software (2006), 8th Eurographic Workshop on Visualization in Scientific Computing (Boulogne-sur-mer, France, 28-30 avril 1997), Journal of Geophysical Research - Oceans (2006), Pattern Recognition Letters, RFIA (2004).

## **Contracts and project management**

- - Geostat is a member of the GENESIS project with the Astrophysics group of the University of Cologne.
- - EPI GeoStat creation (INRIA CEO decision n° 7886, May 31, 2011).
- - NASA-CNES-OSTST: ICARODE project (2013-2016).
- - NASA-CNES-OSTST: HIRESUBCOLOR project (2008-2012).
- - INRIA Fibaur ARC (starting march 2011).
- - FP7 Oceanflux (2011-2014).
- - PHC Volubilis (2010-2012).
- - Aquitaine Région funded project OPTAD (2010-2013).
- - Midi-Pyrenées funded RTRA-STAE Workshop and emerging project (2009).
- - INRIA Thalweg ARC (2002-2004).
- - PHC Egide Plumesat (2005-2007).
- - FP6 Thetis European contract (1998-2001).
- - Dassault-Industries (Action3D, 1987-1989).
- - AMIBE contract (1994-1996).

## **Major Publications (*with links*)**

### **International journals**

- • H. Aetesam, S. Kumar Maji, **H. Yahia**  
**Bayesian approach in a learning-based hyperspectral image denoising framework**  
**IEEE Access (open access) [HAL](#) .**
- • **H. Yahia** et. al.  
**Description of turbulent dynamics in the interstellar medium:**  
**multifractal/microcanonical analysis I. Application to *Herschel* observations of the**  
**Musca filament**  
**Astronomy & Astrophysics [HAL](#) . [Arxiv](#) .**
- • L. Bonne et. al.  
**Formation of the Musca filament: evidence for asymmetries in the accretion flow due**  
**to a cloud-cloud collision**  
**Astronomy & Astrophysics [HAL](#) .**
- • G. Phartiyal, N. Brodu, D. Singh, **H. Yahia**, K. Daoudi  
**Permuted Spectral and Permuted Spectral-Spatial CNN Models for PoISAR-**

## Multispectral Data based Land Cover Classification

IJRS [HAL](#) .

- • A. El Aouni et. al.

**Robust Detection of the North-West African Upwelling From SST Images**

**IEEE Geoscience & Remote Sensing Letters** [HAL](#) .

- • S. K. Maji, R. K. Thakur, H. Yahia

**Structure-preserving denoising of SAR images using multifractal feature analysis**

**IEEE Geoscience & Remote Sensing letters, 2020,** [HAL](#) .

- • A. El Aouni, K. Daoudi, **H. Yahia**, S. K. Maji, K. Minaoui

**Defining Lagrangian coherent vortices from their trajectories**

**Physics of Fluids, American Institute of Physics, 2020,** [HAL](#) .

- • A. El Aouni, V. Garçon, J. Sudre, **H. Yahia**, K. Daoudi, K. Minaoui

**Physical and Biological Satellite Observations of the Northwest African Upwelling:**

### Spatial Extent and Dynamics

**IEEE Transactions on Geoscience and Remote Sensing.** [IEEE Xplore](#) . [HAL](#) .

- • A. El Aouni, **H. Yahia**, K. Daoudi, K. Minaoui

**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](#) .

- • **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, K. Minaoui, K. Daoudi, **H. Yahia** et al.

**Automatic Detection of Moroccan Coastal Upwelling Zones using Sea Surface**

### Temperature Images

**International Journal of Remote Sensing, Taylor & Francis, 2018.** [HAL](#) .

- •I. Hernandez-Carrasco, V. Garçon, J. Sudre, C. Garbe, **H. Yahia**

**Increasing the Resolution of Ocean pCO<sub>2</sub> Maps in the South Eastern Atlantic Ocean**

### Merging Multifractal Satellite-Derived Ocean Variables

**IEEE Transactions on Geoscience and Remote Sensing, 2018.** [HAL](#) .

- • G. Attuel, E Gerasimova-Chechkina, F. Argoul, **H. Yahia**, A. Arneodo

**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](#) .

- • G. Attuel et al.

**Multifractal desynchronization of the cardiac excitable cell network during atrial fibrillation. II. Modeling gap junctions dynamically**

**Frontiers in Physiology**, in preparation.

- • 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](#) .

- •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](#) .

- •J. Sudre, H. Yahia, O. Pont, V. Garçon

**Ocean Turbulent Dynamics at Superresolution From Optimal Multiresolution**

**Analysis and Multiplicative Cascade**

**IEEE Transactions on Geoscience and Remote Sensing**, vol. 53, IGRSD2, number 11, pp. 6274-6285, ISSN 0196-2892 , November 2015. [pdf](#) .

- •A. Tamim, H. Yahia, K. Daoudi, K. Minaoui, A. Atillah, D. Aboutajdine, M. F. Smiej

**Detection of Moroccan coastal upwelling fronts in SST images using the microcanonical multiscale formalism**

**Pattern Recognition Letters**, 55, 2015. [pdf](#) .

- • I. Hernandez-Carrasco *et al.*

**Reconstruction of super-resolution fields of ocean pCO<sub>2</sub> and air-sea fluxes of CO<sub>2</sub> from satellite imagery in the Southeastern Atlantic**

**Biogeosciences**, 2015. [HAL](#) .

- •H. Badri, H. Yahia, D. Aboutajdine

**Fast Edge-Aware Processing via First Order Proximal Approximation**

**IEEE Transactions on Visualization and Computer Graphics**, 2015. [pdf](#) .

- • 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**

**IEEE Geoscience & Remote Sensing Letters**, 2014. [pdf](#) .

- • 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 [pdf](#) .

- • 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. [pdf](#) .

- • S. K. Maji, H. Yahia,

**Edges, Transitions and Criticality**

**Pattern Recognition 47(6) 2104-2115, June 2014. [pdf](#) .**

- •S. K. Maji, H. Yahia, H. Badri,

**Reconstructing an image from its edge representation**

**Digital Signal Processing, Elsevier, 2013. [pdf](#) .**

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

**Non-linear speech representation based on local predictability exponents**

**Neurocomputing, Elsevier, special issue on Non-linear speech processing, 2013. [H](#)**

[AL](#)

[pdf](#)

:

- •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, 2013, [HAL](#) .**

[DOI](#)

:

- •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. [pdf](#) .**

- •H. Yahia, J. Sudre, C. Pottier, V. Garçon

**Motion analysis in oceanographic satellite images using multiscale methods and the energy cascade**

**Pattern Recognition, 43(10), pp. 3591–3604, Elsevier, (2010), [pdf](#) .**

- •H. Yahia, A. Turiel, N. Chrysoulakis, J. Grazzini, P. Prastacos, and I. Herlin

**Application of the microcanonical multifractal formalism to the detection of fire**

**plumes in noaa-avhrr data**

**International Journal of Remote Sensing, Volume 29, Issue 14 2008, pp. 4189-4205, [p](#)**

[df](#)

:

- •A. Turiel , H. Yahia , C. Perez-Vicente

**Microcanonical multifractal formalism: a geometrical approach to multifractal**

**systems. Part I: singularity analysis**

**"Journal of Physics A: Math. Theor",2008, vol. 41, [pdf](#) .**

- •N. Chrysoulakis, I. Herlin, P. Prastacos, H. Yahia, J. Grazzini and C. Cartalis

**An improved algorithm for the detection of plumes caused by natural or**

**technological hazards using AVHRR imagery**



**Remote Sensing of Environment (RSE)**, Volume 108, Issue 4, 29 Juin 2007, pages 393-406, [pdf](#) .

- •J. Grazzini, **H. Yahia**, A. Turiel and I. Herlin

**A multifractal approach for extracting relevant textural areas insatellite meteorological images**

**Environmental Modelling & Software**, 2007, 22(3) :323–334, [direct access](#) .

- •A. Turiel, J. Grazzini, and **H. Yahia**

**Multiscale techniques for the detection of precipitation using thermal ir satellite images**

**IEEE Geoscience and Remote Sensing Letters**, October 2005, 2(4) :447–450. [pdf](#) .

- •E. Huot, **H. Yahia**, I. Cohen, and I. L. Herlin

**Matching structures by computing minimal paths on a manifold**

**Journal of Visual Communication and Image Representation**, 2002, 13 :302–312, 2002. [HAL](#) .

- •J.P. Berroir, I. Herlin, F. Llirbat, J.P. Matsumoto, E. Simon, and **H. Yahia**

**Using scientific workflow techniques for automatic processing of environmental data**

**System Analysis Modeling and Simulation (SAMS)**, Taylor and Francis, 2002, 42(11) :1601–1613, ISSN : 0020-7721,

[direct access](#)

:

- •J. P. Berroir, I. Cohen, D. Béréziat, S. Bouzidi, I. Herlin, and **H. Yahia**

**Traitement d'images et séquences de données océanographiques**

**Océanis**, Editions de l'Institut Océanographique, 1998, 24(3) :95–116, ISSN : 0182-0745.

- •J. Maillot, **H. Yahia** and A. Verroust

**Interactive Texture Mapping**

in **Computer Graphics, ACM Siggraph, Computer Graphics Proceedings**, Annual Conference Series, pages 27–34, Anaheim, CA, August 1-6 1993, Addison-Wesley, ISBN 0-201-58889-7,

[pdf](#)

:

- •C. Mathieu, C. Puech, and **H. Yahia**

**Average efficiency of data structures for binary image processing**

**Information Processing Letters**, October 1987, 26(2) :89–93. [HAL](#) , [direct access](#) .



## Book chapters

- •G. Attuel, O. Pont, B. Xu, H. Yahia  
Sudden Cardiac Death and Turbulence  
in David Ruelle, Ferdinand Verhulst & Christos H. Skiadas Eds. *The Foundations of Chaos Revisited: From Poincaré to Recent Advancements*  
, Springer, 2016  
, in press.
  
- •J. Grazzini, A. Turiel and H. Yahia  
Multifractal Formalism for Remote Sensing : A Contribution to the Description and the Understanding of Meteorological Phenomena in Satellite Images  
in Miroslav M. Novak editor, *Complexus Mundi. Emergent Patterns in Nature*, 5 Toh Tuck Link, Singapore 596224. USA office : 27 Warren Street, Suite 401-402, Hackensack, NJ 07601, USA, ISBN 981-256-666-X,  
[access \(google books\)](#)  
:
  
- •J. Grazzini, A. Turiel and H. Yahia  
Méthodes multiéchelles d'analyse d'images météorologiques inspirées de la thermodynamique: application à la détection de zones précipitantes dans les images infrarouges ,  
Méthodes pour les signaux complexes en traitement d'image, H. Yahia et al. eds, INRIA éditeur, Dépôt légal : 160404/100, ISBN 2-7261-1269-2, 2003.

## **International conferences with international reviewing panel**

### ***Analysis of complex signals***

- • A. Rashidi et. al.  
Fast image deconvolution for enhancement of the resolution in the video rate terahertz imaging  
46th International Conference on Infrared, Millimeter, and Terahertz Waves, Oral presentation, 2021 . [HAL](#) .

- •F. Schmitt, H. Yahia, J. Sudre, V. Garçon, G. Charria, B. Dewitte  
Scaling and anisotropic heterogeneities of ocean SST images from satellite data  
EGU 2020 Session NP2.1 "Nonlinear Multiscale and Stochastic Dynamics of the Earth System" . [HAL](#) .
- •G. Charria, S. Theetten, A. Ayouche, C. Poppeschi, J. Sudre, H. Yahia, V. Garçon  
Multi-scale coastal surface temperature in the Bay of Biscay and the English Channel  
EGU 2020 Session NP2.1 "Nonlinear Multiscale and Stochastic Dynamics of the Earth System" . [HAL](#) .
- • A. El Aouni, K. Daoudi, H. Yahia, K. Minaoui  
The contribution and influence of coherent mesoscale eddies off the North-West African Upwelling on the open ocean  
SIAM Conference on Mathematics of Planet Earth (MPE18). [HAL](#) .
- • L. Bonne, S. Bontemps, N. Schneider, T. Csengeri, H. Yahia, R. Günsten, G. Attuel, A. Roy, R. Simon  
Search for filamentary accretion through low velocity shocks  
2018 Science for the Atacama Pathfinder Experiment (APEX). [HAL](#) .
- • A. El Aouni, K. Daoudi, H. Yahia, K. Minaoui  
Coherent Vortex Detection from Particles Trajectories Analysis  
2018 SIAM Conference on Nonlinear Waves and Coherent Structures. [HAL](#) .
- • A. El Aouni, K. Daoudi, H. Yahia, K. Minaoui  
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  
EGU General Assembly, Vienna, 2018. [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](#) .
- •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](#) .
- • G. Attuel, H. Yahia  
Cardiac arrhythmias and Griffiths phase: desynchronization of excitable cells  
STATPHYS 26. [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. 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.*

**Detection of Moroccan coastal upwelling using sea surface chlorophyll concentration**

AICCSA 2015. [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](#) .

- •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?**

GHER Colloquium. Submesoscale Processes: Mechanisms, Implications and new Frontiers, May 2016, Liege, Belgium , May 2016. [HAL](#) .

- •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](#) .

- •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](#) .

- •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](#) .

- •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, 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](#) :
- • 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  
Geophysical Research Abstracts, Vol. 16, EGU2014-6952, EGU General Assembly 2014 2014. [HAL](#) :
  - • H. Badri, H. Yahia, D. Aboutajdine  
Robust surface reconstruction via triple sparsity  
CVPR, 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  
Handling noise in image deconvolution with local/non-local priors  
ICIP 2014. [HAL](#) :
  - • I. Hernandez-Carrasco *et al.*  
Validation of inferred high resolution ocean pCO<sub>2</sub> and air-sea fluxes with in-situ and remote sensing data.  
Earth Observation for Ocean-Atmosphere Interactions Science 2014 ESA-ESRIN 2014
- [HAL](#) :
- • A. Garg, S. Vardan Naidu, H. Yahia, D. Singh  
Wavelet Based Resolution Enhancement for Low Resolution Satellite Images  
IEEE ICIIS2014. [HAL](#) :
  - • S. Kumar Maji, T. Fusco, H. Yahia  
Cross-scale inference and wavefront reconstruction  
SPIE Astronomical Telescopes + Instrumentation, Session: Adaptive Optics Systems IV (Conference 9148) 2014 . [HAL](#) :
  - • O. Yelekci, G. Charria, D. Mawren, X. Capet, G. Reverdin, F. Gohin, J. Sudre, H. Yahia  
Observing submesoscale activity in the Bay of Biscay with satellite-derived SST and Chlorophyll concentration  
Geophysical Research Abstracts, Vol. 16, EGU2014-6952, EGU General Assembly 2014 2014. [HAL](#) :
  - • I. Hernandez-Carrasco *et al.*  
Inference of super-resolution ocean pCO<sub>2</sub> and air-sea CO<sub>2</sub> fluxes from non-linear and multiscale processing methods  
Geophysical Research Abstracts, Vol. 16, EGU2014-15142, EGU General Assembly 2014 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, Morocco, 2014. [HAL](#) .
- •B. Xu, S. Binczak, S. Jacquir, O. Pont, H. Yahia  
Complexity analysis of experimental cardiac arrhythmia  
IEEE Tensymp, 2014. [HAL](#) .
- • B. Xu, S. Binczak, S. Jacquir, O. Pont, H. Yahia  
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](#) .
- •H. Badri, H. Yahia, D. Aboutajdine,  
Fast Multi-Scale Detail Decomposition via Accelerated Iterative Shrinkage  
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