Paulo Gonçalves

Address	43 rue du souvenir, 69009 Lyon, France
Date of birth	March 16, 1967
Citizenship	Portuguese
Foreign languages (fluent)	English, Spanish, Portuguese

Situation

Position	Inria Senior Researcher (DR2), Inria team project DANTE
Location	Centre Inria Rhône-Alpes – École Normale Supérieure de Lyon
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Education and Business

Certificates

2010	**HDR** : *Analyse temps-fréquence et modèles d'invariance d'échelle: Contribution à l'étude de systèmes complexes*	Maths-Info Fondamentale, ENS Lyon
1993	**Ph.D.** : *Analyse Temps-Echelle*	INPG (ENS Lyon)
1990	**MS** : Digital Signal Processing	INPG
1990	**Engineering degree** : Electrical and Computer Science	CPE Lyon (former ICPI Lyon)
1987	**DUT** : Electrical engineering	IUT Lyon 1

Professional activities

Since 1996	**Instit. Nat. de Rech. en Informatique et Automatique**	**Senior Researcher**
	2012 CRI Rhône-Alpes, team DANTE	
	2005-2012 CRI Rhône-Alpes, team RESO	Leader 2010-2012
	2003-2005 Inst. Sup. Tech. de Lisbon. Portugal	Invited researcher
	1999-2003 CRI Rhône-Alpes, team IS2	
	1996-1999 CRI Rocquencourt, team FRACTALES	
1994-1996	Rice University, DSP Lab. Houston (TX) USA	Post-doctoral fellow
1990-1993	Ecole Normale Supérieure de Lyon. France	Ph. D student

Teaching experience

since 2013	Qualification to the lists of Professor of the Universities for sections 27 (computer science) and 61 (signal processing)	
since 2013	CPE Lyon	Associate professor on *Signal Processing*
2009-2013	ENS Lyon - Master 2R Maths-Info	Responsible for the theme *Models and Optimization for Emerging Infrastructures*
Since 2011	CPE Lyon (School of Engineering)	Lecturer on *Signal Processing*
2008-2011	ENS Lyon - Master 2R Maths-Info	Course on *Models and Optimization for Emerging Infrastructures* (24 hrs)
2007	ENS Lyon - Master *Maths-Info*	Course on *Protocols and stochastic processes* (12 hrs)
2001-2003	INPG–ENSERG	Lecturer on *Non-stationarity and Multiresolution Analysis* (20 hrs)

1997-2001	U. Nacional Autónoma de Mexico (Grad. course)	Lecturer on *Wavelets and Fractals* (40 hrs)
1998-1999	ENSEA, DEA TIS (MS)	Course on *Wavelets and Fractals* (12 hrs)
1997-1998	Ecole Centrale de Paris (Grad. course)	Course on *Wavelets and Fractals* (12 hrs)
1993-1995	ENS Lyon. France (MS), ATER	Electronics (64 hrs)
1990-1994	CPE Lyon (Grad. course), Assistant professor	Signal Processing (130 hrs)
1991-1994	IUT Elec. & Comp. Eng., Assistant professor	Mathematics (24 hrs)
1990-1991	Ecoles Préparatoires Chartreux Lyon, Examiner	Physics, Electronics, Optics (24 hrs)

(Total $\sim$ 1000 hrs)

Scientific activities

Research axes

Signal Processing	Signal Processing on graphs. Spectral analysis. Graph-based semi-supervised learning. Machine learning applied to remote sensing. Multispectral imaging, SVM, models. Mutifractal analysis. Application to heart beat rate variability. Time-frequency and time-scale analysis. Wavelets, diffusion schemes. Empirical Mode Decomposition. Compressive sensing. Application to traffic matrix estimation.
Computer Science	Dynamic resource management in cloud environments. Large deviations. Content- and user-based classification in peer-to-peer networks. Semi-supervised learning. Virtual infrastructures and networking. Infrastructure descriptive language, OpenFlow. Scale invariance properties in network traffic. Analysis and Modelling.

Ph. D supervision

B. Girault (2012-2015)	*Diffusion processes on dynamic graphs*, (E. Fleury, Dir.). ENS Lyon.
M. Sokol (2009-2014)	*Clustering and Learning Techniques for Traffic / User Classification*, (Ph. Nain, Dir.). Univ. of Nice.
S. Roy (2010-2014)	*Large deviations methods for dynamic resource management in clouds*. ENS Lyon.
G. Koslovski (2008-2011)	*Dynamically provisioned virtual computing and communication infrastructures : specification, allocation and execution process*. ENS Lyon.
F. Anhalt (2008-2011)	*Virtualisation des équipements réseau : Partage des ressources, performance et applications*. ENS Lyon.
P. Loiseau (2006-2009)	*Contributions to the Analysis of Scaling Laws and Quality of Service in Networks: Experimental and Theoretical Aspects*. ENS Lyon.
H. Carrão (2005-2009)	*Land Cover Classification using multi-temporal MODIS and MERIS satellite images*, (M. Caetano Dir.). Univ. of Lisbonne (Portugal).
J. Gosme (2001-2004)	*Adaptive diffusion schemes for time-frequency and time-scale representations*, (C. Richard Dir.). Univ. Tech. Troyes.

Scientific animation

Sept. 2015	**GRETSI 2015**: Organisation chair of the 25th french symposium on Signal Processing. Lyon
since 2013	Coordinator of the international exchange programs for the Comp. Sc. Dept of ENS de Lyon
since 2012	Coordinator of the International Relations Directory for the Rhône-Alpes Inria centre
2010-2012	Leader of the Inria team-project RESO
since 2010	Officer of the local liaison board EURASIP
2010	Evaluation committee member for AERES (LTSI, U. Rennes 1)
2008-2010	Evaluation committee member for ANR (programs *Technologies logicielles* and *SIMI3*)

2009	Co-editor of *Scaling, Fractals and Wavelets*. ISTE – J. Wiley & Sons, Inc. (English edition of *Lois d'échelle, fractales et Ondelette*, collection IC2, Hermès Sc. Pub. 2002)
2007	Local chair of GridNets 2007, october 2007, Lyon
2004	Director of the Wavelet And Multiresolution Analysis summer school (WAMA). Cargèse 2004
2002-2004	Associate Editor of *IEEE Signal Processing Letters*
2001-2004	Scientific board member of the "Specialists committee" at U. Joseph Fourier, UFR IMA (Section 26)
1998-1999	Scientific board member of the "Specialists committee" at U. Paris XI (Section 61)
1997-2002	Responsible for the Work Group : *Analysis and decision in signal*, and for the Research Group *Fractals and wavelets for signal and image processing* of the GdR CNRS ISIS

Awards and productions

2013	Best paper award at the 26th IEEE Int. Symp. on Computer-Based Medical Systems, for our article *Hurst Exponent IntraPartum Fetal Heart Rate: Impact of Decelerations*. P. Abry, S. Roux, V. Chudácek, P. Borgnat, P.G., and M. Doret.
2012	Best paper award at Int. Wireless Comm. and Mobile Computing Conf. for our work on *Classification of Content and Users in BitTorrent by Semi-supervised Learning Methods*. K. Avrachenkov, P.G., A. Legout and M. Sokol.
2009	Best demonstration awards at SIGMETRICS for our work on *Automated Traffic measurements and analysis in GRID'5000*. P. Loiseau, R. Guillier, M. Imbert and P.G.
2012	Patent Alcatel Lucent, Inria No. 12305956.0 *A System And A Method For Detecting Cheating Applications*. L. Noirie, M. Jaber and P.G.

30 articles in journals and book chapters
More than 50 publications in international conferences

Link to a complete list of publications : http://perso.ens-lyon.fr/paulo.goncalves/BIB/