Guillaume Fuchs

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28 years old – single – French

Scientific Skills

Signal Processing	*Digital signal coding: speech, music and image, channel coding: linear block and convolutional codes, time-frequency analysis, filtering, quantization*
Probability and statistics	*Entropy and Information theory*
Mathematical optimization	*Constrained optimization, Heuristic and stochastic algorithms, Evolutionary Computation (Genetic Algorithms)*
Computer networks	*IP protocol, network architecture, network administration*
Programming	**C**, **Matlab,** C++, Java, UML, VHDL, AHDL, Pspice, Max+II, Orcad, Assembly

Education

Winter 2003 – Summer 2006 (expected)	University of Sherbrooke (Québec, Canada) **Ph.D.** in Electrical and Computer Engineering ***Hierarchical audio and speech coding at low bit-rates*** *Supported by VoiceAge, Montréal and by the Foreign Affairs Canada*
2001	University of Rennes I (France) **Research Master** (DEA) in Signal Processing and Telecommunications (image option)
2001	INSA (National Institute of Applied Sciences) of Rennes (France) **Electrical Engineer**

Professional Experiences

2004 – 2005	VoiceAge, Montréal (Québec, Canada) Scientist collaborator *Candidature for ITU G.729EV standardization*
Nov. 2001-Dec. 2002 *18 months*	Canon Research Centre France (Cesson-Sévigné, France) R&D Engineer *Image coding using evolutionary computation techniques* *Author and co-author of 9 French granted patents*
Feb. – Aug. 2001 *6 months*	French National Institute for Research in Computer and Control (INRIA/IRISA), (Rennes, France) Master internship/Engineer final year project in TEMICS team *Joint source-channel coding in image transmission over noisy channels*
June – Sep. 2000 *4 months*	Valeo Électronique (Meung-Sur-Loire, France) Undergraduate internship *Industrial computer network administration*

Teaching

Winter 2006	University of Sherbrooke
Winter 2005	Undergraduate teaching
	Digital Signal Processing
Fall 2005	University of Sherbrooke
	Teaching assistant
	Digital Signal Processing
March 2003	Centre Sectoriel de Formation en Électronique (Sousse, Tunisia)
	Training workshop instructor
	Computer Networking, Signal Processing

Languages

French	Mother tongue
English	Good commands
German	Elementary knowledge

Personal Interests

Sport	Outdoor activities (hiking, climbing, skiing, scuba diving, cycling), Tennis, Football
Culture	Alternative music, Comics

Publications

Conference peer reviewed papers

Guillaume Fuchs and Roch Lefebvre, "**A SCALABLE CELP/TRANSFORM CODER FOR LOW BIT RATE SPEECH AND AUDIO CODING"**, AES 120th Convention, may 2006

Guillaume Fuchs and Roch Lefebvre, "**A NEW POST-FILTERING FOR ARTIFICIALLY REPLICATED HIGH-BAND IN SPEECH CODERS"**, Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), may 2006

Guillaume Fuchs and Roch Lefbvre, "**A SPEECH CODER POST-PROCESSOR CONTROLLED BY SIDE INFORMATION"**, Proc. of IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), may 2005

Reports

Guillaume Fuchs, **"CODAGE AUDIO HIÉRARCHIQUE ET UNIVERSEL"**, final report for the government of Canada award, 2004

Guillaume Fuchs, **"CODAGE D'IMAGES PAR DESCRIPTIONS MULTIPLES "**, Master thesis, 2001