Curriculum Vitae – Gaël RICHARD

Adresse professionnelle
Télécom Paris, 46 rue Barrault, 75013 Paris, France
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www.telecom-Paris.fr/~grichard

POSTE ACTUEL

Professeur, Responsable du département Image, Données, Signal à Télécom Paris
Le département regroupe plus de 130 personnes incluant 40 permanents dont 35 Enseignants-Chercheurs et plus de 80 doctorants organisés en 3 groupes d'enseignements et de recherche : Signal, Statistiques et Apprentissage (S2A), Images, Modélisation, Analyse, Géométrie Synthèse (IMAGES) et Multimedia (MM).

THEMATIQUES DE RECHERCHE

Modèles et représentations de signaux (représentations parcimonieuses, analyse sinusoïdale, méthodes de décomposition, Factorisation en matrices non-négatives,…), Séparation de sources,
Apprentissage et modèles pour les signaux audio, parole et musique,
Informatique musicale, transcription musicale, Codage audio, 3D Audio,
Analyse des signaux multimédia et parole.

POSTES PRECEDENTS

2004 -	Professeur à Télécom Paris
2001 - 2004	Maître de conférences à Télécom Paris
2000 - 2001	Chef de projet à Philips Consumer Communications, France.
1997 - 2000	Chef de projet à Matra Nortel Communications puis à L&H (France)
1994 - 1996	Post-Doc au CAIP center, Université de Rutgers, USA (supervision: Pr. James Flanagan).
1990 - 1994	Doctorant et enseignant à l'Université Paris XI (supervision: Dr. d'Alessandro).
1989 - 1990	Stage au KTH, Suède

RESPONSABILITES

2017-	Membre du comité d'orientation stratégique du Labex SMART (UPMC,…).
2016-	Membre du comité scientifique de Teralab – plateforme « Big Data »
2015 -	Responsable du département *Image, Données, Signal (IDS)* à Télécom Paris
2015-	Membre du comité de pilotage de la chaire « Machine Learning for Big Data »
2015-	Membre du Comité de Direction de Télécom Paris
2011-	Membre du comité de la recherche de Télécom Paris
2005 - 2015	Responsable du groupe de recherche « Audio, Acoustique et Ondes »
2013 - 2015	Membre élu du sénat académique de l'Université ParisSaclay
2006 - 2016	Membre élu du conseil de laboratoire LTCI/CNRS
2005 - 2015	Membre du conseil de département « Traitement du Signal et des Images »
2005 – 2012	Membre du comité de l'enseignement de Telecom Paris

FORMATION

2017	Auditeur du cycle national de l'Institut des Hautes Etudes pour la Science et la Technologie
2001	« Habilitation à Diriger des Recherches **»**, Université Paris-Sud, Orsay.
1994	Doctorat en informatique de l'Université Paris-Sud, Orsay.
1990	Diplôme d'ingénieur de Télécom Paris.
1988	Maîtrise EEA de l'Université Paris-Sud, Orsay.

DISTINCTIONS, PRIX

2017	Chevalier de l'ordre des palmes académiques
2017	Fellow IEEE
2010	Prix de thèse du GdR-Isis/EEA/GRETSI's pour l'étudiante N. Bertin en doctorat sous ma direction.
2006	Prix de thèse de Paris Ph.D. pour l'étudiant R. Badeau en doctorat sous ma direction.
2018	Prix du meilleur poster du workshop NILM 2018 pour le papier, S. Henriet, U. Simsekli, G. Richard, B. Fuentes, « Energy Disaggregation for Commercial Buildings: A Statistical Analysis », Austin, Tx, USA, 2018.
2012	Prix du meilleur papier de la convention de l'AES pour le papier: "N. Sturmel, A. Liutkus, J. Pinel, L. Girin, S. Marchand, G. Richard, R. Badeau and L. Daudet, (2012), Linear mixing models for active listening of music productions in realistic studio conditions, "132nd AES Convention", Budapest, Hongrie.
2010	Prix du meilleur papier « jeune auteur » de CORESE2010 pour le papier : C. Joder, S. Essid, and G. Richard, "Approche Hiérarchique pour un Alignement Musique-sur-partition efficace", In Proc. Compression et Représentation des Signaux Audiovisuels (CORESA), Lyon, France, Octobre 2010.
2005	Prix du meilleur papier à CBMI'05 pour le papier : O. Gillet and G. Richard, "Indexing and querying drum loops databases", International workshop on Content Based on Multimedia and Indexing (CBMI'05), Riga, Latvia, June 2005.

COMITES EXTERNES, SOCIETES SAVANTES ET CONSEIL SCIENTIFIQUE

2018-2019	Président-référent de la commission d'évaluation CE23 : « Intelligence Artificielle » de l'ANR
2019	Président du conseil scientifique d'EURECOM
2018 -	Membre du comité d'évaluation HCERES de l'UMR STMS (Ircam, Paris)
2018	Expert pour *l'Academy of Finland* (review panel)
2017	Conseil scientifique, Deezer S.A.
2017 -	**Fellow member de l'IEEE**, membre de EURASIP et AES.
2017	Comité d'évaluation du laboratoire CREATE, Aalborg, Danemark
2016	Comité d'évaluation/promotion au niveau directeur de recherche, IRCAM (Paris)
2015 -	Membre du comité *Acoustic, Sound and Music Signal Processing* de l'EURASIP
2010 -	Membre du comité technique *Audio and Acoustic Signal Processing* de l'IEEE
2010 – 2015	Membre du comité de sélection de l'ANR - programme CONTINT
1998 -	Expert pour la commission européenne, évaluation de projets (FP6, FP7, H2020, FET, EiC)
2001 -	Membre de nombreux jurys de thèses et HDR en France, Europe (UK, Finlande, Suède, Allemagne, Portugal, Italie, Danemark, Espagne, Pays-Bas) et Afrique (Tunisie)
2001-	Membre des jurys de "Habilitation à Diriger des Recherches – HDR" en France (S. Marchand, L. Girin, M. Chetouani, N. Evans, G. Peeters) et en Tunisie (S. Djaziri-Larbi).

ACTIVITES D'EDITION ET DE RELECTURE

2017 Editeur d'un numéro spécial sur "*Sound Scene and Event Analysis*" du journal « ACM/IEEE Transactions on Audio, Speech and Language Processing »

2013 Editeur d'un numéro spécial sur "*Informed Acoustic Source separation*" du journal « EURASIP Journal on Advances in Signal Processing ».

2007 - 2011 Editeur associé de la revue « IEEE Transactions on Audio, Speech and Language Processing »

2010-2011 Editeur invité du numéro spécial sur "*Music Signal Processing*" de la revue « IEEE Journal of Selected Topics in Signal Processing »

1994 - Relecteur régulier pour des conférences majeures (Icassp, Eusipco, Ismir, Interspeech, Waspaa, ...)

1996 - Relecteur régulier pour des revues majeures (IEEE transactions, Eurasip journals …)

IMPLICATION ET ORGANISATION DE CONFERENCES

2018 *Co-)General chair* de la conference International Society for Music Information Retrieval (ISMIR-2018)

2015 *(Co-)General chair* de la conférence « IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA-2015) »

2013 *(Co-)General chair* de la conférence « International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS-2013) »

2006 *(Co-)General chair* de la conférence « Workshop on Acoustic Echo and Noise Control (IWAENC-2006) »

2018 *Program (Co-)Chair* pour le Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE)

2018 *Area Chair* pour la conference Eusipco-2018

2017 *Area chair* de la conférence IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA-2017)

2013 *Area Chair,* pour le domaine « Analysis of Speech, Audio Signals, Speech Coding, Speech Enhancement » de la conférence « International Conference of Speech Communication Association (INTERSPEECH 2013) »

2013 - 2018 *Area Chair*, pour le domaine « Audio and Acoustic Signal Processing » pour la conférence « IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP) »

TUTORIELS ET CONFERENCES INVITEES (KEYNOTES)

2019 Table ronde au workshop IANP2019 "Intelligence Artificielle : Nouvelles Puissances", Avril 2019, CNAM, Paris

2018 Table ronde au congrès de l'Université Franco-Italienne sur « *Les défis de l'Intelligence Artificielle* », novembre 2018, Paris.

2016 Conférence (Keynote) sur *Acoustic Scene and Events Recognition: How Similar is it to Speech Recognition and Music Genre Recognition?* à "International Workshop on Detection and Classification of Acoustic Scenes and Events", Budapest, Hongrie.

2015 Conférence (Keynote) sur *Melody Extraction from music signals: "blind" and "informed" approaches* à « 5th International Workshop on Folk Music Analysis (FMA 2015) », Paris, France

2014 Conférence (Keynote) sur *« Informed Audio Source Separation*" at the « AES 53rd Conference on Semantic Audio », Londres, UK.

2014 Conférence (Keynote) sur « *Melody Extraction from Polyphonic Music Signals*" à « International Workshop on Acoustic Echo and Noise Control (IWAENC 2014) », Nice, France.

2012 Conférence (Keynote) sur *Audio and Multimedia Music Signals Indexing* à « International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS-2012) », Dublin, Irelande.

2010 Conférence (Keynote) sur *olyphonic music signals indexing* aux « Journées d'Informatique Musicale (JIM 2010) », Rennes, France.;

2007 Conférence (Keynote) sur *Recent advances in Digital Music Processing and Indexing* à « Digital Music Research Network (DRMN+2) », Londres , UK.

2014 Tutoriel avec A. Ozerov et A. Liutkus sur « Séparation de sources informée" à « IEEE International Conference on Acoustics Speech and Signal Processing (ICASSP 2014) », Florence, Italy

2011 Tutoriel sur « *Multimedia Music Signal Processing*" à « ACM Multimedia conference », Scottsdale, USA.

Séminaires récents

2017 "Traitement des signaux audionumériques", Rencontre Scientifique Innovation, PSA, Vélizy
2015 "Melody Extraction from Music Signals: "Blind" to "Informed" Approaches", New York University, US.
2014 "A view on Greedy pursuits algorithms for representing audio signals", Mitsubishi Electric Research Laboratories, Boston, US.
2014 Invited talk on "Informed Audio Source Separation" at the Speech and Audio in the Northeast workshop (SANE), Boston, US.
2013 « Should Computational Audio processing systems have ears and brain ?", Stimulus talk at Dagstuhl Seminar on "Computational audio analysis"
2013 "Some research in Audio, Music and Multimodal Signal Processing", Fraunhofer Institute, Ilmenau, Germany
2012 "Greedy pursuits algorithms for representing audio signals: avec applications to Compression, Source separation and Audio Fingerprint", Berkeley Universiy, US
2012 "Audio Processing Research and Technologies", Korea University, Seoul, Korea.
2012 "Greedy pursuits algorithms for representing audio signals: avec applications to Compression, Source separation and Audio Fingerprint", University of California at Los Angeles, US
2012 "Research in audio Processing", Technical University of Berlin, Germany
2011 "Multimodal Music Processing", Dagstuhl Seminar, Germany
2010 "Research in audio Processing", IRCAM, Paris, France
2010 "Transcription and Separation of the main melody", Queen Mary University, London, UK
2009 "Beyond the bag-of frames approach for musical instrument recognition", Aalborg University, Denmark.
2009 "Beyond the bag-of frames approach for musical instrument recognition", Dublin City University, Ireland.
2009 "Beyond the bag-of frames approach for musical instrument recognition", INESC Porto, Portugal.
2008 "Recent advances in Digital Music Processing and Indexing", Acoustics'08 warm up, Paris, France
2008 "Novel approaches for musical instrument recognition", Tampere University, Finland
2007 "Audio signal indexing", Enterface'07 workshop, Istanbul, Turkey
2007 "Transcription and separation of drum signals from polyphonic music", Enterface'07 workshop, Istanbul, Turkey
2007 "Audio signal indexing: Application to drum track separation and transcription", Cambridge University, UK.
2007 "Audio signal indexing: Application to drum track separation and transcription", Standford University, US.
2006 "Drum signal processing and tempo extraction for Audio indexing", University Pompeu Fabra, Barcelona, Spain.
2005 "Tempo extraction for Audio indexing", Columbia University, New York, USA.
2005 "Musical instruments recognition and tempo extraction for Audio indexing", CAIP center, Rutgers Universty, US.
2005 « Indexation des signaux audiofréquences :vue d'ensemble (in French) », Workshop of the French Acoustical Society, Paris, France.

Vulgarisation

2019 Gaël Richard, Sébastien Fenet, Yves Grenier, "De Fourier à reconnaissance musicale", Revue Interstices, Fev. 2019, online at: https://interstices.info/de-fourier-a-la-reconnaissance-musicale/ (in French)
2008 Conférence expérimentale avec B. David à l'Espace des Sciences Pierre Gilles de Gennes, « L'ordinateur a le sens du rythme et de la mélodie ? », ESPCI, Paris.

2004 Participation à la "Fête de la Science", avec un stand sur « Du rythme à la musique » à la Cité des Science et de l'industrie, Paris, France. Diffusé sur France Culture.

Enseignement (quelques exemples de cours récents)

(200h entre 1990 et 1994 et entre 90h et 220h d'enseignement annuel entre 2001 et 2016)

2007- Cours en traitement du signal audio, Master MVA, ENS Cachan, Telecom Paris
2016- Cours en traitementdu signal musical, Master ATSI, Université Paris-Saclay
2003-2015 Cours en traitement du signal audio, Master ATIAM, Université Pierre et Marie Curie, Telecom Paris
2011-2014 Encadrement de projets collaboratifs – 1ère année école d'ingénieur.
2004-2014 Cours en traitement de la parole et du signal audio, Master IMA, Université Pierre et Marie Curie, Telecom Paris
2001 -2016 Cours en traitement du signal à Telecom Paris
2001-2016 Cours en traitement du signal audio et parole à Telecom Paris

Principaux projets de recherche

2019-2022 Contrat de recherche collaborative et encadrement de thèse avec Creaminal on *Analyse et apprentissage multimodaux pour le montage audio/vidéo* , xx k€ (amount on request).
2018-2022 European Training Network MIP-Frontiers (*New Frontiers in Music Information Processing*) 1 051 k€ pour Télécom Paris
2018-2021 Contrat de recherche collaborative avec DEEZER, 48 k€ pour Telecom Paris, avec F. d'Alché-Buc.
2017-2020 Contrat de recherche collaborative avec PSA sur "Amélioration de l'intelligibilité de la parole en contexte automobile", 70 k€ pour Telecom Paris, avec B. David.
2016-2020 Projet international ANR/Tubitak FBIMATRIX on "*Parallel and Distributed Marov Chain Monte Carlo for Bayesian Inference in Matrix and Tensor Factorization Models*", 184 k€ for Telecom Paris, avec U. Simsekli.
2016-2019 Contrat de recherche collaborative et encadrement de thèse avec Smart Impulse on e*lectric source separation*, xx k€ (amount on request).
2014-2018 Projet européen FP7-LASIE (*Large Scale Information Exploitation of Forensic Data*), 420 k€ pour Telecom Paris, avec S. Essid.
2014-2017 Projet national Digiteo/Digicosme (*Expert knowledge for audio and musical signals*), 120 k€ pour Telecom Paris avech M. Kowalski (Université Paris-Sud), H. Papadopoulos (CNRS).
2016 Contrat de recherche collaborative avec Technicolor, 45 k€ pour Télécom Paris avec S. Essid.
2013-2017 Projet ANR-AIDA (*Intelligible Car for Hearing Impaired*), 95 k€ pour Telecom Paris.
2013-2016 Programme « Marie Curie International Outgoing Fellowships (IOF) » *Statistical models for musical signal processing)* avec H. Papadopoulos.
2013-2017 Projet ANR-Edison3D (*Editing and Rendering for next generation of 3D sound*), 458k€ pour Télécom Paris.
2015 Projet « Futur & Ruptures », *Deep Learning for Multiple Instrument Identification in Recorded Music*, 50k€.
2011-2015 Projet européen FP7-REVERIE (*REal and Virtual Engagement in Realistic Immersive Environments),* 604 k€ pour Telecom Paris avec S. Essid.
2011 Contrat de recherche collaborative avec Arkamys, 45 k€ pour Télécom Paris avec Y. Grenier
2011-2013 Projet européen (Support Action), « *Towards Excellence in Media Computing and Communication* », 25 k€ pour Telecom Paris.
2011 Contrat de recherche collaborative avec Audionamix, 15 k€
2010-2013 Réseau d'excellence européen FP7-3DLife (*Bringing the Media Internet to Life*), 415 k€ pour Telecom Paris avec S. Essid.
2009-2013 Projet ANR-DREAM (*Active Music Listening*), 140k€ pour Telecom Paris.
2008-2013 Projet franco-allemand QUAERO (*Multimedia document retrieval*), 800 k€ pour Telecom Paris.
2007-2009 Projet Infom@gic (*Audio indexing and Retrieval*), 75 k€ pour Telecom Paris.
2006 Contrat de recherche collaborative avec RTL, 45 k€ pour Telecom Paris.
2006-2008 Réseau d'excellence européen FP6-K-SPACE (*Knowledge Space of Semantic Inference for Automatic Annotation and Retrieval of Multimedia Content),* 310 k€ pour Telecom Paris.

2005-2007 Projet ACI Big Data Musicdiscover (*Music Information Retrieval and Discovery*), 75 k€ pour TelecomParis

2004 Réseau d'excellence européen avec Thales et LIMSI, 20 k€ pour Telecom Paris

2001-2002 Projet RNRT-COHRAINTE (*Robust and Scalable coding of audiovisual sources avec applications to Internet*), 100 k€ pour Telecom Paris

2001-2004 Projet européen FP5-IST- JOCO (*JOint source-channel COding-driven digital baseband design for 4G multimedia streaming*), 500 k€ pour Philips.

2000-2003 Projet européen FP5-IST- INTERFACE (*MultimodAl analysis/synthesis systEm for human INTERaction to virtual and augmented environments*), approx.. 200k€ pour Matra-Nortel (*project transferé*)

2000-2003 Projet européen FP5-IST-BANCA (*Biometric Access Control for Networked and e-Commerce Applications*), 500 k€ pour Matra Nortel (*projet transferé*)

Encadrement de thèses de doctorat (31 diplomés, 10 en cours)

2019- L. Pretet, "Analyse et apprentissage multimodaux pour le montage audio/vidéo », co-encadré avec G. Peeters (Télécom Paris) en collaboration avec la société Creaminal.

2018- G. Cantisani, "Multimodal music recording remastering", co-encadrée par S. Essid (Télécom Paris), collaboration prévue avec Technicolor

2018- K. Schulze-Forster, « Text-Informed Lead Vocal Extraction", coencadré par R. Badeau (Télécom Paris), C. Doire (Audionamix)

2018- J. Nistal, « Conditional generation of audio using deep learning: application to music production", co-encadré par S. Lattner (Sony).

2018- K. Ibrahim, « Audio Content and Context in Music Recommendation", co-encadré par G. Peeters (Télécom Paris), J. Royo Letellier et F. Lesaint (Deezer),

2018- O. Cifka, « Context-Driven Music Transformation", co-encadré par Umut Simsekli (Telecom Paris), collaboration prévue avec Technicolor.

2018- Andréa Vaglio, « Transcription de voix chantée », co-supervisée par F. d'Alché-Buc, R. Hennequin (Deezer), M. Moussallam (Deezer)

2017- Thanh-Huy Nguyen, "Méthodes parallèles distribuées de Monte-Carlo par Chaînes de Markov pour l'inférence Bayesienne de Modèles à Factorisation de tenseurs", co-supervisé par Umut Simsekli (Telecom Paris)

2017- E. Gentet, « Amélioration de l'intelligibilité en contexte bruité automobile», co-encadré avec B. David (Telecom Paris) et V. Roussarie (PSA)

2017- S. Henriet, « Analyse et séparation de sources d'intensités électriques », co-encadré avec U. Simsekli (Telecom Paris) et B. Fuentes (Smart Impulse)

2016-2019 S. Parekh, « Models for audiovisual objects discovery, localization and extraction », co-encadré avec S. Essid (Telecom Paris), A. Ozerov (Technicolor)

2014-2018 V. Bisot, « Multimodal analysis and indexing of complex urban scenes », co-encadré avec S. Essid (Telecom Paris)

2014-2018 T. Jansoone, « Multimodal analysis and recognition of social signals : application to the synthesis of social attitudes of an animated agents », Co-encadré avec C. Clavel (Telecom Paris), K. Bailly (Université Pierre and Marie Curie).

2014-2017 S. Leglaive, « Under-determined audio source separation in reverberant environment», co-encadré avec R. Badeau (Telecom Paris).

2014-2017 C. Laroche, «Sparse approaches for music transcription », co-encadré avec H. Papadopoulos (CNRS), M. Kowalski (University Paris-Sud)

2013-2017 S. Durand, "Automatic music transcription", Co-encadré avec B. David (Telecom Paris)

2012 -2016 A.C Conneau, "Dynamic identification of emotional state by analysis of heterogenous biological signals », co-encadrée avec S. Essid (Telecom Paris)

2012-2016 H. Bai, "Hybrid models for sound reverberation", co-encadré avec L. Daudet (Université Paris 6).

2011-2015 X. Jaureguiberry, "Fusion for audio source separation", co-encadré avec E. Vincent (INRIA, Nancy).

2011-2015 A. Masurelle, "Multimodal action and dance steps recognition", co-encadré avec S. Essid (Telecom Paris)

2011-2014 N. Lopez, « Monochannel approaches for speech dereverberation », co-encadré avec Y. Grenier (Telecom Paris).

2010-2013 S. Fenêt, "Audio-Fingerprints and Associated Indexing Strategies for the Purpose of Large-Scale Audio-Identification", co-encadré avec Y. Grenier (Telecom Paris).

2009-2013 R. Foucard, "Multilevel fusion by boosting for automatic tagging", co-encadré avec S. Essid (Telecom Paris)

2009-2013 B. Fuentes, "Latent component probabilistic analysis and its adaptation to music signals. Application to automatic music transcription and source separation" co-encadré avec R. Badeau (Telecom Paris).

2010-2012 A. Liutkus, "Gaussian processes for source separation and posterior source coding", co-encadré avec R. Badeau (Telecom Paris).

2009-2012 M. Moussallam, "Sparse and herarchical representations for archival and compression of audio scenes", co-encadré avec L. Daudet (Univ. Paris 6).

2008-2011 S. Gulluni "An interactive system for electro-acoustic music analysis", co-encadré avec S. Essid (Telecom Paris), O. Buisson, E. Favreau (INA)

2007-2011 C. Joder, "Audio-to-score temporal alignment avec discriminative graphical models", co-encadré avec S. Essid (Telecom Paris)

2007-2011 F. Vallet, "Automatic structuring of TV talk shows", co-encadré avec S. Essid (Telecom Paris), J. Carrive (INA).

2007-2010 J-L Durrieu, "Automatic transcription and separation of the main melody in polyphonic music signals", co-encadré avec B. David.

2006-2010 M. Ramona, "Automatic classification of broadcast audio streams avec Support Vector Machines", co-encadré avec B. David.

2006-2009 V. Nguyen, "Study of characteristics of the vietnamese language for its synthesis and its automatic recognition : Static and dynamic aspects", co-encadré avec R. Carré (CNRS), E. Castelli (MICA, Vietnam).

2005-2009 N. Bertin, "Non-negative matrix factorizations : constrained and probabilistic approaches and application to automatic transcription of polyphonic music", co-encadrée avec R. Badeau (Telecom Paris).

2005-2008 E. Ravelli, "Audio signal representations avec overcomplete transforms for coding and indexing", co-encadré avec L. Daudet (Univ. Paris 6).

2004-2008 M. Betser, "Sinusoidal modeling and applications to audio indexing", co-encadré avec B. David (Telecom Paris) and P. Collen (Orange Labs).

2004-2007 P. Leveau, "Structured sparse decomposition : application to obejct representation of music : signal models, algorithms and applications", co-supervised with L. Daudet (Univ. Paris 6).

2004-2007 C. Clavel, "Acoustic analysis and recognition of fear-type emotions occuring in abnormal situations, co-encadrée avec L. Devillers (Univ. ParisXI) and S. Sedogbo (Thales)

2003-2007 O. Gillet, "Drum signal analysis : applications to music video analysis", Telecom Paris.

2002-2006 S. Essid, "Automatic classification of audio signals : machine recognition of musical instrument, Co-encadré avec B. David (Telecom Paris)

2002-2006 M. Alonso, "Extraction of metrical information from acoustic music signals", Co-encadré avec B. David (Telecom Paris)

2001-2005 R. Badeau, "High resolution methods for estimating and tracking modulated sinusoids : Application to music signals, Co-encadré avec B. David (Telecom Paris)

PUBLICATIONS

240+ articles incluant 69 revues et chapitres de livres, 10 brevets et plus de 180 articles de conférences
7546 citations, h-number = 46, Source Google Scholar)

Revues, Chapitres de livre (69)

Zhiyao Duan, Slim Essid, Cynthia C. S. Liem, Gaël Richard, Gaurav Sharma, "Audio-Visual Analysis of Music Performances", IEEE Signal Processing Magazine, vol. 36, no. 1, pp. 63-73, Jan. 2019.

Gaël Richard, Sébastien Fenêt, Yves Grenier, "De Fourier à reconnaissance musicale", Revue Interstices, Fev. 2019, online at: https://interstices.info/de-fourier-a-la-reconnaissance-musicale/ (in French)

Thanh Huy Nguyen, Umut Şimşekli, Gaël Richard, Ali Taylan Cemgil, "Efficient Bayesian Model Selection in PARAFAC via Stochastic Thermodynamic Integration", IEEE Signal Processing Letters, April 2018

Simon Henriet, Umut Simsekli, Benoit Fuentes, Gaël Richard, (2018), "A Generative Model for Non-Intrusive Load Monitoring in Commercial Buildings", Volume 177, Oct. 2018, Pages 268-278 (a former version on arxiv).

Clément Laroche, Matthieu Kowalski, Hélène Papadopoulos and Gaël Richard, (2018), "Hybrid Projective Nonnegative Matrix Factorization with Drum Dictionaries for Harmonic/Percussive Source Separation", ACM/IEEE Transactions on Audio, Speech and Language Processing.Simon Leglaive, Vol. 26 (9), pp. 1499-1511, Sept. 2018

Simon Leglaive, Roland Badeau and Gaël Richard, (2018), "Student's t Source and Mixing Models for Multichannel Audio Source Separation", IEEE Transactions on Audio, Speech and Language Processing, vol. 26, no. 6, pp. 1154-1168, June 2018.

B. Pardo, A. Liutkus, Z. Duan, G. Richard, Applying source separation to music; in Audio Source Separation and Speech Enhancement, E. Vincent, T. Virtanen, S. Gannot, Eds., Wiley International, 2017.

R. Serizel, V. Bisot, S. Essid, G. Richard, Acoustic Features for Environmental sound Analysis, in Computational Analysis of Sound Scenes and Events, T. Virtanen, D. Ellis, M. Plumbley Eds., Springer International Publishing AG, pp 71-101, 2018.

K. Nathwani, G. Richard, B. David, P. Prablanc, V. Roussarie, Speech Intelligibility Improvement in Car Noise Environment by Voice Transformation, Speech Communication, May 2017.

T. Janssoone, C. Clavel, K. Bailly et G. Richard,."Règles d'associations temporelles de signaux sociaux pour la synthèse d'un Agent Conversationnel Animé: Application aux attitudes sociales", Revue d'Intelligence Artificielle (in French). 2017.

V. Bisot, R. Serizel, S. Essid, G. Richard, "Feature Learning with Matrix Factorization Applied to Acoustic Scene Classification", IEEE/ACM Transactions on Audio, Speech, and Language Processing, Special Issue on Sound Scene and Event Analysis, June 2017.

S. Fenet, R. Badeau, G. Richard, "Reassigned Time-Frequency Representations of Discrete Time Signals and Application to the Constant-Q Transform", Signal Processing, 132 (2017) 170–176.

S Durand, J. Bello, S. Leglaive, B. David, G. Richard, "Robust Downbeat Tracking Using an Ensemble of Convolutional Networks", IEEE/ACM Transactions on Audio, Speech, and Language Processing, 2016 (accepted)

S. Leglaive, R. Badeau, G. Richard, "Multichannel Audio Source Separation with Probabilistic Reverberation Priors", IEEE/ACM Transactions on Audio, Speech, and Language Processing, Vol. 24, no. 12, December 2016

X. Jaureguiberry, E. Vincent and G. Richard, (2016), "Fusion methods for speech enhancement and audio source separation", ACM/IEEE Transactions on Audio, Speech and Language Processing.

A. Masurelle, A. Rida Sekkat, S. Essid, G. Richard, « TPT-Dance&Actions : un corpus multimodal d'activités humaines », Revue Traitement du signal – no 4/2015, pp. 443-475.

H. Bai, G. Richard, L. Daudet "Late Reverberation Synthesis: From Radiance Transfer to Feedback Delay Networks", IEEE/ACM Transactions on Audio, Speech, and Language Processing, 2015 vol. 23, n° 12, pp. 2260 - 2271.

J. Salomon, E. Gomez, D. Ellis, G. Richard, "Melody Extraction from Polyphonic Music Signals: Approaches, Applications and Challenges", IEEE Signal Processing magazine, Vol 31, Issue 2, pp 118-134, March 2014

M. Moussallam, A. Gramfort, L. Daudet, G. Richard, "Blind Denoising with Random Greedy Pursuits", IEEE Signal Processing letters, Vol. 21, N° 11, Nov. 2014

C. Joder, S. Essid, G. Richard, "Learning Optimal Features for Polyphonic Audio-to-Score Alignment," Audio, Speech, and Language Processing, IEEE Transactions on , vol.21, no.10, pp.2118,2128, Oct. 2013

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