Paul Magron

Research Scientist

INRIA Centre at Université de Lorraine
615 Rue du Jardin-Botanique, 54600 Villers-lès-Nancy, France
✉ paul.magron@inria.fr
🌐 https://magronp.github.io/

Current position

Since 2021	**Research scientist**, *INRIA Nancy Grand-Est, Multispeech team*, Nancy, France Signal processing and machine learning applied to audio (sound source separation, speech enhancement) and astronomy imaging (globular cluster analysis).

Professional experience

2019 - 2021	**Postdoctoral researcher**, *IRIT, Université de Toulouse, CNRS*, Toulouse, France Hybrid deep learning for content-aware music recommendation.
2017 - 2019	**Postdoctoral researcher**, *Tampere University*, Tampere, Finland Audio/music source separation, phase-aware probabilistic models, deep learning. Real-time speech separation in a collaborative project with the Eriksholm Research Center (Denmark).
2013 - 2016	**Ph.D.**, *Télécom ParisTech, Signal and Image Processing department*, Paris, France Audio source separation, phase recovery, nonnegative matrix factorization.
2013	**Research intern**, *Centro de Investigacion en Tecnologias de Audio*, Santiago, Chile Complex resonator acoustics, digital filter design, sound synthesis.
2011 - 2012	**Trainee engineer**, *Airbus - Propulsion Integration Domain*, Toulouse, France Propulsion systems weight management, modeling of the water hammer pressure surge at engine start.
2010	**Research Assistant**, *UR NAVIER Research Center*, Paris, France Mechanical analysis of straw balls composite panels.

Supervision

PhD students	**Orane Dufour**, *co-supervised with E. Vincent and M. Rouvier, 2024 - 2027* Towards a comprehensive speech anonymization framework.
	Mayank Mishra, *co-supervised with R. Serizel, 2024 - 2027* Semantic segmentation of audio soundscapes on edge devices.
	Nasser-Edine Monir, *co-supervised with R. Serizel, 2022 - 2026* Multichannel speech enhancement for patients with auditory neuropathy spectrum disorders.
Postdocs	**Marina Krémé**, *co-supervised with A. Deleforge, 2022 - 2023* Phase retrieval and optimal transport for audio restoration.
M2 interns	**Charles Franchi**, *co-supervised with M. Andreatta, F. Jacquemard, and P. Lascabettes, 2025* Mathematical morphology and machine learning for computational music analysis.
	Louis Lalay, *co-supervised with M. Sadeghi, 2023* Dictionary learning for deep speech separation.
	Louis Bahrman, *co-supervised with A. Deleforge, 2022* Repairing audio signals using compact phase-aware models.

Teaching

Since 2021	**Teaching assistant**, *Université de Lorraine*, Nancy, France Neural networks (lecture + programming), automatic speech recognition (programming)
2018 - 2019	**Teaching assistant**, *Tampere University*, Tampere, Finland Advanced audio signal processing (lecture + programming + projects), Introduction to audio signal processing (programming + projects).
2014 - 2016	**Teaching assistant**, *Télécom ParisTech*, Paris, France Nonnegative Matrix Factorization (lecture + programming), fundamentals of psychoacoustics (lecture), first-year collaborative and final projects supervision.

Distinctions

2018	Best Paper Award at IWAENC 2018 for the paper titled "Towards complex nonnegative matrix factorization with the beta-divergence", by P. Magron and T. Virtanen.

Funding

2026	Funding from the Action Spécifique Numérique (ASNUM, CNRS-INSU) for a collaborative project with Observatoire Astronomique de Strasbourg.
2020	Short-term mobility grant from the Maupertuis program for France-Finland scientific collaboration.

Scientific evaluation

PhD	**Pierre-Hugo Vial**, *IRIT, Université de Toulouse, CNRS*, Toulouse (examiner) Topic: Phase retrieval and audio signal reconstruction with non-quadratic cost functions. PhD supervised by Cédric Févotte and Thomas Oberlin; defended on November 29th, 2022.
MSc	Reviewer for the ATIAM (Sorbonne University) and NLP (University of Lorraine) MSc programs.

Reviewing activities

Journals	IEEE Transactions on Audio, Speech, and Language Processing, IEEE Transactions on Signal Processing, IEEE Signal Processing Letters, IEEE Access, Eurasip journal, Speech communications, Multimedia Systems, Journal of Computational and Graphical Statistics.
Conferences	IEEE ICASSP, IEEE WASPAA, DAFx, DCASE, IWAENC, Interspeech.
Funding agencies	Czech Science Foundation (Czech republic). MITACS internship program (Canada).

Academic services

2026	Member of a selection committee (CoS) for an associate professor position (Université de Lorraine).
2026	Jury member for the Natural Language Processing M2 program (Université de Lorraine).
Since 2022	Member of the INRIA commission for Scientific Information & Edition (IES) (since 2022).
2021	Organizer of a special session at IEEE IJCNN 2021 on "Representation Learning for Audio Processing".

Education

2013 - 2016	**Ph.D.**, *Télécom ParisTech, Signal and Image Processing department*, Paris, France Thesis: Phase recovery based on signal modeling: application to audio source separation.
2016	**Summer school in Image and Signal processing**, *GRETSI*, Peyresq, France Probabilistic modeling and Bayesian inference in signal and image processing.
2012 - 2013	**Master of sciences**, *Sorbonne University, Télécom Paris, and IRCAM*, Paris, France Acoustics, Signal Processing and Computer Science applied to Music (ATIAM). Thesis: Modeling and simulation of the Antara, a Latin American closed-end pan flute.
2009 - 2011	**Engineering degree**, *École des Ponts ParisTech*, Paris, France Majors: materials, structures and fluids mechanics. Minors: acoustics, thermodynamics, aerodynamics.
2007 - 2009	**Preparatory school to French "Grandes Écoles"**, *Lycée Pierre de Fermat*, Toulouse, France Majors: mathematics, physics and computer science.
2007	**Baccalaureate in sciences and mathematics**, *Lycée Pierre de Fermat*, Toulouse, France Major in mathematics, graduated with first class honors.

Languages

Programming	Python (advanced), Matlab/Octave (advanced), C++ (beginner), Faust (to reactivate).
Natural	French (native), English (fluent), Spanish (fluent), Chinese (beginner), Finnish (beginner).

Personal interests

Music	I have been playing the electric guitar for 20+ years, mostly in jazz and progressive rock/metal. I am a student at the conservatory, where I currently study jazz, and previously was a student in the classical curriculum (music theory/*solfège* and composition).
Martial arts / combat	I have trained in taekwondo for 10+ years and am a black belt (2nd Dan). I competed in technical and sparring competitions, and I occasionally assisted my instructor for teaching. I started practicing Muay Thaï one year ago.