

Mathieu Fontaine

Curriculum Vitae

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Research Interests & Skills

Audio signal processing

Audio source localization, audio source separation & denoising.

Probabilistic framework

Gaussian and α -stable processes, Bayesian inference, sketching & compressed sensing.

Other Mathematics skills

Measure theory, algebra & projective geometry.

Education

2016–2019 **Thesis in Applied Mathematics for Signal Processing**, INRIA Nancy Grand-Est, Nancy, France.

2014–2015 **Master in Fundamental and Applied Mathematics**, University of Poitiers, Poitiers, France.

2011–2012 **Bachelor in Fundamental Mathematics**, University of Rennes 1, Rennes, France.

2009–2011 **Classe Préparatoire aux Grandes Ecoles (CPGE)**, Montesquieu High School, Le Mans, France.

MPSI (Mathematics, Physics and Engineer Science) and MP (Mathematics and Physics).

PhD Topic & Master Thesis

PhD *α -stable process for signal processing.*

Supervisors Antoine Liutkus, INRIA Nancy Grand-Est, France & Roland Badeau, Telecom ParisTech, France.

Master thesis *27 lines on a smooth projective cubic.*

Supervisor Alessandra Sarti, MFA Poitiers.

Teaching Experience

- 2015-2016 **High school mathematics teacher**, *Lycée Racan*, Château-du-Loir, France.
- 2013-2014 **Middle school mathematics teacher**, *Collège Alfred de Musset*, Ecommoy, France.

Languages

French	Native
English	Fluently
German	Novice

Computer Skills

OS	<i>Linux, Windows</i>
Programming Language	<i>Python, Matlab, C, L^AT_EX</i>

Other Interest

- Music I practice bass guitar, vocals, piano & saxophone. I recorded several bands in professional conditions.
- Reading Old literature & Theater.

Publications

- [1] M Fontaine, A Liutkus, L Girin, and R Badeau. Parameterized wiener filtering for single-channel denoising. In *Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA 2017)*, 2017, In Preparation.
- [2] M Fontaine, C Vanwysberghe, A Liutkus, and R Badeau. Scalable source localization with multichannel alpha-stable distributions. In *25th European Signal Processing Conference (EUSIPCO 2017)*, 2017, Submitted.
- [3] M Fontaine, C Vanwysberghe, A Liutkus, and R Badeau. Sketching for nearfield acoustic imaging of heavy-tailed sources. In *13th International Conference on Latent Variable Analysis and Signal Separation (LVA/ICA 2017)*, 2017.