

Diplomas

- 2020– **PhD: Hierarchical temporal learning for multi-instrument and orchestral audio synthesis**, *ircam*, Paris IV.
Deep learning, realtime audio synthesis, generative models
- 2018–2019 **Master Degree 2 ATIAM with High Honours**, *ircam*, Paris IV, Acoustic, Signal Processing and Computer Science applied to music.
Filtering, source separation, machine learning, Reactive programming, modelisation and synthesis of instruments...
- 2017–2018 **Master Degree 1 Engineering Sciences**, *Sorbonne Université*, Paris VI.
Signal processing, acoustic, mecanic, numeric methods (finite element method, finite difference method)
- 2015–2017 **Mathematic degree**, *Sorbonne Université*, Paris VI.
- 2012–2014 **Audiovisual BTS**, *Institut Technologique Européen des Métiers de la Musique (ITEMM)*, Le Mans.
Filtering, mixing, electronic
- 2011–2012 **Baccalauréat**, *Lycée Bignon*, Mortagne-Au-Perche.
Parcours Scientifique, obtenu avec mention Bien

Professional Experiences

- 2019 **R&D**, *ircam*, Paris, 2 months fixed-term contract.
Creation and deployment of audio / video focused generative models in collaboration with Alexander Schubert, leading to a musical piece called *Convergence*
- 2019 **R&D**, *Technicolor - Interdigital*, Rennes, 6 months internship.
Speech transformations using deep generative models.
Creation of an age-focused speech conversion system using end-to-end waveform auto-encoders.
- 2018 **R&D**, *Institut d'Alembert*, Paris, 3 months internship.
Caractérisation et synthèse des harpes d'Afrique Centrale par analyse modale opérationnelle
Utilisation de la fomulation modale d'Udwadia Kalaba pour obtenir la modélisation couplée et non-linéaire d'un instrument à corde.

Open source projects

- 2020–2021 **Realtime DDSP**, *ircam*, Paris.
Implementation of the *Differentiable Digital Signal Processing* model in pytorch, and creation of a CPU realtime implementation in C++, running as a PureData external (see website for more informations).
- 2020 **WaVAE**, *ircam*, Paris.
Creation of a realtime audio variational auto-encoder for timbre transfer and latent space exploration, running as a PureData external (see website for more informations).

Other Abilities

- Programming – **Python, C++, CUDA**
– **PyTorch**
– **max/MSP, PureData, JUCE**
– **ReactJS, React Native, Redux**
- Languages – **Anglais: Fluent**
– **Espagnol: Niveau B1**
- Music – Cycle 3 **Percussions, Piano**
– Diplôme de fin d'étude en **formation musicale**