



# MARTIN AVERSENG

Weinbergstrasse 62, 8006 Zurich  
(+33)622854025  $\diamond$  martin.averseng@gmail.com

## EDUCATION

---

### CMAP, Ecole Polytechnique, Palaiseau

*Sept. 2016 - Dec. 2019*

PhD thesis in applied mathematics:

*Efficient methods in acoustic scattering in 2D and 3D*

*Preconditioning on singular domains and fast convolution.*

Direction: Pr. François Alouges.

Thesis defended and obtained on october 14th 2019.

### Université Pierre et Marie Curie, Paris

*Sept. 2015 - July 2016*

Master's degree, Numerical analysis of partial differential equations.

### IRCAM, Paris

*Sept. 2014 - July 2015*

Master's degree, Acoustics, signal processing, computer science applied to music.

### Ecole Polytechnique, Palaiseau

*Sept. 2011 - July 2014*

Major in applied mathematics.

Minors in quantum and statistical physics, continuum mechanics

## WORK EXPERIENCE

---

### Laboratoire Jacques-Louis Lions, Inria Alpines team, Paris

*Jan. 2020 - June 2020*

Post-doc, supervised by Xavier Claeys. Working on combinations of additive Schwarz and Calderón preconditioners.

### Laboratoire des systèmes perceptifs, ENS, Paris

*Jan. 2015 - July 2015*

Research internship in behavioral neurosciences.

### ESI-Group, San Diego

*March - July 2013*

Research internship.

Modeling of the variance in a transient model of the Statistical Energy Analysis.

### PSA Peugeot Citroën, Vélizy-Villacoublay

*July - Sept. 2013*

Ergonomics of Human Machine interfaces

### Armée française, 8ème RPIMA, Castres

*Sept. 2011 - April 2012*

8 month experience in French army, including 4 month at the 8ème RPIMA.

## PUBLICATIONS

---

- Bagur, S., Averseng, M., Elgueda, D., David, S., Fritz, J., Yin, P., Shamma, S., Boubenec, Y., and Ostojic, S.: Go no-go task engagement enhances population representation of the target stimulus in primary auditory cortex. *Nature Comm.* 9(1), 2529 (2018)
- Averseng M.: Fast discrete convolution in R2 with radial kernels using non-uniform fast Fourier transform with nonequispaced frequencies. *Numer. Algor.* (2019)
- Alouges. F., Averseng, M.: New preconditioners for the Laplace and Helmholtz integral equations on open curves. Submitted. Arxiv preprints 1905.13604 (2019)
- Averseng, M.: Pseudo-differential analysis of the weighted layer potentials for the Laplace and Helmholtz integral equations on open curves. Submitted. Arxiv preprint 1905.13602 (2019).

## LANGUAGE AND COMPUTER SKILLS

---

**Programming:** Matlab and Python.

**Languages:** Fluent in english and italian, intermediate level in spanish. French native speaker