MARTIN AVERSENG

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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*
Ergonomy 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