# List of publications [1]
# Romain Brossier

## Publications in peer-reviewed international journals


[1] A. Nouibat, R. Brossier, L. Stehly, J. Cao, and A. Paul. Ambient noise wave equation tomography of the alps and ligurian-provence basin. *Journal of Geophysical Research : Solid Earth*, submitted.

[2] Ludovic Métivier and Romain Brossier. On the use of nonlinear anisotropic diffusion filters for seismic imaging using the full waveform. *Inverse Problems*, 38(11) :115001, 2022.

[3] Ludovic Métivier, Romain Brossier, Félix Kpadonou, Jérémie Messud, and Arnaud Pladys. A review of the use of optimal transport distances for high resolution seismic imaging based on the full waveform. *MathematicS In Action*, 11(1) :3–42, 2022.

[4] Peng Yong, Romain Brossier, Ludovic Métivier, and Jean Virieux. Localized adaptive waveform inversion : Methodology and numerical verification. *Geophysical Journal International*, in press, 2022.

[5] Giuseppe Provenzano, Romain Brossier, and Ludovic Métivier. Robust and efficient waveform-based velocity-model building by optimal transport in the pseudotime domain : Methodology. *GEOPHYSICS*, 88(2) :U49–U70, 2023.

[6] Jet Hoe Tang, Romain Brossier, and Ludovic Métivier. Fully scalable solver for frequency-domain visco-elastic wave equations in 3d heterogeneous media : A controllability approach. *Journal of Computational Physics*, 468 :111514, 2022.

[7] A. Nouibat, L. Stehly, A. Paul, S. Schwartz, Y. Rolland, T. Dumont, W. C. Crawford, R. Brossier, and Cifalps Team, and AlpArray Working Group . Ambient-noise tomography of the ligurian-provence basin using the alparray onshore-offshore network : Insights for the oceanic domain structure. *Journal of Geophysical Research : Solid Earth*, 127(8) :e2022JB024228, 2022. e2022JB024228 2022JB024228.

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[9] Ludovic Métivier and Romain Brossier. Receiver-extension strategy for time-domain full-waveform inversion using a relocalization approach. *GEOPHYSICS*, 87(1) :R13–R33, 2022.

[10] T M Irnaka, R Brossier, L Métivier, T Bohlen, and Y Pan. 3-D multicomponent full waveform inversion for shallow-seismic target : Ettlingen Line case study. *Geophysical Journal International*, 229(2) :1017–1040, 12 2022.

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1. [update 09/2018], an up-to-date list in also available at `https://users.isterre.fr/brossier/`, with links to pdfs or publisher pages for most of publications and proceedings

[12] A Nouibat, L Stehly, A Paul, S Schwartz, T Bodin, T Dumont, Y Rolland, R Brossier, Cifalps Team, and AlpArray Working Group. Lithospheric transdimensional ambient-noise tomography of W-Europe : implications for crustal-scale geometry of the W-Alps. *Geophysical Journal International*, 229(2) :862–879, 12 2022.

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[15] Alain Manceau, Romain Brossier, and Brett Poulin. Response to comment on "mercury isotope fractionation by internal demethylation and biomineralization reactions in seabirds : Implications for environmental mercury science" : Principles and limitations of source tracing and process tracing with stable isotope signatures. *Environ. Sci. Technol.*, 56(3) :2065–2068, 2022.

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[19] Andrzej Górszczyk, Romain Brossier, and Ludovic Métivier. Graph-space optimal transport concept for time-domain full-waveform inversion of ocean-bottom seismometer data : Nankai trough velocity structure reconstructed from a 1d model. *Journal of Geophysical Research : Solid Earth*, 126(5) :e2020JB021504, 2021. e2020JB021504 2020JB021504.

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## Book Chapters

[1] L. Métivier, A. Allain, R. Brossier, Q. Mérigot, and J. Oudet, E.and Virieux. On the use of optimal transport distances for a pde-constrained optimization problem in seismic imaging. In Harbir Antil, Drew P. Kouri, Martin-D. Lacasse, and Denis Ridzal, editors, *Frontiers in PDE-Constrained Optimization*, pages 377–397. Springer New York, New York, NY, 2018.

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## Thesis

[1] R. Brossier. *Imagerie sismique à deux dimensions des milieux visco-élastiques par inversion des formes d'onde :développements méthodologiques et applications.* PhD thesis, Université de Nice-Sophia-Antipolis, 2009.

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## Proceedings of international conferences with peer-review

[1] L. Metivier, R. Brossier, A. Hoffmann, J. Mirebeau, G. Provenzano, A. Tarayoun, and P. Yong. Anisotropic diffusion filter for 3d full waveform inversion : application to a north sea dataset. In *84th EAGE Annual Conference & Exhibition*, volume 2023, pages 1–5. European Association of Geoscientists & Engineers, 2023.

[2] J. Cao, R. Brossier, Y. Capdeville, L. Métivier, and S. Sambolian. A fully scalable 3d non-periodic homogenization method to upscale elastic media. In *84th EAGE Annual Conference & Exhibition*, volume 2023, pages 1–5. European Association of Geoscientists & Engineers, 2023.

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[9] Andrzej Górszczyk, Rafael Almeida, Romain Brossier, and Ludovic Métivier. Structure of the tokai segment from the integrated high-resolution seismic imaging : A case study

from the eastern nankai trough. In *Second International Meeting for Applied Geoscience & Energy*. Society of Exploration Geophysicists and American Association of Petroleum Geologists, August 2022.

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[12] S. Sambolian, R. Brossier, and L. Métivier. Exploiting the richness of multi-component data : a time-dependent polarization-based fwi approach. In *83$^{rd}$ Annual EAGE Meeting (Madrid)*. European Association of Geoscientists & Engineers, 2022.

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