10 key publications

Joonas Ilmavirta

August 30, 2024

1. Maarten V. de Hoop, Joonas Ilmavirta, Matti Lassas, Anthony Várilly-Alvarado. **Reconstruction of generic anisotropic stiffness tensors from partial data around one polarization.** Preprint, 2023.

2. Joonas Ilmavirta, Antti Kykkänen. **Tensor tomography on negatively curved manifolds of low regularity.** *The Journal of Geometric Analysis*, 34:147, 2024.

3. Maarten V. de Hoop, Joonas Ilmavirta, Vitaly Katsnelson. **Spherically symmetric terrestrial planets with discontinuities are spectrally rigid.** *Communications in Mathematical Physics*, 405:31, 2024.

4. M. V. de Hoop, J. Ilmavirta, M. Lassas, T. Saksala. **Stable reconstruction of simple Riemannian manifolds from unknown interior sources.** *Inverse Problems*, 39(9):095002, 2023.

5. M. V. de Hoop, J. Ilmavirta, V. Katsnelson. **Spectral rigidity for spherically symmetric manifolds with boundary.** *Journal de mathématiques pures et appliquées*, 160:54–98, 2022.

6. A. Feizmohammadi, J. Ilmavirta, Y. Kian, L. Oksanen. **The Light Ray transform in Stationary and Static Lorentzian geometries.** *Journal of Geometric Analysis*, 31: 3656–3682, 2021.

7. E. Iversen, B. Ursin, T. Saksala, J. Ilmavirta, and M. V. de Hoop. **Higher-order Hamilton-Jacobi perturbation theory for anisotropic heterogeneous media: dynamic ray tracing in ray-centred coordinates.** *Geophysical Journal International*, 226(2): 1262–1307, 2021.

8. J. Ilmavirta, O. Koskela, J. Railo. **Torus computed tomography.** *SIAM Journal on Applied Mathematics*, 80(4), 2020.

9. J. Ilmavirta, G. Uhlmann. **Tensor tomography in periodic slabs.** *Journal of Functional Analysis*, 275(2): 288–299, 2018.

10. J. Ilmavirta. **Coherent quantum tomography.** *SIAM Journal on Mathematical Analysis*, 48(5): 3039–3064, 2016.