

The Weighted X-ray Transform and Applications

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In this talk, we will discuss recent progress on the integral geometry question of inverting X-ray transforms, with a possible weight, using the local-to-global approach initiated by Uhlmann and Vasy. We also apply the invertibility results to study some non-linear inverse problems arising naturally from geophysics, geometry and mathematical physics.

Part of the talk is based on a joint work with G. P. Paternain, M. Salo and G. Uhlmann.