ANALYTIC DOUBLE FIBRATION TRANSFORMS

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Time：Fri, Jun. 9, 20:00-21:00

Venue: Zoom: 618-038-6257, Password: SCMS

Abstract: We study integral transforms associated with a double fibration. This class includes various transforms encountered in tomography problems, such as (magnetic) geodesic X-ray transforms, generalized Radon transforms, and (Lorentzian) light ray transforms. If the underlying curve or surface family is real-analytic and a Bolker condition holds, we show that certain analytic singularities of a function can be determined from its transform which is treated as an analytic elliptic Fourier integral operator. This leads to local and global uniqueness results and Helgason type support theorems for these transforms.

This is joint work with Marco Mazzucchelli (ENS Lyon) and Leo Tzou (Amsterdam).