

SPECTRAL MULTIPLIERS ON STRATIFIED GROUPS

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In 1984, A. Hulanicki showed that the spectral calculus associated with a positive Rockland operator on a graded group maps Schwartz multipliers into Schwartz convolution kernels. In 2010, A. Martini generalized the preceding result to more general families of differential operators including the commutative finite families of homogeneous left-invariant differential operators one of which is Rockland.

Focusing on the setting of stratified Lie groups, I will consider:

- a converse of the aforementioned result, that is: given a Schwartz kernel, does it correspond to a Schwartz multiplier?
- an analogue of the Riemann–Lebesgue lemma: given an integrable kernel, does it correspond to a continuous multiplier?