

Complex powers of infinite order pseudodifferential operators

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The study of complex powers of pseudodifferential operators started with the work of Seeley. They proved to have an essential role in the spectral analysis of elliptic operators; for example in the famous Weyl asymptotic formula. Recently, Buzano and Nicola considered complex powers of pseudodifferential operators whose symbols are merely hypoelliptic.

In this talk we discuss the problem of complex powers of the L^2 -realisations of infinite order hypoelliptic operators acting on spaces of non-quasianalytic ultradistributions. In fact, we show, under certain conditions, that these are still pseudodifferential.

The talk is based on a collaborative work with Stevan Pilipović.