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Application

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On Asymptotic Expansion of the Conormal Symbol of the Singular Operator

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We study the conormal symbol of the singular Bochner-Martinelli integral on a compact closed surface with conical points S in mathbbC^n and evaluate its asymptotic expansion.

Keywords: *singular Bochner-Martinelli operator, conormal symbol, conical point.*

Smooth manifolds with conical points are the simplest singular spaces in the hierarchy of stratified varieties. Differential analysis on such manifolds was perhaps initiated by Kondrat'ev [1] who invented the so-called conormal symbol of a differential operator at a singular point.

1. Integral

Theorem 1 ([4])**.** *Integral (2) induces a bounded linear operator in* $\mathcal{L}^{2,\gamma}(X \times [0,R))$ *provided* $1-2n<\gamma<0$.

Proof. We will consider a smooth hypersurface $\mathcal{S}$ in $\mathbb{C}^n \setminus \{0\}$ with a singular point at the origin given by

$$\mathcal{S} = \{(\varphi(r)x, r) \in \mathbb{R}^{2n} : x \in X,\, r \in [0,R)\}. \tag{1}$$

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