

# A CLASS OF FBI TRANSFORMS WITH DEGENERATE HESSIANS

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ABSTRACT. We introduce a new class of FBI transforms that characterize microlocal smoothness and analyticity. A new feature is that the phase functions of the transforms may have degenerate Hessians. Applications to the microlocal analytic hypoellipticity of systems of vector fields and fully nonlinear first order pdes will be discussed. (Most of the work is based on a joint collaboration with J. Hounie).

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