DIRECTIONAL HEISENBERG UNCERTAINTY PRODUCT

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Abstract. A directional time-frequency localization measure for functions defined on the $d$-dimensional Euclidean space is introduced. A connection between this measure and its periodic counterpart is established. For a class of functions, an optimization problem for finding the optimal direction, along which a function is best or worst localized, is solved.


Keywords and phrases: Time-frequency localization, uncertainty product, multivariate functions.

REFERENCES