

Global wave front sets in ultradifferentiable classes

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On joint work with C. Boiti, D. Jornet, and A. Oliaro.

The aim of this talk is to introduce a global wave front set using Weyl quantizations of global pseudodifferential operators of infinite order in ultradifferentiable classes of Beurling type, extending previous results by Rodino and Wahlberg. We will see that, in many cases, this wave front set coincides with the Gabor wave front set, given in terms of Gabor frames or the short-time Fourier transform, studied by Boiti, Jornet, and Oliaro in the ultradifferential setting. Applications of this wave front set to the regularity of pseudodifferential operators are provided.