

Microlocal analyticity of solutions of a first order nonlinear pde

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Abstract: Let $(x, t) \in \mathbb{R}^m \times \mathbb{R}$ and $u \in C^2(\mathbb{R}^m \times \mathbb{R})$. We will discuss microlocal analyticity for solutions of the nonlinear equation $u_t = f(x, t, u, u_x)$. Here $f(x, t, \zeta_0, \zeta)$ is analytic in all variables, and holomorphic in (ζ_0, ζ) .