
SEMINARIO

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Extension of Whitney jets of controlled growth

Abstract: We revisit Whitney's extension theorem in the ultradifferentiable Roumieu setting. Based on the description of ultradifferentiable classes by weight matrices, we extend results on how growth constraints on Whitney jets on arbitrary compact subsets in \mathbb{R}^n are preserved by their extensions to \mathbb{R}^n . More precisely, for any admissible class \mathcal{C} of ultradifferentiable functions on \mathbb{R}^n we determine a class \mathcal{C}' such that all ultradifferentiable Whitney jets of class \mathcal{C}' on arbitrary compact subsets admit extensions in \mathcal{C} . The class \mathcal{C}' can be explicitly computed from \mathcal{C} .

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