

# Taylor coefficient multipliers and interpolation of holomorphic functions

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**Abstract:** This is a report on joint work with P. Domański. I will consider Taylor coefficient multipliers on  $\mathcal{A}(\mathbb{R}^d)$ , that is, continuous linear operators on  $\mathcal{A}(\mathbb{R}^d)$  such that all monomials are eigenfunctions. The corresponding sequence  $(m_\alpha)_{\alpha \in \mathbb{N}^d}$  of eigenvalues is called multiplier sequence. Typical examples of multipliers are Hadamard partial differential operators defined by  $H(\theta) := \sum_{|\alpha| \leq m} c_\alpha \theta^\alpha$ , where  $\theta^\alpha := \prod_{j \leq d} \theta_j^{\alpha_j}$  for  $\theta_j := x_j \partial / \partial x_j$ . I will discuss a characterization of multiplier sequences as interpolating sequence for certain holomorphic functions  $f$ , i.e.  $f$  satisfies  $f(\alpha) = m_\alpha$  for any  $\alpha \in \mathbb{N}^d$ . This will be used to prove necessary and also sufficient conditions for the surjectivity of multipliers. The evaluation of these conditions is interesting already for Hadamard operators of order 2 in 2 variables.