The punctured neighborhood theorem for the complex interpolation method

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joint work with K.-H. Förster

In this talk, we consider Fredholm properties of bounded interpolation operators S_λ on complex interpolation spaces, where $\lambda \in \mathbb{S}_0 := \{z \in \mathbb{C} : \operatorname{Re} z \in (0,1)\}$. With the well known punctured neighborhood theorem of T. Kato, we show that if S_λ is lower semi-Fredholm, then S_θ is lower semi-Fredholm and the nullities, deficiencies and indices coincide for all θ in a neighborhood of λ in $\mathbb{S}_0$; i.e. we show a non-jumping version of the punctured neighborhood theorem.