

Hervé Queffélec (Lille)

Approximation numbers of composition and weighted composition operators

Given a class \mathcal{C} of bounded operators on a Hilbert space H , and $T \in \mathcal{C}$, studying the rate of decay of the singular numbers of T is going one step further than studying, for example, the membership of T in some Schatten class S_p . This study :

1. was essentially achieved for the class of Hankel operators
2. was recently pursued for the class of composition operators on various Hilbert spaces
3. is under progress for for the class of weighted composition operators.

In this talk, we will present an overview of what was obtained in the second case, as well as some recent results in the third (weighted) case.

This corresponds to several joint works with G. Lechner, D. Li, L. Rodriguez-Piazza, K. Seip.