

## Combinatorics and Discrete Probability Seminar

### *Minimum Norm Interpolation Meets The Local Theory of Banach Spaces*

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**Abstract:** Minimum-norm interpolators have recently gained attention primarily as an analyzable model to shed light on the double descent phenomenon observed for neural networks. The majority of the work has focused on analyzing interpolators in Hilbert spaces, where typically an effectively low-rank structure of the feature covariance prevents a large bias. More recently, tight vanishing bounds have also been shown for isotropic high-dimensional data for  $\ell_p$ -spaces with  $p \in [1, 2)$ , leveraging the sparse structure of the ground truth. This work takes a first step towards establishing a general framework that connects generalization properties of the interpolators to well-known concepts from high-dimensional geometry, specifically, from the local theory of Banach spaces.

Monday, September 30 at 3:00 PM in 1227 SEO