

Hypercontractivity and strips of convergence for general Dirichlet series

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For a general Dirichlet series $\sum_n a_n e^{-\lambda_n s}$ with frequency $\lambda = (\lambda_n)_n$, horizontal translation (i.e. convolution with a Poisson kernel) improves its integrability properties. In this talk we study notions such as hypercontractivity and strips of convergence that quantify this phenomenon. We cover the scalar and the vector-valued case, where the coefficients a_n belong to a Banach space. For the latter, the local geometry of the Banach space plays a big role in determining the extent to which scalar results carry over to the vector-valued setting.

In Special Session 10 on Nonlinear Analysis on Banach Spaces at the Mathematical Congress of the Americas 2025.