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Eigenvalues and entropy numbers of powers of operators

In this talk, we will discuss some results concerning the spectral theory of operators in interpolation spaces. We will study the limits of geometric means of entropy numbers of powers of operators, and show the relationship between these limits and eigenvalues of operators. In particular, some of the obtained formulas may be regarded as a generalization of Gelfand's spectral radius formula. Combining our results with interpolation techniques yields an interpolation variant of the celebrated Carl-Triebel inequality. This is joint work with Mieczysław Mastyło [MS17].

[MS17] M. Mastyło and R. Szvedek, *Eigenvalues and Entropy Moduli of Operators in Interpolation Spaces*, J. Geom. Anal. **27** (2017), no. 2, 1131–1177.