
Speaker: Antonio Ache
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Tuesday, September 26, 2017
11:00 AM
258 Hurley Hall

Title: Sharp Sobolev-trace inequalities of order four

Abstract:

We establish sharp Sobolev inequalities of order four on Euclidean d -balls for d greater than or equal to four. When $d=4$, our inequality generalizes the classical second order Lebedev-Milin inequality on Euclidean 2-balls. Our method relies on the use of scattering theory on hyperbolic d -balls. As an application, we characterize the extremals of the main term in the log-determinant formula corresponding to the conformal Laplacian coupled with the boundary Robin operator on Euclidean 4-balls. This is joint work with Alice Chang.