

Calderon -Zygmund Analysis Seminar

Monday, March 9, 2020, 3:45 pm, Eck 202

Fourier restriction estimates above rectangles and an application

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Abstract. We discuss the problem of obtaining Lebesgue space inequalities for the Fourier restriction operator associated to rectangular pieces of the paraboloid and perturbations thereof. We state a conjecture for the dependence of the operator norms in these inequalities on the sidelengths of the rectangles, outline a proof of the conjecture (conditional in some cases, unconditional in others), and demonstrate how these estimates can be applied to obtain sharp restriction inequalities on some degenerate hypersurfaces. This is joint work with Jeremy Schwend.