

# Minisymposium „Aspects of Harmonic Analysis and PDE related to curvature“

am Donnerstag, den 8.11.2018

Mathematisches Seminar der Christian-Albrechts-Universität zu Kiel

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14:00 – 14:50 **Betsy Stovall (Madison)**

„Extremizability of Fourier restriction to the paraboloid“

Abstract:

We will show that for almost all valid Lebesgue space bounds for the restriction operator associated to the paraboloid, there exist nonzero functions whose restrictions have the maximum possible norm. As time permits, we will also discuss related questions for other Fourier restriction/extension operators.

(LMS4, R.312)

15:00 – 15:50 **Isroil Ikromov (Samarkand)**

“Sharp estimates for maximal operators associated to some classes of hypersurfaces”

(LMS4, R.312)

16:00 – 16:45 **Coffee break**

(LMS4, R.423)

16:45 – 17:35 **Timothy Candy (Bielefeld)**

“Bilinear restriction estimates for general phases”

Abstract:

Bilinear restriction (or extension) estimates for free waves give an efficient way to exploit both transversality and curvature, and essentially optimal estimates for the wave and Schrodinger equations are known. However, for general phases at very different scales, the essentially sharp bounds have only recently been obtained. We give an overview of these estimates, as well as some extensions of the bilinear theory from free waves to the adapted function spaces  $U^p$ . These extensions are particularly useful, as they give a way to connect the bilinear restriction theory with the global well-posedness problem for dispersive PDE.

(LMS4, R.325)

18:30 **Dinner**

Restaurant „Längengrad“, Schwedenkai 1, 24103 Kiel