

**On a control of the maximal truncated Riesz transform  
by the Riesz transform; dimension-free estimates.**

Błażej Wróbel

*University of Wrocław*

blazej.wrobel@uwr.edu.pl

We prove a dimension-free estimate for the  $L^2(\mathbb{R}^d)$  norm of the maximal truncated Riesz transform in terms of the  $L^2(\mathbb{R}^d)$  norm of the Riesz transform. Consequently, the vector of maximal truncated Riesz transforms has a dimension-free estimate on  $L^2(\mathbb{R}^d)$ . We also show that the maximal function of the vector of truncated Riesz transforms has a dimension-free estimate on all  $L^p(\mathbb{R}^d)$  spaces,  $1 < p < \infty$ . The talk is based on joint work with Maciej Kucharski.