

1172-42-194

**Polona Durcik\*** (durcik@chapman.edu), **Lenka Slavíková** and **Christoph Thiele**. *Singular Brascamp-Lieb inequalities with cubical structure: extending the range of exponents*. Preliminary report.

Brascamp-Lieb inequalities are  $L_p$  estimates for certain multilinear integral forms on functions on Euclidean spaces. They generalize several classical inequalities, such as Hölder's inequality or Young's convolution inequality. In this talk we focus on singular Brascamp-Lieb inequalities, which arise when one of the functions in a Brascamp-Lieb integral is replaced by a singular integral kernel. Singular Brascamp-Lieb integrals are much less understood than their non-singular variants. We focus on a special case which features a particular cubical structure and discuss improvements in the range of exponents which was obtained previously by Thiele and the author. Based on work in progress with L. Slavíková and C. Thiele. (Received August 27, 2021)