



Vienna School
of Mathematics

PhD Colloquium

Philipp Kniefacz:

Sharp Sobolev Inequalities via Projection Averages

In this talk we present a family of sharp Sobolev-type inequalities obtained from averages of the length of i -dimensional projections of the gradient of a function. This family has both the classical Sobolev inequality (for $i=n$) and the affine Sobolev-Zhang inequality (for $i=1$) as special cases as well as a recently obtained Sobolev inequality of Haberl and Schuster (for $i=n-1$). Moreover, we identify the strongest member in our family of analytic inequalities which turns out to be the only affine invariant one among them.

4. December,

15:00-15:45

SkyLounge, OMP-1