


Monday 19 February 2024

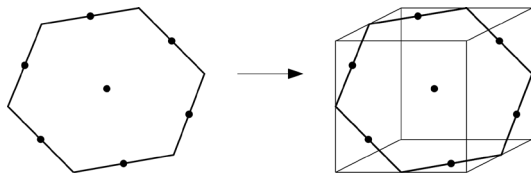
Magnus-Haus Berlin

12:00 Giulia Codenotti *(FU Berlin)*

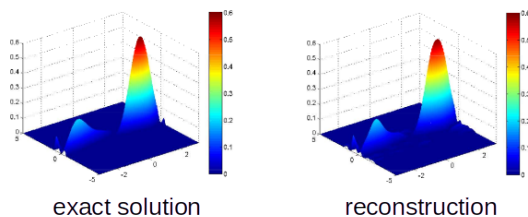
Flatness: theorems, bounds and tools

In this talk, Codenotti will consider convex bodies and polytopes (generalizations of polygons) and how they interact with a lattice (think of the points with integer coordinates) before introducing the flatness theorem, which tells us that any convex object which does not contain integer points must be "flat". Just how flat, though, is an open question, so recent and classical tools developed for this problem will be discussed.

Giulia Codenotti is a Junior Professor at FU Berlin and loves to think about polytopes and their many appearances in convex geometry, optimization and algebraic combinatorics. 



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12:30 Ruming Zhang *(TU Berlin)*

Measure the unmeasurable – inverse scattering problems

The scattering problems are normally modeled by partial differential equations (PDEs). The inverse problems, generally speaking, is to reconstruct the unknown parameters in the PDEs by measuring their solutions. In this talk, Zhang will introduce two types of methods briefly, i.e., the PDE-constrained optimization methods, and the fast imaging methods, to solve the inverse scattering problems.

Ruming Zhang has been a tenure-track professor at TU Berlin since May 2023. She is interested in numerical analysis of PDEs and their inverse problems. 