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Fixed points of Minkowski valuations

In this talk, we show that for any sufficiently regular even Minkowski valuation Φ which is homogeneous and intertwines rigid motions, there exists a neighborhood of the unit ball, where balls are the only solutions to the fixed-point problem $\Phi^2 K = \alpha K$. This significantly generalizes results by Ivaki for projection bodies and suggests, via the Lutwak–Schneider class reduction technique, a new approach to Petty's conjectured projection inequality. This is joint work with Franz E. Schuster.