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WORKSHOP ON GEOMETRIC PDE
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Best constants in certain Sobolev–Poincaré inequalities

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We prove a lower bound for the first nontrivial Neumann eigenvalue in convex domains for the p Laplace operator when $p \geq 2$. This inequality provides a sharp bound, in terms of the diameter alone, of the best constant in Poincaré inequalities. Some limit cases are also considered.

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