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Attainability of the best Sobolev constant in ball.

The best constant in the Sobolev inequality in the whole space is attained by the Aubin–Talenti function; however, this does not happen in bounded domains because of the break down of the dilation invariance. In this talk, we investigate a new scale invariant form of the Sobolev inequality in a ball and show that its best constant is attained by functions of the Aubin–Talenti type. (Received January 28, 2019)