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Sergii Myroshnychenko* (smyroshn@kent.edu), Kent State University, Department of Mathematical Sciences, Summit St, Kent, OH 44242. *On a functional equation related to a pair of hedgehogs with congruent projections.*

Hedgehogs are geometrical objects that describe the Minkowski differences of arbitrary convex bodies in the Euclidean space \mathbb{E}^n . We prove that two hedgehogs in \mathbb{E}^n , $n \geq 3$, coincide up to a translation and a reflection in the origin, provided that their projections onto any two-dimensional plane are directly congruent and have no direct rigid motion symmetries. Our result is a consequence of a more general analytic statement about the solutions of a functional equation in which the support functions of hedgehogs are replaced with two arbitrary twice continuously differentiable functions on the unit sphere. (Received September 07, 2016)