1161-52-66   **Alina Stancu*** (`alina.stancu@concordia.ca`), Department of Mathematics and Statistics, Concordia University, 1455 Blvd. de Maisonneuve Ouest, Montreal, Quebec H3G 1M8, Canada. *When convex body meets its polar.*

Convex sets whose polars are orthogonal transformations of themselves have been considered before in different mathematical contexts. We attempted a comprehensive study of planar convex bodies whose polars are the same convex bodies up to a rotation by pi. Roughly speaking, for any line passing through the origin, on one side we have part of the convex body and, on the other side, the mirror image of part of its polar, hence the title. We will show that the set of such bodies, called negatively self-polar, is very rich and has nice properties. (This is joint work with John-Mark Fortier.) (Received August 09, 2020)