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*Series expansions for generalized random polygons, floating bodies and relative affine surface area*

We prove power series expansions for random L-convex polygons in planar convex bodies with sufficiently smooth boundaries. Besides extending earlier asymptotic formulas, our results have consequences about L-convex floating bodies and relative affine surface area that have recently been investigated by Schütt, Werner and Yalikun (2025). This is joint work with D. Papvári (University of Szeged).