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Regularizing and self-avoidance effects of integral Menger curvature

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Abstract. We investigate geometric curvature energies on closed curves involving integral versions of the Menger curvature. In particular, we prove geometric variants of Morrey-Sobolev and Morrey-space imbedding theorems, which may be viewed as counterparts to respective results on one-dimensional sets in the context of harmonic analysis.

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