

# Isoperimetry in the Plane with Density

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## **Abstract**

The solution isoperimetric problem is well known in Euclidean space: the solution is obviously a sphere. At SMALL over the summer under Frank Morgan we worked on solving the isoperimetric problem in the plane with density  $e^{-1/r}$ . I'll define the notion of manifold with density, describe the tools used in this problem, give current results, and also pose some questions for future study.