

ISOPERIMETRIC PROBLEMS IN THE MAPPING CLASS GROUP.

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ABSTRACT

I will discuss a range of problems related to filling and "obstructed filling" functions that quantify the flexibility of the geometry in a group or general metric space. Spaces of nonpositive curvature often have efficient filling functions except in a critical dimension, and spaces with abundant flats have the property that these fillings can be perturbed without blowing up their volume. This work investigates the extent to which these aphorisms hold in the mapping class group and in Teichmüller space.

This is part of a group project on filling functions together with Abrams, Brady, Dani, and Young.