

SELECTION AND APPROXIMATION OF CHEEGER SETS

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This talk is based on joint works with G. Buttazzo, M. Comte and G. Peyr. Given a bounded Lipschitz domain of \mathbb{R}^2 , a Cheeger set of Ω is a minimizer of the ratio Perimeter over volume among finite perimeter subsets of the closure of Ω . We'll consider some variants of this problem where volume and perimeter are weighted by some given functions. After presenting several motivations for this problem, we'll discuss nonuniqueness issues, selection of a particular solution, the maximal Cheeger set and present a simple numerical approximation scheme.

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