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*The impact of metric constraints on the behavior of shadow metrics*

Since its introduction by Hofer, the eponymous norm on the group of Hamiltonian diffeomorphisms has been of great importance in symplectic topology. In particular, the Hofer norm induces a metric on the Hamiltonian orbit of a Lagrangian submanifold, as proved by Chekanov. However, this gives no way to significantly compare Lagrangian submanifolds which are not Hamiltonian diffeomorphic, let alone those which do not have the same homotopy type. This is one of the reasons why the so-called shadow metrics — or more generally the weighted fragmentation pseudometrics — introduced by Biran, Cornea and Shelukhin, are a very interesting and promising object of study.

After a brief explainer on shadow metrics, I will present a conjecture of Cornea on how they are related to the set-theoretic Hausdorff distance when one looks at a subspace of Lagrangian submanifolds respecting certain metric constraints. I will then present a proof of the conjecture in certain cases based on Groman and Solomon's reverse isoperimetric inequality. If time permits, I will explain how this result extends to other weighted fragmentation pseudometrics.