

Higher symplectic capacities

Kyler Siegel *

kyler@math.columbia.edu

I will describe general framework for producing new symplectic capacities based on higher algebraic structures in Floer theory or symplectic field theory. These give new symplectic embedding obstructions even for very simple examples, e.g. embedding one polydisk into another. Computing these capacities leads to some rather intricate enumerative problems involving curves with local tangency constraints. I will outline what we know so far and state some of the many open problems.

*Department of Mathematics, Columbia University, 2990 Broadway, New York, NY 10027, USA