The Fukaya category is an interesting invariant of symplectic manifolds which is in general difficult to calculate. This talk concentrates on Fukaya categories of Stein manifolds, complex analytic submanifolds of $\mathbb{C}^n$. A conjecture of Kontsevich predicts the structure of these Fukaya categories, namely that they are in fact built out of local invariants of the Lagrangian spine of the Stein manifold in question. Joint work with Sheel Ganatra and Vivek Shende seeks to address this conjecture. First, we define a reasonable class of so called “Liouville sectors”, certain symplectic manifolds with boundary. An inclusion of Liouville sectors induces a pushforward functor on wrapped Fukaya categories. This fact (that the wrapped Fukaya category forms a pre-cosheaf) already allows some interesting applications, such as verification of Abouzaid’s generation criterion. Second, we study when this pre-cosheaf is actually a cosheaf. I will explain everything in concrete terms and with examples.

References