GLOBALIZATION OF LOCAL MIRROR FUNCTORS

ABSTRACT. Motivated by SYZ mirror symmetry, we study a homological algebra of gluing of Yoneda funtors of A_∞-category. We combine a technique of weakly unobstructed deformation of a single A_∞-algebra and a general homotopy theory of A_∞-categories and find a condition for gluing several Yoneda functors in a suitable sense. We also prove some descent property for matrix factoriztion categories. As an application, we globalize a local mirror construction for pair-of-pants to a pair-of-pants decomposition of generic hypersurface.