SYZ MIRROR SYMMETRY AND MAURER-CARTAN EQUATION

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The Strominger-Yau-Zaslow conjecture for understanding Mirror Symmetry geometrically, leads to the Fukaya's conjectural reconstruction of mirror manifolds which solves Maurer-Cartan equation near large limits using quantum corrections. In this talk, we will discuss progesses of the Fukaya's conjecture and the formulation of the Maurer-Cartan equation near large structure limits by constructing a dgBV algebra $PV^*(X)$, a generalized version of the Kodaira–Spencer dgLa, associated to possibly degenerate Calabi– Yau variety X equipped with local thickening data. This talk is based on joint works with Kwokwai Chan, Conan Leung and Yat-Hin Suen.