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Kei Irie* (iriek@kurims.kyoto-u.ac.jp). *Chain-level string topology, pseudo-holomorphic disks, and Kuranishi structures.*

I will talk about an application of chain-level string topology to pseudo-holomorphic curve theory in symplectic topology. Specifically, given a closed, oriented, and spin Lagrangian submanifold L in a symplectic vector space, one can define a Maurer-Cartan element of the chain-level loop bracket on the free loop space of L , using the virtual fundamental chain of the moduli space of pseudo-holomorphic disks with boundary on L . This idea is due to Fukaya, who also pointed out its important consequences in symplectic topology. I will explain how to rigorously carry out this idea, using a novel chain model of the free loop space and theory of Kuranishi structures. (Received July 25, 2017)