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Timothy Perutz* (perutz@math.utexas.edu). *The Fukaya category of the punctured torus.*

I report on joint work with Yanki Lekili which characterizes the Fukaya category of compact exact Lagrangians in the once punctured 2-torus. This category is generated by a certain two-object subcategory. We show that the “moduli space” of A-infinity structures on this subcategory is also the moduli space of Weierstrass curves (that is, irreducible, pointed curves with a non-zero holomorphic differential). Under this “mirror” correspondence, the trivial A-infinity structure is related to the cuspidal cubic curve; the A-infinity structure of the Fukaya category is related to a nodal cubic; and filling the puncture to smoothing the node. (Received May 11, 2011)