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Ayman Mohammad Almomany* (almom1am@cmich.edu), Department of Mathematics, Pearce 214, Mount Pleasant, MI 48858, and **Brad Safnuk**. *Intersection numbers on moduli spaces of curves through topological recursion.*

To explore relationships between the plane algebraic curve and intersection numbers of topological classes on moduli spaces of curves. The link is provided by Eynard and Orantin's theory of topological recursion, which associates to any plane algebraic curve an infinite family of invariants. Due to work of Eynard, it is expected that these invariants are closely related to intersection numbers on moduli spaces of curves, but the explicit calculation has not yet been carried out. A particular focus will be coming up with an analogue of the so-called ELSV formula, which relates Hurwitz number to linear Hodge integrals, and has been an important source for many groundbreaking results (Received September 16, 2014)