1107-57-308   **R. Inanc Baykur*** (`baykur@math.umass.edu`) and **Kenta Hayano**. *Multisections of Lefschetz fibrations and topology of symplectic 4-manifolds.*

We initiate an extensive study of multisections of Lefschetz fibrations via positive factorizations in framed mapping class groups. Using our techniques, we can reformulate and tackle various interesting conjectures and problems related to the topology of symplectic 4-manifolds. In this talk we will focus on the conjectural smooth classification of symplectic Calabi-Yaus and their fundamental groups in real dimension 4. If time permits, we will discuss some other applications as well; such as Stipsicz's conjectures on minimality and fiber sum decompositions, constructions of inequivalent Lefschetz fibrations and exotic pencils. (Received January 18, 2015)