1116-57-522   **Robert Lipshitz** and **Ciprian Manolescu*** (`cm@math.ucla.edu`), UCLA Dept. of Mathematics, 520 Portola Plaza, Los Angeles, CA 90095-1555. *Constructing Floer homotopy using polyfolds.* Preliminary report.

I will describe the problem of constructing a Floer stable homotopy type as a refinement of Lagrangian Floer homology. A scheme for doing so was proposed by Cohen, Jones and Segal, but there are analytical details to be overcome even in the case of exact Lagrangians in an exact symplectic manifold. One needs to put a structure of smooth manifolds with corners on the moduli spaces of holomorphic disks, and then to equip them with compatible stable framings. (This also involves a topological obstruction, the polarization class.) I will outline how this problem can be approached using polyfold theory. (Received September 05, 2015)