1050-58-26   **Samuel T Lisi*** (`lisi@math.stanford.edu`), Department of Mathematics, bldg 380, Stanford, CA 94305. *Homoclinic orbits and pseudoholomorphic curves.* Preliminary report.

This talk will present work in progress on developing a Floer theory for homoclinic orbits. To this end, we will consider pseudoholomorphic planes with two different asymptotic boundary conditions : a finite energy condition in one direction, and an asymptotic periodicity condition in the other direction. (These conditions are a natural generalization of ones considered previously by Cieliebak and Séré.) We will focus on the analytical aspects that are new in this setting. (Received January 06, 2009)