1017-53-166 Chris Wendl* (wendlc@math.mit.edu), Mathematisches Institut der LMU Muenchen, Theresienstr. 39, 80333 Muenchen, Germany. Some remarks on holomorphic foliations. Preliminary report.

Finite energy foliations arise in 3-dimensional contact manifolds when one has holomorphic curves that are "as nice as possible": embedded, with Fredholm index 1 or 2, genus 0, and (mainly) elliptic asymptotic limits. The moduli spaces of such curves have some remarkable geometric properties; not only do they foliate the underlying manifold, but they satisfy compactness theorems that are stronger than ordinary SFT, and survive various homotopies of the data, as well as (with a little care) surgery. We'll summarize the current state of knowledge in this area, and in case that isn't impressive enough, show lots of nice pictures. (Received February 20, 2006)