1154-32-2493 **Katherine Brubaker*** (kbrubaker@ehc.edu). *Uniform estimates for the Monge-Ampère foliation on a compact Kähler manifold.*

The tradition of studying equations of the form $(\partial\bar{\partial}u)^n = 0$ via an associated foliation goes back to Bedford and Kalka. Dirichlet problems of an analogous "Monge-Ampère type" have played an important role in Kähler geomery. However, on a compact Kähler manifold M, such equations may not have even C^2 solutions.

A smooth solution to the homogeneous complex Monge-Ampère equation on $\overline{U} \times M$, where $U \subset \mathbb{C}$ is the unit disk, corresponds to a "Monge-Ampère foliation" of $U \times M$ by holomorphic disks. In a 2002 paper, Donaldson leveraged this foliation to show that the set of boundary functions for which a smooth solution exists is open.

To continue this line of inquiry, we prove uniform estimates on the leaves of Monge-Ampère foliations, showing that sequences of leaves converge to holomorphic disks. The goal is to understand, for a sequence of boundary functions, when the associated foliations converge to a Monge-Ampère foliation. (Received September 17, 2019)