

1084-32-92

Tamas Darvas, tdarvas@math.purdue.edu, and **Laszlo Lempert***, lempert@purdue.edu.

Geodesics in the space of Kahler metrics.

Given a compact Kähler manifold, according to Mabuchi, the set of Kähler forms in a fixed cohomology class has the natural structure of an infinite dimensional Riemannian manifold. We address the question whether points in this Riemannian manifold can be joined by a geodesic, and strengthening earlier findings of Liz Vivas and the second author here, we show that this cannot always be done even with a certain type of generalized geodesics. As in the work with Vivas, the result is obtained through the analysis of a Monge–Ampère equation. (Received August 24, 2012)