

1088-53-103

**Tamás Darvas\*** (tdarvas@math.purdue.edu), 150 N. University Street, West Lafayette, IN 47907-2067. *Regularity of Geodesics in the Space of Kähler metrics.*

Suppose  $(X, \omega_0)$  is a Kähler manifold. As it was found by Mabuchi, the space of Kähler metrics cohomologous to  $\omega_0$  has an infinite dimensional Riemannian manifold structure. Semmes observed that the problem of joining two points in this space with a geodesic is equivalent to a boundary value problem for the complex Monge-Ampère equation. We discuss regularity issues related to this problem. (Received February 05, 2013)