

**Meeting:** 1005, Newark, Delaware, SS 12A, Special Session on Geometric Analysis

1005-58-91            **Lamm Tobias**, Mathematisches Institut der, Universitat Freiburg, Freiburg, Germany, and  
**Changyou Wang\*** (cywang@ms.uky.edu), Department of Mathematics, University of Kentucky,  
Lexington, KY 40506. *The Heat Flow of Biharmonic Map in Four Dimension*. Preliminary report.

In this talk, I will discuss the existence of global weak solution of the heat equation of extrinsic biharmonic maps from a Riemannian manifold of dimension four  $M$  into another Riemannian manifold  $N$ , which is smooth away from finitely many singular times. As an application, we show that there exists at least one minimizing biharmonic maps among each free homotopy class in  $[M, N]$ , provided that the 4th homotopy group of  $N$  is trivial. This is a joint work with Tobias Lamm. (Received February 01, 2005)