

# PIMS DISTINGUISHED LECTURE I

FRIDAY, APRIL 7, 2006

PDL C-401

2:30-3:30PM

Evolution of Minimal Tori in Riemannian Manifolds

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We propose a new approach to obtain minimal surfaces of genus  $p \geq 1$  in a closed Riemannian manifold by the  $L^2$  negative gradient flow of the energy  $E(u, \sigma)$ , where  $\sigma$  denotes the conformal structures on the genus  $p$  surface. In a recent work with Jiayu Li and Qinyue Liu, we concentrate in the case  $p = 1$ , i.e. the surface being a 2-torus, and obtain results on the analysis of the flow including the existence of the initial value problem, blow-up of the map  $u(t)$  and degeneration of the conformal structure  $\sigma(t)$ , energy identities when blow-up and degeneration occurs, and convergence at time infinity, etc.

For more information about this seminar, visit the DG/PDE Seminar Web page (from the Math Department home page, [www.math.washington.edu](http://www.math.washington.edu), follow the link **Seminars, Colloquia, and Conferences**).

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