

SCMS Seminar



HARMONIC MAP FLOW WITH LOW D-BAR ENERGY

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Lecture

Time: 15:00-16:00, Friday, Nov. 15, 2019

Venue: Room 102, Shanghai Center for Mathematical Sciences

Abstract: We show that for an initial map with low d-bar energy, the harmonic map heat flow from a surface into a Kähler manifold, though still may blow-up in finite time, has a continuous weak limit at the blow-up time. In particular, we obtain a bound on its blow-up rate and a decay estimate near finite time singularities, which is analogous to the elliptic case. This is a joint work with Alex Waldron.

$$k_3 = hf \left(x_{i-1} + \frac{h}{2}, y_{i-1} + \frac{h^2}{2} \right)$$
$$b_i = \frac{\sum_{j=1}^{i-1} a_{ij} x_j^{(k)} + \sum_{j=i+1}^n a_{ij} x_j^{(k)}}{x_{i+1} a_{ij} b_i - \left(\sum_{j=1}^{i-1} a_{ij} x_j^{(k)} + \sum_{j=i+1}^n a_{ij} x_j^{(k)} \right)}$$
$$\Delta y_i = \int_{x_i}^{x_{k+1}} y' dx = \int_{x_k}^{x_{k+1}} y' dx = y(x)$$
$$\int_{x_k}^{x_{k+1}} f(x, y) dx = \int_{x_k}^{x_{k+1}} y' dx = y(x)$$
$$-\sqrt{(y_n + 0.5\tau k_1)^2 + (t_n + 0.5\tau)^2}$$