

SCMS Seminar



ON SOME FULLY NONLINEAR PDES

Speaker: Dekai Zhang
Shanghai Center for Mathematical Sciences

Time: 15:00-15:30, Wednesday, October 16th, 2019

Venue: Room 106, SCMS

Abstract:

In this talk, we will talk about some fully nonlinear elliptic PDEs with geometric backgrounds. Some existence and regularity results of these equations will be reported.

$$k_3 = hf\left(x_{i-1} + \frac{h}{2}, y_{i-1} + \frac{k_2^{(i-1)}}{2}\right)$$
$$b_i - \left(\sum_{j=1}^{i-1} a_{ij}x_j^{(k)} + \sum_{j=i+1}^n a_{ij}x_j^{(k)}\right)$$
$$\Delta y_i = \int_{x_i}^{x_{i+1}} \frac{a_{ij} b_i - \left(\sum_{j=1}^{i-1} a_{ij}x_j^{(k)} + \sum_{j=i+1}^n a_{ij}x_j^{(k)}\right)}{a_{ii}} dx$$
$$\int_{x_k}^{x_{k+1}} f(x, y) dx = \int_{x_k}^{x_{k+1}} y' dx = y(x)$$
$$-\sqrt{(y_n + 0.5\tau k_1)^2 + (t_n + 0.5\tau)^2}$$