

SCMS Seminar



CRITICAL POINT THEORY OF DISTANCE FUNCTIONS AND ITS APPLICATIONS

Speaker: Chen Xiaoyang

University of Macau

Time: 10:00 a.m. - 11:00 a.m., Friday, November 20, 2015

Venue: Room 2201, East Guanghua Tower (Main), Fudan University

Abstract: Though the distance function in a Riemannian manifold is not a smooth function in general, the “Morse theory” of distance functions was developed by Grove and Shiohama in 1970’s. It has been proved to be a fundamental tool in the study of Riemannian manifolds with lower sectional curvature bound. We will talk about this theory and its applications.

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