

SCMS Seminar



ALGEBRAIC AND TROPICAL DE RHAM THEORIES

FOR P-ADIC SPACES

Speaker: Professor Liu, Yifeng

Northwestern University

Time: 2:00-3:00 pm., Wednesday, Jun 22, 2016

Venue: Room 2201, East Main Guanghua Tower, Handan Campus

Abstract: We show that algebraic de Rham cohomology sheaves of smooth non-Archimedean analytic spaces have canonical decomposition via weights. This in particular confirms a question raised by Berkovich about 1-forms. On the other hand, we study tropical Dolbeault cohomology in the sense of Chambert-Loir and Ducros, and will show a connection between these two theories. Some applications and conjectures will be discussed.

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