

SCMS Seminar



RADIAL SYMMETRY OF STATIONARY AND UNIFORMLY-ROTATING SOLUTIONS IN 2D INCOMPRESSIBLE FLUID EQUATIONS

Speaker: Yao Yao

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Lecture

Time: 10:30-11:30, August 1st, 2019

Venue: Room 102, Shanghai Center for Mathematical Sciences

Abstract: In this talk, I will discuss some recent work on radial symmetry property for stationary or uniformly-rotating solutions for 2D Euler and SQG equation, where we aim to answer the question whether every stationary/uniformly-rotating solution must be radially symmetric, if the vorticity is compactly supported. This is a joint work with Javier Gómez-Serrano, Jaemin Park and Jia Shi.

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