非線形力学特別講義

Integrable Systems and Non-linear p.d.e.

by Ting-Jung Kuo

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Professor Ting-Jung Kuo will give an intensive course of 8 lectures as an activity of the Mathematics and Physics Unit "Multiscale Analysis, Modelling and Simulation" Top Global University Project, Waseda University

ABSTRACT: This part of the course will be an introduction to the Mean Field Equation, with an emphasis on analytic techniques for solving nonlinear pde. The Mean Field Equation is closely related to the Liouville equation, and the Toda equation. It appears in theoretical physics (gauge theory), differential geometry, and the theory of integrable systems. Solutions of the Mean Field Equation with singular sources (solutions with logarithmic behaviour at isolated singular points) are particularly interesting and important, and require special techniques. The lectures will explain these techniques, starting from the simplest cases, and leading to nontrivial applications.

Students may register to obtain credit for this course (MATX72ZL Advanced Study of Nonlinear Mechanics).

Time:

Thursday 29 June	10:40-12:10
Monday 3 July	13:00-14:30
Thursday 6 July	10:40-12:10
Monday 10 July	13:00-14:30
Thursday 13 July	10:40-12:10
Monday 17 July	13:00-14:30
Thursday 20 July	10:40-12:10 [to be confirmed]
Monday 24 July	13:00-14:30 [to be confirmed]

Place:

Waseda University, Nishi-Waseda Campus, Building 51, Room 10-06

Web page:

http://www.f.waseda.jp/martin/conf/2017SGlectures.html

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Mathematics and Physics Unit "Multiscale Analysis, Modeling and Simulation", Top Global University Project, Waseda University