

Math 6590, Topics in Applied Mathematics—Fall 2015
(Section 351)

Instructor: Dr. Jiahong Wu; Office: MS424;
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Hours of Class Meeting:

MWF, 11:30-12:20 @ MSCS 509

Office Hours:

Please feel free to stop by my office if you have questions or ideas on the materials covered in class.

Textbook:

This course covers various topics in mathematical fluid mechanics. Backgrounds and necessary preparations will be provided to make this course self-contained. The books listed below may help you understand some of the topics covered in class:

- Ch. Doering and J. Gibbon, *Applied Analysis of the Navier-Stokes Equations*, Cambridge University Press, 1995.
- A. Majda and A. Bertozzi, *Vorticity and Incompressible Flow*, Cambridge University Press, 2002.
- A. Majda, *Introduction to PDEs and waves for the atmosphere and ocean*, Courant Lecture Notes, 2003.
- E. Stein, *Singular integrals and differentiability properties of functions*, Princeton University Press, 1970.
- C. Miao, J. Wu and Z. Zhang, *Littlewood-Paley Theory and Its Applications in Fluid Mechanics*, Science Press of China, Beijing, China, March 2012, 450pp.

Grading Policy:

- Class Attendance—70% , Participation—20%, Lectures —10%
- Cut-offs for letter grades: A (90-100); B (75-89); C (60-74)