

**Topics in Applied Mathematics—Fall 2010**  
**(MATH 6590—Section 351)**

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**Hours of Class Meeting:**

Tu Th 9:00-10:15 @MS 509

**Office Hours:**

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

**Textbook:**

This course covers various topics in mathematical fluid mechanics with an emphasis on recent progress.

- 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.
- Ch. Doering and J. Gibbon, *Applied Analysis of the Navier-Stokes Equations*, Cambridge University Press, 1995.
- E. Stein, *Singular integrals and differentiability properties of functions*, Princeton University Press, 1970.
- C. Miao, *Harmonic analysis and its applications in PDEs*, Science Press, China, 2007

**Grading Policy:**

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