

## **MATH-6010 ADV SEMINAR IN MATH** **Section 351, Spring 2013**

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### **Hours of Class Meeting:**

MWF, 2:30-3:20 @ LSE 113

### **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 with an emphasis on recent progress. The books listed below may help you understand some of the topics covered in class:

- 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.
- H. Bahouri, J.-Y. Chemin and R. Danchin, *Fourier Analysis and Nonlinear PDEs*, Springer, 2011.

### **Grading Policy:**

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