Courant Institute of Mathematical Sciences
Center for Atmosphere, Ocean Sciences (CAOS)

Post doctoral Position for Andrew J. Majda

The Courant Institute of Mathematical Sciences at New York University has recently established the Center for Atmosphere, Ocean Sciences (CAOS) in order to expand its traditional strengths in applied mathematics and computational science into the area of global environmental sciences.

Research activities carried out by members of the Center focus on the development and application of mathematical and computational methodologies aimed at increasing understanding of key dynamical processes within the global climate system. Disciplinary tools used include a hierarchy of climate models ranging from simple models up to those of the general circulation. Ideas from modern applied mathematics involving statistical and stochastic modeling, nonlinear PDE’s, and asymptotic modeling also have a central role in these efforts.

As part of an expanding research program within the center, several postdoctoral fellowships have recently been created. Applicants possessing a background in atmosphere science, physical oceanography, or applied mathematics are currently being sought for positions September 1, 2009. Either recent PhD’s in applied mathematics interested in learning about exciting contemporary applications of applied math in atmosphere/ocean science or PhD’s from atmosphere/ocean science with an interest in learning contemporary applied mathematics approaches are suitable candidates.

These positions will be supervised by Professor Andrew Majda, Morse Professor of Arts and Sciences at the Courant Institute and the founder of CAOS. The general topics for the post doc positions are the following:

**Multi-scale Modeling of Clouds and Moist Convection:** Development of new multi-scale asymptotic and numerical procedures for interaction of cloud systems across scales including squall lines, superclusters, tropical intraseasonal oscillations and their mid-latitude impacts. Real time Filtering and Data Assimilation for Tropics (supervised by A. Majda with possible interaction with Prof. Olivier Pauluis)

**Mathematical Strategies for Statistical and Stochastic Modeling of under Resolved Degrees of Freedom:** Potential applied areas include low frequency variability of the coupled ocean system atmosphere, tropical convection, etc. (supervised by A. Majda)

**Climate Change Response via Fluctuation-Dissipation Theorems:** Developing theory, hierarchy of models, and applications to low frequency climate response, Information theory and Model Error in FDT.

These positions are available for up to a three-year period, subject to annual performance review. Salary range is $56-$58K, and an attractive benefits package is also offered. Please send resumes to Prof. Majda’s Administrative Assistant, Joeleen Grant, 251 Mercer Street, New York, NY 10012 or preferably via email to grant@cims.nyu.edu, as well as directly to Prof. Majda at jonjon@cims.nyu.edu. Further information about the Center and the positions offered may be found at URL http://caos.cims.nyu.edu/page/home. Prof. Majda’s current research, reprints and preprints are available at his NYU faculty website http://math.nyu.edu/faculty/majda. NYU is an Equal Opportunity/Affirmative Action Employer.