APPLIED MATHEMATICS COLLOQUIUM

Conserved Variable Coordinate Modeling of Hurricanes

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Abstract:
Numerical modeling has become an important tool for simulating complex systems, such as weather and climate. It is often assumed that the quality of a model is proportional to its own degree of complexity and sophistication. In this talk, I will show that in many cases, much computer power is needlessly consumed in predicting details that are, in any case, beyond reasonable limits of predictability. Simplifying the model and bringing to bear some mathematical elegance results in models that are at once much more understandable, far faster, and yield predictions that are just as good as those of their complex cousins. I will illustrate this with a particular model of hurricane strength that can be run on an ordinary laptop.

Monday October 18th 2010
4:30 PM
Building 2, Room 105
Refreshments are available in Building 2, Room 290
(Math Common Room) between 3:30 – 4:30 PM