

Special Program in Applied Mathematics and Applied Mechanics

Climate Simulations Meet Weather Prediction: What Can We Learn From It?

2013 - 11 - 20 (Wed.)

16:00 - 18:00

308, Mathematics Research Center Building (ori. New Math. Bldg.)

There has been a significant progress in climate modeling in the last few decades. Yet, scientists around the world still struggle for a better understanding of the underlying physical processes from small scale turbulence, clouds, precipitation to large-scale planetary circulation in the climate system in order to improve the systematic errors seen in many climate models. This is of great importance as these systematic errors may affect the fidelity of climate models in simulating future climate projections that will impact human lives in the next few decades. Nevertheless, understanding the origin of these systematic errors is challenging because nonlinear feedback processes in the climate system make it difficult to unambiguously identify causal relationships. The present talk will focus on how we can apply numerical weather prediction technique to better understand and improve climate models in simulating current climate and potentially their future projections.



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