



Interactions between natural climate variability and economic endogenous variability

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The economic system and the climatic system display specific dynamics; yet the coupling of these systems is not well understood. We study this coupling in two simple models. The climate model is a Lorenz model with periodic forcing that simulates intrinsic variability. It is coupled with NEDyM, a macro-economic growth model reacting to short-term shocks, such as extreme climatic events. In NEDyM, the economic system appears to show rapid transitions even in response to small perturbations. This work is motivated by the possibility that interactions between the two systems may lead to much larger fluctuations than either one taken separately. The present talk will report on our methodology and preliminary results of this long-term, collaborative research.