

Physics Colloquium

Michigan Technological University

Thursday, September 11, 2014

4:00 - 5:00 pm

Room 139, Fisher Hall

Chaos, predictability and small scale weather simulation

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ABSTRACT

Recent developments in computing hardware open up the possibility to conduct simulations of local weather with unprecedented detail. These high-resolution simulations have the additional advantage that notoriously cumbersome processes, such as turbulence and cloud formation, are represented in the model much better than before. As an example we will show animations of simulated clouds next to the real cloud field as viewed by a webcam. It appears, however, that the fine scale simulations are reaching the borders of predictability. We will discuss this issue by revisiting two classical papers by E. Lorenz on chaos and predictability.