NUMERICAL METHODS FOR PDEs SEMINAR
and
PHYSICAL MATHEMATICS SEMINAR

Implicit Runge-Kutta Methods:
Are They Practical?

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ABSTRACT:

A large class of methods for propagating the state of a system and its associated uncertainty (i.e., its probability density function) require the propagation of an ensemble of particles or states through nonlinear dynamics. In this talk, a new implicit Runge-Kutta-based approach for the efficient propagation of uncertainty will be described. Comparison to existing explicit-based approaches will be made in the context of space situational awareness, wherein uncertainty propagation is critical for space catalog maintenance, collision avoidance, and object characterization.

WEDNESDAY, APRIL 3, 2013
4:00 PM
Building 2, Room 147

Reception at 3:30 PM in the Math Common Room
(Building 2, Room 290)

http://math.mit.edu/seminars/nmpde/

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