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MMM SEMINAR *NCAR*

Particle Filters and High-Dimensional Systems

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Particle filters offer an elegant solution to the problem of state estimation. They make no assumptions about the form of the underlying probability distributions and, in principle, are applicable in the presence of strong nonlinearity and non-Gaussianity. Driven in part by geophysical applications, much recent work has focussed on particle-filter algorithms for high-dimensional systems. I will give a basic tutorial on particle filters and then present a small sample of further topics: reasons that high-dimensional system are especially challenging for particle filters, a bound on the performance of an important class of particle filters, and potential paths toward more effective high-dimensional particle filters.

This seminar will be webcast live at:
http://www.fin.ucar.edu/it/mms/fl-live.htm

Recorded seminar link can be viewed here:
https://www.mmm.ucar.edu/events/seminars

Thursday, 17 September 2015, 3:30 PM
Refreshments 3:15 PM
NCAR-Foothills Laboratory
3450 Mitchell Lane
Bldg 2 Main Auditorium, Room 1022

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