



# UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

## COLLOQUIUM

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**Dr. Jinqiao Duan**

**(Institute for Pure and Applied Mathematics, UCLA & Dept. of Applied Mathematics, IIT, Chicago)**

"A Glimpse of Stochastic and Nonlinear Dynamical Systems"

**Abstract:**

This is a colloquium presentation aimed at graduate students and general audience in mathematics.

Dynamical systems in science and engineering are nonlinear in nature, and are often subject to random influences (known as "noise", or "uncertainty"). Nonlinear or stochastic ordinary as well as partial differential equations are appropriate models for some of these dynamical systems.

Nonlinearity may lead to "chaos", while uncertainty may have delicate or profound impact on system evolution. Nonlinearity can take various forms, and noise could be Gaussian or non-Gaussian, white or colored. The speaker will present an overview of some recent, and not so recent, advances in dynamical systems, and will try to convey certain interesting ideas and discoveries.

**Wednesday, February 8<sup>th</sup>, 2012**

**Surge 284**

**4:10-5:00pm**

*Tea Time at 3:40pm*