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Department of Marine Sciences
Presents a Seminar By

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Dynamics of the Madden-Julian Oscillation

The Madden-Julian oscillation (MJO) is the dominant mode of variability in the tropics on the intraseasonal time scale (say, 20-90 day periods) and one of the most important coherent, quasi-periodic modes of natural variability in the global climate system altogether.

Though it was discovered over 40 years ago, we still do not fully understand the MJO, in the sense of being able to state a simple mathematical model that explains its basic features.

I will present evidence that the MJO is what some of us now call a "moisture mode", best analyzed by examining the budget of moist static energy or moist entropy. I will argue that cloud-radiative feedbacks are important to the maintenance of the MJO, while horizontal advection of moisture is important to its eastward propagation. I will present evidence from observations, theory, general circulation models, and cloud-resolving models to this effect, including recent simulations of the MJO events observed during the DYNAMO field campaign in the Indian Ocean in 2011.

Host: Kelly Lombardo

Time & Date: 11:00 am, Friday, October 2, 2015

Place: Marine Sciences Building, Seminar Room 103

Please see this [page](#) for cancelations and additional seminar information, email marinesciences@uconn.edu, or call 860-405-9152 or 860-405-9151