Weekly CEAFM Seminar: Fall 2016

JOHNS HOPKINS
Center for Environmental
& Applied Fluid Mechanics

Date: **Friday, October 28th, 2016**

Time: 11:00 AM

Location: Gilman Hall # 50

Speaker: **Prof. Kayo Ide** (University of Maryland at College Park)

Title: ***"Observing System Impact and Forecast Sensitivity for Global Numerical Weather Prediction using Data Assimilation"***

Abstract

Scientific prediction of a time-evolving system can be viewed as a problem of iteratively re-initializing the estimated state and parameters by assimilating observations into computational model forecasts. This talk will start with a brief introduction of a hybrid 4DEnVar data assimilation system used in the current operation numerical weather prediction, and describe an effort toward applying waveband dependent localization as well as weighting between the static and ensemble contributions within a hybrid assimilation paradigm. I will also discuss observing impact using the observing system simulation experiments as well as forecast sensitivity to observations in a low-resolution prototype of the global data assimilation system.

Bio

Kayo Ide is an Associate Professor at the University of Maryland at College Park and an expert in data assimilation, predictability, numerical weather prediction, control and nonlinear dynamics systems. Her application area spans over a wide range of earth systems: including oceans, atmosphere, space weather, environmental, and geomagnetic systems. At University of Maryland, she has an interdisciplinary appointment with Department of Atmospheric and Oceanic Science, Center for Scientific Computation and Mathematical Modeling, Earth System Science Interdisciplinary Center, and Institute for Physical Science and Technology. She has an extensive record in synergetic activities, such as organizing committees of World Meteorological Organization (WMO) and national symposia, journal editors. She received B.S. in Aerospace Engineering from Nagoya University, Japan, and M.S. and Ph.D. in Aeronautics from California Institute of Technology.