

Kathy Verzone Pegion

Center-for-Ocean-Land-Atmosphere Studies
4041 Powder Mill Rd, Suite 302, Calverton, MD 20705-3106
Tel: (301) 931-7287, Fax: (301) 595-9793
Email: kpegion@cola.iges.org

Education

- 2007 Ph.D. Climate Dynamics, George Mason University, Fairfax, VA
Advisers: Drs. J. Shukla and Ben Kirtman
Dissertation Title: The Impact of Air-Sea Coupling on Tropical Intraseasonal Variability: Simulation and Predictability
- 1999 M.S. Meteorology, Florida State University, Tallahassee, FL
Adviser: Dr. James J. O'Brien
Thesis Title: Double Ensemble Estimates of Precipitation in the Southeastern United States for Extreme ENSO Events
- 1998 B.S. Meteorology, Florida State University, Tallahassee, FL
- 1998 B.S. Computer Science, Florida State University, Tallahassee, FL

Research & Professional Experience

- May 2007-
present **Research Scientist**
Center for Ocean-Land-Atmosphere Studies, Calverton, MD
Investigate climate variability, predictability, and prediction using GCMs with emphasis on air-sea interactions and tropical convection on timescales from weather to seasonal. Specific interests include the MJO, ENSO, and hurricanes.
- Dec 2002 –
May 2007 **Graduate Research Assistant**
Climate Dynamics Department, George Mason University, Fairfax, VA
Investigated the impact of coupled air-sea interactions on tropical intraseasonal variability using the NCEP Climate Forecast System.
- Feb 2001 –
Dec 2002 **Meteorologist**
NOAA/NWS/Meteorological Development Laboratory, Silver Spring, MD
Developed operational software used by NWS forecasters to generate forecast products. Lead end-to-end development of two components of the system.
- Aug 1999 –
Feb 2001 **Scientific Programmer/Analyst**
GSC-SAIC in support of the NASA Seasonal to Interannual Prediction Project, Greenbelt, MD
Conducted and analyzed experiments with the Poseidon Ocean model. Investigated errors in the model thermocline structure and ENSO simulation.

- Aug 1998 – **Graduate Research Assistant**
Aug 1999 *Center for Ocean-Atmosphere Prediction Studies, Florida State University, Tallahassee, FL*
Investigated teleconnections associated with ENSO and precipitation in the Southeastern United States using the FSU Global Spectral Model.
- Jan 1997 – **Undergraduate Research Assistant**
Aug 1998 *Center for Ocean-Atmosphere Prediction Studies, Florida State University, Tallahassee, FL*
Investigated errors in NCEP Reanalysis fluxes by comparing with fluxes derived from World Ocean Circulation Experiment research vessels.
Developed moving vector software in IDL for visualization of NSCAT data.
Converted WOCE ship data from native formats to NetCDF

Refereed Publications

- Pegion, K.** and B. P. Kirtman, 2007: The Impact of Air-Sea Interactions on the Simulation of Tropical Intraseasonal Variability. Submitted to *J. Climate*.
- Pegion, K.** and B. P. Kirtman, 2007: The Impact of Air-Sea Interactions on the Predictability of the Tropical Intraseasonal Oscillation. Submitted to *J. Climate*.
- Pegion, K.** and B. P. Kirtman, 2007: Internal Atmospheric Dynamics and Air-Sea Interactions in the Tropical Intraseasonal Oscillation. Submitted to *J. Geophys. Res.*
- Wu R., B. P. Kirtman, **K. Pegion** (2007), Surface latent heat flux and its relationship with sea surface temperature in the National Centers for Environmental Prediction Climate Forecast System simulations and retrospective forecasts, *Geophys. Res. Lett.*, 34, L17712, doi:10.1029/2007GL030751.
- Hu, Z. -Z., B. Huang, and **K. Pegion**, 2007: Low Clouds over the Southeastern Tropical Atlantic Ocean and Their Climate Effects in a Coupled GCM and Observations. *Submitted to J. Geophys. Res.*
- Hu, Z. -Z., B. Huang, and **K. Pegion**, 2007: Leading patterns of the tropical Atlantic variability in a coupled GCM. *Clim. Dyn.*, (accepted).
- Kirtman, B. P., **K. Pegion**, and S. Kinter, 2005: Internal atmospheric dynamics and Tropical Indo-Pacific Climate Variability. *J. Atmos. Sci.*, 62, 2220-2233.
- Wu, R., B. P. Kirtman, and **K. Pegion** 2005: Local Air-Sea Relationships in Observations and Model Simulations. *J. Climate*, 19, 4913-4932.
- Smith, S.R., D. M. Legler, and **K.V. Verzone**, 2001: Quantifying Uncertainties in NCEP-Reanalysis Using High-Quality Research Vessel Observations. *J. Climate*, 14, 4062-4072.

Invited Talks

- Nov 2007 CTB-COLA Seminar Series
- Feb 2007 Penn State University,
Earth Science System Center Seminar Series
- Feb 2007 GSFC, GMAO Subseasonal to Decadal Group Seminar

Conference Presentations/Posters

- Pegion, K.** and B. P. Kirtman, 2007: Sensitivity of MJO Predictability to SST, presentation, 32nd Climate Diagnostics Workshop, Tallahassee, FL.
- Pegion, K.** and B. P. Kirtman, 2007: Sensitivity of MJO Predictability to SST, poster, New Approaches to Understanding, Simulating, and Forecasting the Madden-Julian Oscillation, Irvine, CA.
- Pegion, K.**, B. Kirtman, J. Shukla, 2006: The Impact of Air-Sea Coupling on Tropical Intraseasonal Variability in the CFS, poster, 31st Annual Climate Diagnostics and Prediction Workshop, Boulder, CO.
- Pegion, K.**, and B. Kirtman, 2006: Interannual and Intraseasonal Variability in the CFS Interactive Ensemble, poster, 31st Annual Climate Diagnostics and Prediction Workshop, Boulder, CO.
- Pegion, K.**, B. Kirtman, D. Straus, and J. Shukla, 2006: Potential Predictability of Tropical Intraseasonal Variability in the NCEP Climate Forecast System, presentation, 2006 AGU Joint Assembly, Baltimore, MD.
- Pegion, K.**, D. Straus, B. Kirtman, and J. Shukla, 2005: Simulation of Tropical Intraseasonal Variability in the CFS, poster, 30th Annual Climate Diagnostics and Prediction Workshop, State College, PA.
- Pegion, K.**, B.P. Kirtman, J. Shukla, 2004: The Importance of Daily vs. Monthly SSTs in Seasonal Simulations, poster, 84th Annual AMS meeting, Seattle, WA.

Professional and Service Activities

Nov 2007	Clivar MJO Workshop (Irvine, CA)
June 2007	WCRP Workshop on Seasonal Prediction (Barcelona, Spain)
March 2006	Workshop on the Organization and Maintenance of Tropical Convection and the Madden Julian Oscillation (ICTP, Italy)
2006, 2007	Reviewer Climate Dynamics
September 2005	IMAGE Theme-of-the-Year Workshop on Multi-Scale Interactions in the Tropics to Midlatitudes: Mathematical Theory, Observations, and Numerical Models (NCAR, Boulder, CO)
Fall 2005- Spring 2007	Climate Dynamics Department Recruitment Committee, Student Representative
May 2005	NATO Advanced Study Institute on Seasonal to Interannual Climate Variability: its Prediction and Impact on Society (Gallipoli, Italy)
Summer 2004	Co-founded COLA/GMU Climate Dynamics Graduate Student Organization & Journal Club

Technical Skills

Programming: Fortran 77/90, C/C++, Perl, shell-scripting, SQL, MPI
Web & Applications: MS Word, Powerpoint, Excel; HTML, CGI
Data Analysis: GrADS, IDL, Matlab
Operating Systems: Unix/Linux, Mac OSX, Windows
Debugging & Revision Control: ddd, gdb, TotalView, rcs, PVCS
Models: NCEP CFS/GFS, CCSM, FSUGSM, Poseidon Ocean Model, MOM3