Peng Wang, Ph.D.

Email: wangpeng@miami.edu

Phone: (+1) 786.266.3320

Web: http://www.rsmas.miami.edu/personal/wangpeng/

Address: 4600 Rickenbacker Causeway, Ocean Sciences Dept., Miami, FL 33149

Education

09/2011 – 05/2016 Ph.D. in Meteorology and Physical Oceanography
University of Miami, Miami, USA

09/2007 – 06/2011 B.S. in Ocean Sciences
Ocean University of China, Qingdao, China

Career

06/2016 – Present Postdoctoral Associate, University of Miami

Research Interests

- *Ocean dynamics:* instabilities of ocean mesoscale and submesoscale eddies, mixed layer instabilities, internal waves, inertial waves, wave-current interaction, Langmuir circulations, etc.

- *Material dispersion:* through ocean eddies, currents, waves, etc.; Lagrangian coherent structures (e.g. FTLE, FSLE).

Publications

- **Wang, P.**, Özgökmen, T. M., Haza, A. C., 2016. Material dispersion by oceanic internal waves. *Environmental Fluid Mechanics*, DOI: doi:10.1007/s10652-016-9491-y.

- **Wang, P.**, 2016. Material dispersion by ocean eddies and waves. *Open Access Dissertations*, Paper 1653.

- **Wang, P.**, Özgökmen, T. M., 2016. Spiral inertial waves radiated from geophysical vortices. *Ocean Modelling*, DOI: 10.1016/j.ocemod.2016.01.001.

- **Wang, P.**, Özgökmen, T. M., 2015. How do hydrodynamic instabilities affect 3D transport in geophysical vortices? *Ocean Modelling*, DOI:10.1016/j.ocemod.2015.01.002.

- Rypina, I., Pratt, L. J., **Wang, P.**, Özgökmen, T. M., Mezić, I., 2015. Resonance phenomena in 3D time-dependent volume-preserving flows with symmetries. *Chaos*, DOI: 10.1063/1.4916086.

- Pratt, L. J., Rypina, I. I., Özgökmen, T. M., **Wang, P.**, Childs, H., Bebieva, Y., 2014. Chaotic advection in a steady, three-dimensional, Ekman-driven eddy. *Journal of Fluid Mechanics*, DOI:10.1017/jfm.2013.583.

- Zambianchi, E., Poulain, P., **Wang, P.**, Kalampokis, A., Berta, M., Borghini, M., Buonocore, B., Cianelli, D., Falco, P., Gerin, R., Iermano, I., Mantovani, C., Nicolaides, G., Özgökmen, T., Sofianos, S., Uttieri, M., Zervakis, V., 2013. Surface circulation in the Gulf of Naples during the GELaTo 2012 experiment. *40th CIESM Congress – Marseille, France, October 2013.*

Under Review:

- Zhai, L., Wang, X., **Wang, P.**, Zhang, B., Miralles-Wilhelm, F., da Silveira, L., Sternberg, L. Quantification of evaporation based on deuterium excess method indicates discharge gate location and vegetation influences on evaporation in a tropical. *Journal of Hydrology*, submitted on 12/05/2016.

In Preparation:

- **Wang, P.**, Özgökmen, T. M.. Simulation of Langmuir circulations using explicit modelling of surface waves. *Geophysical Research Letters*.

- Brett, J., Pratt, L., **Wang, P.**. Stirring and mixing in a kinematic 3D eddy: the importance of chaotic structures for observations.

Conferences and Presentations

- 11/2016, Miami, FL, USA. Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE-II All Hands Meeting).
  --- *Oral presentation*: "Simulating Langmuir circulations without phase averaging

surface gravity waves".

- 05/2016, Woods Hole, MA, USA. AmeriMech Symposium on Fluid Transport and Nonlinear Dynamics.
  --- Poster presentation: "Spiral inertial waves emitted from geophysical vortices".

- 02/2016, New Orleans, LA, USA. Ocean Sciences Meeting (AGU).
  --- Poster presentation: "Spiral inertial waves emitted from geophysical vortices".

- 09/2015, La Jolla, CA, USA. Dynamical Systems Theory and Lagrangian Data Assimilation in 3D+1 Geophysical Fluid Dynamics (MURI Ocean 3D+1).
  --- *Oral presentation*: "Spiral inertial waves emitted from geophysical vortices".

- 12/2014, San Francisco, CA, USA. American Geophysical Union Fall Meeting (AGU Fall Meeting).
  --- *Poster presentation*: "How do hydrodynamic instabilities affect 3D transport in geophysical vortices".

- 11/2014, Miami, FL, USA. Dynamical Systems Theory and Lagrangian Data Assimilation in 3D+1 Geophysical Fluid Dynamics (Ocean 3D+1).
  --- *Oral presentation*: "The material transport and wave radiation in a 3D ocean eddy".

- 04/2014, Hollywood, FL, USA. Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE All Hands Meeting).
  --- *Oral presentation*: "3D instability in an isolated geophysical vortex".

- 02/2013, Chapel Hill, NC, USA. Dynamical Systems Theory and Lagrangian Data Assimilation in 3D+1 Geophysical Fluid Dynamics (Ocean 3D+1).
  --- *Oral presentation*: "Chaotic advection a periodically-perturbed, three-dimensional rotating cylinder".

- 06/2012, Miami, FL, USA. Lagrangian Analysis and Prediction of Coastal and Ocean Dynamics (LAPCOD-V).

Teaching and Relevant Experiences

- 08/2011 – 05/2016 Research Assistant at University of Miami
- 10/2015 – 11/2015 Teaching Assistant for "Geophysical Fluid Dynamics"
- 09/2015 Visiting Scholar for "Fluid Dynamics on Sustainability and the Environment" at École Polytechnique, France
- 09/2014 Field operation in coastal ocean of southeast Florida
- 07/2014 Field operation in coastal ocean of southeast Florida
- 08/2013 – 12/2013 Teaching Assistant for "Computer Models of Fluid Dynamics"

- 01/2013 – 05/2013 Teaching Assistant for “Introduction to Physical Oceanography”

Computer Skills

Fortran; MATLAB; VisIt; Linux/Unix; Latex; etc.

Awards and Honors

- 2009 – 2010 Honorary Title of Outstanding Student at Ocean University of China
- 2009 – 2010 Excellent Students Scholarship at Ocean University of China
- 2008 – 2010 Excellent Academy Scholarship at Ocean University of China
- 2008 First Prize of National Undergraduate Ocean Knowledge Contest, China
- 2009 Second Prize of National Undergraduate Mathematics Contest, Shandong, China

Society Services

- 10/2015 Volunteer for “National Gandhi Day of Service”
- 03/2015 Volunteer for UM/RSMAS Auction Activity
- 04/2014 Volunteer for “Baynanza Beach (Miami) Cleanup and Exotic Plant Removal”
- 09/2013 – 05/2014 Member of UM/RSMAS MPO Student Seminar Committee
- 01/2013 – 03/2016 Member of UM/RSMAS Garden Club

Professional Affiliations

American Geophysical Union