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**Curriculum Vitae**

**Ping-Tung Shaw**

Associate Professor

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*Education*

BS in Physics, 1972, National Taiwan University, Taipei, Taiwan

MS in Oceanography, 1977, University of Rhode Island, Kingston, RI

Ph.D. in Oceanography, 1982, MIT/Woods Hole Oceanographic Institution, MA

*Professional Experience*

Associate Professor, Department of Marine, Earth and Atmospheric Sciences, North Carolina State University, Raleigh, NC, 1993-present

Assistant Professor, Department of Marine, Earth and Atmospheric Sciences, North Carolina State University, Raleigh, NC, 1987-1993

Associate Professor, Institute of Oceanography, National Taiwan University, Taipei, Taiwan, 1984-1987

Visiting Investigator, Department of Physical Oceanography, Woods Hole Oceanographic Institution, Woods Hole, MA, summer, 1985

Assistant Scientist, Graduate School of Oceanography, University of Rhode Island, Kingston, RI, 1983-1984

Research Associate, Graduate School of Oceanography, University of Rhode Island, Kingston, RI, 1981-1983

*Courses Taught*:

MEA200 Introduction to Oceanography

MEA210 Oceanography Lab

MEA460/540 Principles of Physical Oceanography

MEA463 Fluid Physics

MEA464 Ocean Circulation Systems

MEA735 Time Series Analysis

MEA744 Ocean Circulation

*Recent Research Grants*:

1. Internal tides and solitary waves in the northern South China Sea: a nonhydrostatic numerical investigation. PI: P.-T. Shaw, Office of Naval Research, 10/1/2004-9/30/2010, $159,744.
2. A Statistical Investigation of Internal Wave Propagation in the Northern South China Sea, Office of Naval Research, October 1, 2009-September 30, 2011, PI: P.-T. Shaw, $33,664.
3. Early Student Support for a Statistical Investigation of Internal Wave Propagation in the Northern South China Sea, Office of Naval Research, November 1, 2009-August 15, 2014, PI: P.-T. Shaw, $104,522.

*Refereed Publications (\* by student advised)*:

Chen, Y.-J.\*, D. S. Ko, and P.-T. Shaw, 2013: The generation and propagation of internal solitary waves in the South China Sea, J. Geophys. Res. Oceans, 118, 6578–6589, doi:[10.1002/2013JC009319](http://dx.doi.org/10.1002/2013JC009319%22%20%5Co%20%22Link%20to%20external%20resource%3A%2010.1002/2013JC009319).

Qian, H.\*, P.-T. Shaw and D. S. Ko, 2010: Generation of internal waves by barotropic tidal flow over a steep ridge, *Deep-Sea Res. I*, 57, 1521-1531, doi:10.1016/j.dsr.2010.09.001.

Shaw, P.-T., D. Ko, and S.-Y. Chao: Internal solitary waves induced by flow over a ridge: with applications to the northern South China Sea, *J. Geophys. Res*., 114, C02019, doi:10.1029/2008JC005007, 2009

Hsin, Y.-C., C.-R. Wu, and P.-T. Shaw, 2008: Spatial and temporal variations of the Kuroshio east of Taiwan, 1982–2005: A numerical study, *J. Geophys. Res.*, 113, C04002, doi:10.1029/2007JC004485.

Chao, S.-Y., D.-S. Ko, R.-C. Lien, and P.-T. Shaw, 2007: Assessing the west ridge of Luzon Strait as an internal wave mediator, *J. Oceanogr*., 63, 897-911.

Shaw, P.-T. and S.-Y. Chao, 2006: A nonhydrostatic primitive-equation model for studying small-scale processes: an object oriented approach, *Continental Shelf Research*, 26, 1416-1432.

Chao, S.-Y., P.-T. Shaw, M.-K. Hsu., and Y.-J. Yang, 2006: Reflection and diffraction of internal solitary waves by a circular island, *Journal of Oceanography*, 62(6), 811-823.

Shaw, P.-T. and S.-Y. Chao, 2003: Effects of a baroclinic current on a sinking dense water plume from a submarine canyon and heton shedding. *Deep-Sea Res*., *I*, 50(3), 357-370.

Chao, S.-Y. and P.-T. Shaw, 2003: A numerical study of dense outflow and halocline anticyclones in an Arctic baroclinic current, *J. Geophys. Res.*, 108 (C7) 3226, doi: 10.1029/2002JC0014173.

Chao, S.-Y. and P.-T. Shaw, 2003: Heton shedding from submarine canyon plumes in an Arctic boundary current system: sensitivity to the undercurrent, *J. Physical Oceanogr.,* 33 (9), 2032-2044.

Liu, K.-K., T.-H. Peng, P.-T. Shaw, and F.-K. Shiah, 2003: Circulation and biogeochemical processes in the East China Sea and the vicinity of Taiwan: An overview and a brief synthesis. *Deep-Sea Res. II* 50 (6-7), 1055-1064.

Liu, K.-K., S.-Y. Chao, P.-T. Shaw, G.-C. Gong, C.-C. Chen and T.-Y. Tang, 2002: Monsoon-forced chlorophyll distribution and primary production in the south China Sea: observations and a numerical study. *Deep-Sea Res I*. 49(8), 1387-1412.

Chao, S. Y. and P.-T. Shaw, 2002: A numerical investigation of slanted convection and subsurface anticyclone generation in an Arctic baroclinic current system. *J. Geophys. Res.*, 107(C3), 10.1029/2001JC000786.

Chao, S. Y. and P.-T. Shaw, 2002: Nonhydrostatic aspects of coastal upwelling meanders and filaments off eastern ocean boundaries. *Tellus A*, **54**(1), 63-75.

Chao, S. Y. and P.-T. Shaw, 2000: Slope-enhanced fission of salty hetons under sea ice. *J. Phys. Oceanogr.*, **30**,2866-2882.

Shaw, P.-T., S.-Y. Chao, and L.-L. Fu, 1999: Sea surface height variations in the South China Sea from satellite altimetry, *Oceanologica Acta*, **22**, 1-17.

Wu, C-R\*, P.-T. Shaw, and S.-Y. Chao, 1999: Assimilating altimeter data into a South China Sea model, *Journal of Geophysical Research*, **104**, 29,987-30,005.

Chao, S.-Y. and P.-T. Shaw, 1999: Close interaction between two pairs of heton-like vortices under sea ice, *Journal of Geophysical Research*, **104**, 23,591-23,605.

Chao, S.-Y. and P.-T. Shaw, 1999: Fission of heton-like vortices under sea ice, *Journal of Oceanography*, **55**, 65-78.

Chao, S.-Y. and P.-T. Shaw, 1998: Eddy maintenance and attrition in a vertically sheared current under Arctic ice, *Journal of Physical Oceanography*, **28**, 2427-2443.

Wu, C-R\*, P.-T. Shaw, and S.-Y. Chao, 1998: Seasonal and interannual variations in the velocity field of the South China Sea, *Journal of Oceanography*, **54**, 361-372.

Chen, Y.-H.\*, P.-T. Shaw, and T. G. Wolcott, 1997: Estuarine retention of planktonic larvae by tidal currents, *Estuarine, Coastal, and Shelf Science,* **45,** 525-533.

Shaw, P.-T., S.-Y. Chao, K.-K. Liu, S.-C. Pai and C.-T. Liu, 1996: Winter upwelling off Luzon in the northeastern South China Sea, *Journal of Geophysical Research,* **101***,* 16,435-16,448.

Chao, S.-Y., P.-T. Shaw and S. Y. Wu, 1996: El Niño modulation of the South China Sea circulation, *Progress in Oceanography,* **38,** 51-93.

Chao, S.-Y., and P.-T. Shaw, 1996: Initialization, asymmetry and spin-down of Arctic eddies, *Journal of Physical Oceanography,* **26,** 2076-2092.

Chao, S.-Y., P.-T. Shaw and S. Y. Wu, 1996: Deep water ventilation in the South China Sea, *Deep-Sea Research, I,* **43,** 445-466.

Chen, H.-T., X.-H. Yan, P.-T. Shaw and Q. Zheng, 1996: A numerical simulation of wind stress and topographic effects on the Kuroshio current path near Taiwan, *Journal of Physical Oceanography,* **26**, 1769-1802.

Chao, S.-Y., P.-T. Shaw and J. Wang, 1995: Wind relaxation as a possible cause of the South China Sea Warm Current, *Journal of Oceanography,* **51*,*** 111-132.

Shaw, P.-T., 1994: A numerical simulation of the evolution and propagation of Gulf Stream Warm Core Rings, *Journal of Physical Oceanography,* **24,** 573-586.

Shaw, P.-T. and S.-Y. Chao, 1994: Surface circulation in the South China Sea, *Deep-Sea* *Research, I,* **41,** 1663-1683.

Shaw, P.-T., L. J. Pietrafesa, C. N. Flagg, R. W. Houghton, and K.-H. Su\*, 1994: Low-frequency oscillations on the outer shelf in the southern Mid-Atlantic Bight, *Deep-Sea Research, II,* **41,** 253-271.

Su, K.-H.\*, P.-T. Shaw and L. J. Pietrafesa, 1994: The origin of low-frequency oscillations in the southern Mid-Atlantic Bight, *Journal of Physical Oceanography,* **24,** 1110-1119.

Shaw, P.-T., 1992: Shelf circulation off the southeast coast of China, *Reviews in Aquatic Sciences,* **6,** 1-28.

Shaw, P.-T., 1991: The seasonal variation of the intrusion of the Philippine Sea water into the South China Sea, *Journal of Geophysical Research,* **96,** 821-827.

Shaw, P.-T., and S. Divakar, 1991: Generation of topographic waves over the continental margin, *Journal of Physical Oceanography,* **21,** 1032-1042.

Shaw, P.-T., 1989: The intrusion of water masses into the sea southwest of Taiwan, *Journal of Geophysical Research,* **94,** 18,213-18,226.

Shaw, P.-T. and G. T. Csanady, 1988: Topographic waves over the continental slope, *Journal of Physical Oceanography,* **18***,* 813-822.

Shaw, P.-T. and C.-Y. Peng, 1987: A numerical study of the propagation of topographic waves, *Journal of Physical Oceanography,* **17,** 358-366.

Shih, C.-F.\*, P.-T. Shaw and H.-W. Li, 1986: Low frequency sea level fluctuations around Taiwan, *Acta Oceanographica Taiwanica.,* **17,** 18- 28. (In Chinese)

Peng, C.-Y.\* and P.-T. Shaw, 1986: Topographic Rossby waves near the continental margin, *Acta Oceanographica Taiwanica.,* **16,** 61-73. (In Chinese)

Rossby, H. T., A. Bower and P.-T. Shaw, 1985: Particle pathways in the Gulf Stream, *Bulletin of the American Meteorological Society,* **66,** 1106-1110.

Shaw, P.-T. and H. T. Rossby, 1984: Towards a Lagrangian description of the Gulf Stream, *Journal of Physical Oceanography,* **14**, 528-540.

Shaw, P.-T. and G. T. Csanady, 1983: Self-advection of density perturbations on a sloping continental shelf, *Journal of Physical Oceanography,* **13*,*** 769-782.

Csanady, G. T. and P.-T. Shaw, 1983: The "insulating" effect of a steep continental slope, *Journal of Geophysical Research,* **88***,* 7519-7524.

Csanady, G. T. and P.-T. Shaw, 1980: The evolution of a turbulent Ekman layer, *Journal of Geophysical Research,* **85,** 1537-1547.

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