

Curriculum Vitae

**Ping-Tung Shaw**

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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

*Professional Society Memberships*

American Geophysical Union  
Sigma Xi

*Courses Taught:*

- 1) Introduction to Oceanography
- 2) Fluid Physics
- 3) Ocean Circulation
- 4) Principles of Physical Oceanography
- 5) Time Series Analysis
- 6) Ocean and Atmospheric Waves

*Recent Research Grants:*

## Curriculum Vitae

- 1) Internal tides and solitary waves in the northern South China Sea: a nonhydrostatic numerical investigation, new, October 1, 2004-September 30, 2009, \$159,744.
- 2) Nonhydrostatic investigations of oscillating flow over sills, Office of Naval Research, \$83K, 5/1/2004-9/30/2006.

*Recent Teaching Grants:*

- 1) Shaw, P.-T. E. Knowles, and M. Kimberley, Discussing Oceans (MEA 200: Intro to Oceanography), DELTA Instructional Services, NC State University, Fall, 2007, \$1.5 K.
- 2) Shaw, P.-T. E. Knowles, and M. Kimberley, Discussing Oceans (MEA 200: Intro to Oceanography), DELTA Instructional Services, NC State University, Sept., 2007-May, 2008, \$14,973.50.

*Refereed Publications:*

- 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 waves mediator, *Journal of Oceanography*, *Journal of Oceanography*, 63, pp. 897 to 911.
- 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, 2006: A nonhydrostatic primitive-equation model for studying small-scale processes: an object oriented approach, *Continental Shelf Research*, 26, 1416-1432.
- 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.
- 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.
- 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:

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- 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.

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- 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.
- Shaw, P.-T., D. R. Watts and H. T. Rossby, 1978: On the estimation of oceanic wind speed and stress from ambient noise measurements, *Deep-Sea Research*, **25**, 1225-1233.