

BIOGRAPHICAL SKETCH

ERIC P. CHASSIGNET

Center for Ocean-Atmospheric Prediction Studies
Florida State University

PERSONAL

Citizenship: USA
Current Academic Rank: Professor
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HIGHER EDUCATION

University of Miami, Miami, USA, Ph. D., 1988

EXPERIENCE

Florida State University	Professor	3/06 - present
	COAPS director	3/06 - present
University of Miami	Adjunct Professor	3/06 - present
	Professor	6/01 - 3/06
	Associate Professor	6/95 - 5/01
	Assistant Professor	9/90 - 5/95
National Center for Atmospheric Research (NCAR)	Postdoctoral Associate	8/88 - 8/90

SYNERGISTIC ACITIVITIES (selected and recent)

WOCE Working Group in Numerical Modeling, **1992-97**; ONR/DAMÉE-NAB Steering Committee **1994-98**; NSF APROPOS Workshop Science Steering Committee **1997-98**; International Liège Colloquium on Ocean Hydrodynamics Scientific Organizing Committee **2000-2001, 2003-2004**; WOCE Conference 2002 Organizing Committee **2001-2002**; Faculty, Geophysical Fluids Dynamics Program, Woods Hole Oceanographic Institution, **2000-present**; International GODAE Symposium Organizing Committee **2001-2002**; NSF Lagrangian/Autonomous Platforms Workshop Steering Committee **2002-2003**; ESMF Advisory Board **2002-2006**, US CLIVAR Atlantic Panel **2004-2005**; National Center for Atmospheric Research Scientific Computing Division Advisory Panel **1995-97, 1999-present**; US-GODAE Science Steering Committee **1998-present**; WOCE/CLIVAR Working Group on Ocean Model Development **1999-present**; HYCOM Consortium for Data Assimilative Modeling Coordinator **1999-present**; International GODAE Science Steering Committee **2001-present**.

SERVED AS A GRADUATE OR POST-GRADUATE ADVISOR FOR

M.S. or Ph.D.: S. Sun, E. Fillenbaum, Y. Song, A. Roubicek*, T. Özgökmen*, D. Fratantoni, H. Kang, J. Jacob*, S. Dutkiewicz, A. Paiva*, D. Zhang, O. Esenkov, J. Hargrove, S. Sofianos, W. Cheng, M. Papadakis*, B. O'Connor, M. Veneziani*, B. Jaimes*, M. Saraceno, M. Donoso, X. Xu*, F. Yao, M. Magaldi*, F. Gouillon*, A. Kennedy*, D. Moroni, P. Hugues, J. Dong, C. Chien, A. Todd*, D. VanDyke*, H. Winterbottom*, C. Albers.

Postdocs: A. Romanou*, L. Cherubin*, D. Bi*, M. Bentsen*, A. Bozek*, S. Rattan*.

* Main advisor or supervisor

JURIED or REFERRED PUBLICATIONS

- Magaldi, M., T.M. Özgökmen, A. Griffa, E.P. Chassignet, M. Iskandarani, and H. Peters, 2008. Turbulent flow regimes behind a coastal cape in a stratified and rotating environment. *Ocean Modelling*, submitted.
- Rousset, C., M.-N. Houssais, and E.P. Chassignet, 2008: A multi-model study of the restratification phase in an idealized convection basin. *Ocean Modelling*, submitted
- Griffies, S.M., et al., 2008: Coordinated Ocean-Ice Reference Experiments (COREs). *Ocean Modelling*, submitted.
- Wallcraft, A.J., A.B. Kara, H.E. Hurlburt, E.P. Chassignet, and G.R. Halliwell, 2008: Value of bulk heat flux parameterizations for ocean SST prediction. *J. Mar. Sys.*, in press.
- LaRow, T.E., Y.-K. Lim, D.W. Shin, E.P. Chassignet, and S. Cocke, 2008: High resolution ensemble Atlantic basin seasonal hurricane simulations. *J. Climate*, in press.
- Chassignet, E.P., and D.P. Marshall, 2008: Gulf Stream separation in numerical ocean models. In "*Eddy-Resolving Ocean Modeling*", M. Hecht and H. Hasumi, Eds., AGU Monograph Series, in press.
- Hurlburt H.E., E.P. Chassignet, J.A. Cummings, A.B. Kara, E.J. Metzger, J.F. Shriver, O.M. Smedstad, A.J. Wallcraft, and C.N. Barron, 2008: Eddy-resolving global ocean prediction. In "*Eddy-Resolving Ocean Modeling*", M. Hecht and H. Hasumi, Eds., AGU Monograph Series, in press.
- Kara, A.B., A.J. Wallcraft, P.J. Martin, and E.P. Chassignet, 2008: Performance of mixed layer models in simulating SST in the Equatorial Pacific Ocean. *J. Geophys. Res.*, **113**, C02020, doi:10.1029/2007JC004250.
- Lim, Y.-K., D.W. Shin, S. Cocke, T.E. LaRow, J.T. Schoof, J.J. O'Brien, and E.P. Chassignet, 2007: Dynamically and statistically downscaled forecasts of maximum surface air temperature over the southeast United States. *J. Geophys. Res.*, **112**, D24102, doi:10.1029/2007JD008764.
- Xu, X., E.P. Chassignet, J.F. Price, T.M. Özgökmen, and H. Peters, 2007: A regional modeling study of the entraining Mediterranean outflow. *J. Geophys. Res.*, **112**, C12005, doi:10.1029/2007JC004145.
- Aretxabaleta, A., B.O. Blanton, H.E. Seim, F.E. Werner, J.R. Nelson, and E.P. Chassignet, 2007: Cold event in the South Atlantic Bight during summer of 2003: Model simulations and implications. *J. Geophys. Res.*, **112**, C05022, doi:10.1029/2006JC003903.
- Chassignet, E.P., H.E. Hurlburt, O.M. Smedstad, G.R. Halliwell, P.J. Hogan, A.J. Wallcraft, R. Baraille, and R. Bleck, 2007: The HYCOM (HYbrid Coordinate Ocean Model) data assimilative system. *J. Mar. Sys.*, **65**, 60–83.
- Xu, X., Y.S. Chang, H. Peters, T.M. Özgökmen, and E.P. Chassignet, 2006: Parameterization of gravity current entrainment for ocean circulation models using a high-order 3D nonhydrostatic spectral element model. *Ocean Modelling*, **14**, 19-44.
- Cherubin, L.M., Y. Morel, and E.P. Chassignet, 2006: Loop Current ring shedding: The formation of cyclones and the effect of topography. *J. Phys. Oceanogr.*, **36**, 569–591.
- Peng, G., E.P. Chassignet, E.P., Y.O. Kwon, and S.C. Riser, 2006: Investigation of variability of the North Atlantic Subtropical Mode Water using profiling float data and numerical model output. *Ocean Modelling*, **13**, 65-85.
- Rothstein, L.M., J.J. Cullen, M. Abott, E.P. Chassignet, K. Denman, S. Doney, H. Ducklow, K. Fennel, M. Follows, D. Haidvogel, E. Hoffman, D. Karl, J. Kindle, I. Lima, M. Maltrud, C. McClain, D. McGillicuddy, J. Olascoaga, J. Vincent, and J. Yoder, 2006: Modeling ocean ecosystems - the PARADIGM program. *Oceanography*, **19**, 16-45.
- Chassignet, E.P., H.E. Hurlburt, O.M. Smedstad, G.R. Halliwell, A.J. Wallcraft, E.J. Metzger, B.O. Blanton, C. Lozano, D.B. Rao, P.J. Hogan, and A. Srinivasan, 2006: Generalized vertical coordinates for eddy-resolving global and coastal ocean forecasts. *Oceanography*, **19**, 20-31.
- Chassignet, E.P., and J. Verron (Eds.), 2006: *Ocean Weather Forecasting: An Integrated View of Oceanography*, Springer, 577 pp.
- Chassignet E.P., H.E. Hurlburt, O.M. Smedstad, G.R. Halliwell, P.J. Hogan, A.J. Wallcraft, and R. Bleck, 2006: Ocean Prediction with the HYbrid Coordinate Ocean Model (HYCOM). In "*Ocean Weather Forecasting: An Integrated View of Oceanography*", E.P. Chassignet and J. Verron (Eds.), Springer, 413-426.

- Veneziani, M., A. Griffa, A.M. Reynolds, Z.D. Garraffo, and E.P. Chassignet, 2005: Parameterizations of Lagrangian spin statistics and particle dispersion in presence of coherent vortices. *J. Mar. Res.*, **63**, 1057-1083.
- Chassignet, E.P., H.E. Hurlburt, O.M. Smedstad, C.N. Barron, D.S. Ko, R.C. Rhodes, J.F. Shriver, A.J. Wallcraft, and R.A. Arnone, 2005: Assessment of ocean prediction systems in the Gulf of Mexico using ocean color. In *"Circulation in the Gulf of Mexico: Observations and models"*, W. Sturges and A. Lugo-Fernandez, Eds., AGU Monograph Series, **161**, 87-100.
- Veneziani, M., A. Griffa, Z.D. Garraffo, and E.P. Chassignet, 2005: Lagrangian spin parameter and coherent structures from trajectories released in a high-resolution ocean model. *J. Mar. Res.*, **63**, 753-788.
- Chang, Y.S., X. Xu, T.M. Özgökmen, E.P. Chassignet, H. Peters, and P.F. Fisher, 2005: Comparison of gravity currents mixing parameterizations and calibration using a high-resolution 3D nonhydrostatic spectral element model. *Ocean Modelling*, **10**, 342-368.
- Treguier, A.M., S. Theetten, E.P. Chassignet, T. Penduff, R. Smith, L. Talley, J.O. Beisman, and C. Boening, 2005: Salinity distribution and circulation of the North Atlantic subpolar gyre in high resolution models. *J. Phys. Oceanogr.*, **35**, 757-774.
- Cherubin, L.M., W. Sturges, and E.P. Chassignet, 2005: Deep flow variability in the vicinity of the Yucatan Straits from a high-resolution MICOM simulation. *J. Geophys. Res.*, **110**, C04009, doi:10.1029/2004JC002280.
- Hurlburt, H.E., J.F. Shriver, O.M. Smedstad, A.J. Wallcraft, R.A. Arnone, C.N. Barron, E.P. Chassignet, P.M. Flynn, D.-S. Ko, R.C. Rhodes, and L.F. Smedstad, 2005: Comparing ocean prediction system skill using ocean color. *NRL Review*, 207-212.
- Nauw, J.J., H.A. Dijkstra, and E.P. Chassignet, 2004: Frictionally induced asymmetries in wind-driven flows. *J. Phys. Oceanogr.*, **34**, 2057-2072.
- Foltz, G.R., J.A. Carton, and E.P. Chassignet, 2004: Tropical instability vortices in the Atlantic Ocean. *J. Geophys. Res.*, **109**, C03029, doi:10.1029/2003JC001942.
- Romanou, A., E.P. Chassignet, and W. Sturges, 2004: The Gulf of Mexico circulation within a high resolution numerical simulation of the North Atlantic Ocean. *J. Geophys. Res.*, **109**, C01003, doi:10.1029/2003JC001770.
- Garraffo, Z.D., W.E. Johns, E.P. Chassignet, and G.J. Goni, 2003: North Brazil Current rings and transport of southern waters in a high resolution numerical simulation of the North Atlantic. In *"Interhemispheric Water Exchange in the Atlantic ocean"*, G. Goni and P. Malanotte-Rizzoli (Eds.), Elsevier Oceanographic Series, 375-409.
- Chassignet, E.P., L.T. Smith, G.R. Halliwell, and R. Bleck, 2003: North Atlantic simulation with the HYbrid Coordinate Ocean Model (HYCOM): Impact of the vertical coordinate choice, reference density, and thermobaricity. *J. Phys. Oceanogr.*, **33**, 2504-2526.
- Bracco, A., E.P. Chassignet, Z.D. Garraffo, and A. Provenzale, 2003: Lagrangian velocity distributions in a high-resolution numerical simulation of the North Atlantic. *J. Oce. Atmos. Tech.*, **20**, 1212-1220.
- Papadakis, M., E.P. Chassignet, and R.W. Hallberg, 2003: Numerical simulations of the Mediterranean Sea outflow: Impact of the entrainment parameterization in an isopycnic coordinate ocean model. *Ocean Modelling*, **5**, 325-356.
- Visbeck, M., E.P. Chassignet, R. Curry, T. Delworth, R. Dickson, and G. Krahnman, 2002: The ocean's response to North Atlantic Oscillation variability. In *"The North Atlantic Oscillation: Climatic Significance and Environmental Impact"*, J.W. Hurrell, Y. Kushnir, G. Ottersem, and M. Visbeck (Eds.), AGU Monograph Series, **134**, 113-145.
- Özgökmen, T.M., E.P. Chassignet, 2002: A Numerical study of two-dimensional turbulent bottom gravity currents. *J. Phys. Oceanogr.*, **32**, 1460-1478.
- Paiva, A.M., and E.P. Chassignet, 2002: North Atlantic modeling of low-frequency variability in mode water formation. *J. Phys. Oceanogr.*, **32**, 2666-2680.
- Jacob, J.P., E.P. Chassignet, and W.K. Dewar, 2002: Influence of topography on the propagation of isolated eddies. *J. Phys. Oceanogr.*, **32**, 2848-2869.
- Özgökmen, T.M., E.P. Chassignet, and G.H. Rooth, 2001: On the connection between the Mediterranean outflow and the Azores Current. *J. Phys. Oceanogr.*, **31**, 461-480.
- Paiva, A.M., and E.P. Chassignet, 2001: The Impact of Surface Flux Parameterizations on the Modeling of the North Atlantic Ocean. *J. Phys. Oceanogr.*, **31**, 1860-1879..

- Garraffo, Z.D., A.J. Mariano, A. Griffa, C. Veneziani, and E.P. Chassignet, 2001: Lagrangian Data in a High Resolution Numerical Simulation of the North Atlantic. I: Comparison with *In-Situ* Drifter Data. *J. Mar. Sys.*, **29**, 157-176.
- Garraffo, Z.D., A. Griffa, A.J. Mariano, and E.P. Chassignet, 2001: Lagrangian data in a high resolution numerical simulation of the North Atlantic. II: On the pseudo-Eulerian averaging of Lagrangian data. *J. Mar. Sys.*, **29**, 177-200..
- Özgökmen, T.M., E.P. Chassignet, and C.G.H. Rooth, 2001: On the connection between the Mediterranean outflow and the Azores Current. *J. Phys. Oceanogr.*, **31**, 461-480.
- Griffies, S.M., C. Böning, F.O. Bryan, E.P. Chassignet, R. Gerdes, H. Hasumi, A. Hirst, A.-M. Treguier, and D. Webb, 2000: Developments in ocean climate modelling. *Ocean Modelling*, **2**, 461-480.
- Stammer, D., and E.P. Chassignet, 2000: Ocean State Estimation and Prediction in Support of Oceanographic Research. *Oceanography*, **13**, 51-56.
- Chassignet, E.P., and P. Malanotte-Rizzoli (Eds.), 2000: *Ocean Circulation Model Evaluation Experiments for the North Atlantic Basin*. Special issue of *Dyn. Atmos. Oceans.*, Elsevier Science Ltd., **32**, 155-432
- Paiva, A.M., E.P. Chassignet, and A.J. Mariano, 2000: Numerical Simulations of the North Atlantic Subtropical Gyre: Sensitivity to Boundary Conditions and Horizontal Resolution. *Dyn. Atmos. Oceans.*, **32**, 209-238.
- Chassignet, E.P., H. Arango, D. Dietrich, T. Ezer, M. Ghil, D.B. Haidvogel, C.-C. Ma, A. Mehra, A.M. Paiva, and Z. Sirkes, 2000: DAMÉE-NAB: The Base Experiments. *Dyn. Atmos. Oceans.*, **32**, 155-183.
- Smith, L.T., E.P. Chassignet, and R. Bleck, 2000: The Impact of Lateral Boundary Conditions and Horizontal Resolution on North Atlantic Water Mass Transformations and Pathways in an Isopycnic Coordinate Ocean Model. *J. Phys. Oceanogr.*, **30**, 137-159.
- Pratt, L.J., K.R. Helfrich, and E.P. Chassignet, 2000: Hydraulic adjustment to an obstacle in a rotating channel. *J. Fluid Mech.*, **404**, 117-149.
- Stern, M.E., and E.P. Chassignet, 2000: Mechanism of Eddy Separation from Coastal Currents. *J. Mar. Res.*, **58**, 1-27.
- Paiva, A.M., J.T. Hargrove, E.P. Chassignet, and R. Bleck, 1999: Turbulent Behavior of a Fine Mesh (1/12°) Numerical Simulation of the North Atlantic. *J. Mar. Sys.*, **21**, 307-320.
- Chin, T.M., A.J. Mariano, and E.P. Chassignet, 1999: Spatial Regression with Markov Random Fields for Kalman Filter Approximation in Least-squares Solution of Oceanic Data Assimilation Problems. *J. Geophys. Res.*, **104**, 7991-8014.
- Sun, S., R. Bleck, C.G. Rooth, J. Dukowicz, E.P. Chassignet, and P. Killworth, 1999: Inclusion of Thermobaricity in Isopycnic-Coordinate Models. *J. Phys. Oceanogr.*, **29**, 2719-2729.
- Chassignet, E.P., and J. Verron (Eds.), 1998: *Ocean Modeling and Parameterization*. Kluwer Academic Publishers, 451 pp.
- Özgökmen, T.M. and E.P. Chassignet, 1998: On the Emergence of Inertial Gyres in a Two-Layer Quasi-Geostrophic Ocean Model. *J. Phys. Oceanogr.*, **28**, 461-484.
- Stern, M.E., E.P. Chassignet, and J.A. Whitehead, 1997: The Wall Jet in a Rotating Fluid. *J. Fluid Mech.*, **335**, 1-28.
- Özgökmen, T.M., E.P. Chassignet, and A.M. Paiva, 1997: Impact of Wind Forcing, Bottom Topography and Inertia on Mid-latitude Jet Separation in a Quasi-geostrophic Model. *J. Phys. Oceanogr.*, **27**, 2460-2476.
- Griffa, A.C., E.P. Chassignet, V. Coles, and D.B. Olson, 1996: Inertial Gyre Solutions from a Primitive Equation Ocean Model. *J. Mar. Res.*, **54**, 1-26.
- Chassignet, E.P., L.T. Smith, R. Bleck, and F.O. Bryan, 1996: A Model Comparison: Numerical Simulations of the North and Equatorial Atlantic Ocean Circulation in Depth and Isopycnic Coordinates. *J. Phys. Oceanogr.*, **26**, 1849-1867.
- Chassignet, E.P., 1995: Vorticity Dissipation by Western Boundary Currents in the Presence of Outcropping Layers. *J. Phys. Oceanogr.*, **25**, 242-255.
- Chassignet, E.P., R. Bleck, and C.G.H. Rooth, 1995: The Influence of Layer Outcropping on the Separation of Boundary Currents. Part II: The Wind- and Buoyancy-driven Experiments. *J. Phys. Oceanogr.*, **25**, 2404-2422.
- O'Brien, E.W., and E.P. Chassignet, 1995: Extratropical Large-scale Air-Sea Interaction in a Coupled and Uncoupled Ocean-Atmosphere Model. *Climate Dyn.*, **12**, 53-65.

- Smith, L.T., E.P. Chassignet, and D.B. Olson, 1994: Wind-forced Variations in the Brazil-Malvinas Confluence Region as Simulated in a Coarse Resolution Numerical Model of the South Atlantic. *J. Geophys. Res.*, **99**, 5095-5117.
- Bleck, R., and E.P. Chassignet, 1994: Simulating the Oceanic Circulation with Isopycnic-Coordinate Models. In "*The Oceans: Physiochemical Dynamics and Resources*", S.K. Majumdar, E.W. Miller, G.S. Forbes, R.F. Schumalz, and A.A. Panah (Eds.), The Pennsylvania Academy of Science, 17-39.
- Chassignet, E.P., and R. Bleck, 1993: The Influence of Layer Outcropping on the Separation of Boundary Currents. Part I: The Wind-driven Experiments. *J. Phys. Oceanogr.*, **23**, 1485-1507.
- Sun, S., R. Bleck, and E.P. Chassignet, 1993: Layer Outcropping in Numerical Models of Stratified Flows. *J. Phys. Oceanogr.*, **23**, 1877-1884.
- Chassignet, E.P., 1992: Rings in Numerical Models of Ocean General Circulation: A Statistical Study. *J. Geophys. Res.*, **97**, 9479-9492.
- Chassignet, E.P., W.R. Holland, and A. Capotondi, 1992: Impact of the Altimeter Orbit on the Reproduction of Oceanic Rings: Application to a Regional Model of the Gulf Stream. *Oceanologica Acta*, **15**, 479-490.
- Chassignet, E.P., and B. Cushman-Roisin, 1991: On the Influence of a Lower Layer on the Propagation of Nonlinear Oceanic Eddies. *J. Phys. Oceanogr.*, **21**, 939-957.
- Chassignet, E.P., and P.R. Gent, 1991: The Influence of Boundary Conditions on Mid-latitude Jet Separation in Ocean Numerical Models. *J. Phys. Oceanogr.*, **21**, 1290-1299.
- Cushman-Roisin, B., E.P. Chassignet, and B. Tang, 1990: Westward Motion of Mesoscale Eddies. *J. Phys. Oceanogr.*, **20**, 7558-768.
- Chassignet, E.P., D.B. Olson, and D.B. Boudra, 1990: Motion and Evolution of Rings in a Numerical Model and in Observations. *J. Geophys. Res.*, **95**, 22121-22140.
- Boudra, D.B., K.A. Maillet, and E.P. Chassignet, 1989: Numerical Modeling of Agulhas Retroflexion and Ring Formation with Isopycnal Outcropping. In *Mesoscale/Synoptic Coherent Structures in Geophysical Turbulence*, Nihoul and Jamart (Eds.), Elsevier Oceanography Series, **50**, 315-336.
- Chassignet, E.P., D.B. Olson, and D.B. Boudra, 1989: Evolution of Rings in Numerical Models and Observations. In "*Mesoscale/Synoptic Coherent Structures in Geophysical Turbulence*", J. Nihoul and B. Jamart (Eds.), Elsevier Oceanography Series, **50**, 337-356.
- Boudra, D.B., and E.P. Chassignet, 1988: Dynamics of Agulhas Retroflexion and Ring Formation in a Numerical Model. Part I. The Vorticity Balance. *J. Phys. Oceanogr.*, **18**, 280-303.
- Chassignet, E.P., and D.B. Boudra, 1988: Dynamics of Agulhas Retroflexion and Ring Formation in a Numerical Model. Part II. Energetics and Ring Formation. *J. Phys. Oceanogr.*, **18**, 304-319.
- Chassignet, E.P., and D.B. Boudra, 1987: Dynamics of Agulhas Retroflexion and Ring Formation in a Quasi-isopycnic Coordinate Numerical Model. In "*Three-dimensional Models of Marine and Estuarine Dynamics*", J. Nihoul and B. Jamart (Eds.), Elsevier Oceanography Series, **45**, 169-194.