

The following will need to be updated at the time of publication:

Davies, Wahlin, et al. 2006; Rabe et al. 2006; Princevac et al. 2005; Girton, Pratt and Sutherland (2006);

The following needs to be updated now.

Astraldi, et al. recent jpo; Baines and Leonard

Abbott, M. B. 1961. On the spreading of one fluid over another. part ii. The wave front. *La Houille Blanche* **6**, 827-846.

Alavian, V. 1986. Behavior of density currents on an incline. *J. Hydraul. Eng.* **112**, 27-42.

Armi, L. 1986. The hydraulics of two flowing layers of different densities. *J. Fluid Mech.*, **163**, 27-58.

Armi, L. 1989. Hydraulic control of zonal currents on a β -plane. *J. Fluid Mech.* **201**, 357-377.

Armi, L., and D. M. Farmer 1986. Maximal two-layer exchange through a contraction with barotropic net flow. *J. Fluid Mech.* **164**, 27-51.

Armi, L. and D. M. Farmer 1987. A generalization of the concept of maximal exchange in a strait. *J. Geophys. Res.* **92**, 14679-80.

Armi, L. and D. M. Farmer 1988. The flow of Mediterranean water through the Strait of Gibraltar. *Progress in Oceanography*, **21**, 1-105.

Assaf G. and A. Hecht 1974. Sea straits: A dynamic model. *Deep-Sea Res.* **21**, 947-958.

Astraldi, M., G.P. Gasparini, L. Gervasio, and E. Salusti 200? . Dense water dynamics along the strait of sicily (Mediterranean Sea). *J. Phys. Oceanogr.* , ??????

Baines, P. G. 1984. A unified description of two-layer flow over topography. *J. Fluid Mech.* **146**, 127-167.

Baines, P. G. 1987. Upstream blocking and airflow over mountains. *Ann. Rev. Fluid Mech.* **19**, 75-97.

Baines, P. G. 1995 *Topographic Effects in Stratified Flows*. Cambridge University Press, 482 pp.

Baines P. G. and J. A. Whitehead 2003. On multiple states in single-layer flows, *Phys Fluids*. **15**, 298-307.

Batchelor, G. K. 1964 *An Introduction to Fluid Dynamics*. Cambridge University Press, 615 pp.

Beardsley, R. C., Dorman, C. E., Rosenfeld, L. and Winant, C. D. 1987. Local atmospheric forcing during the coastal ocean dynamics experiment 1. A description of the marine boundary layer and atmospheric conditions over a northern California upwelling region. *J. Geophys. Res.* **92**, 1467-1488.

Benjamin, T. B. 1968. Gravity currents and related phenomena. *J. Fluid Mech.* **80**, 641-671.

Benjamin, T. B. 1970. Upstream influence. *J. Fluid Mech.* **40**, 49-79.

Benjamin, T. B. 1971. A unified theory of conjugate flows. *Phil. Trans. R. Soc. Lond.* **A269**, 587-647.

Benjamin, T. B. 1981. Steady flows drawn from a stably stratified reservoir. *J. Fluid Mech.* **106**, 245-260.

Bennett, J. R. 1973. A Theory of Large-Amplitude Kelvin Waves. *J. Phys. Oceanogr.* **3**, 57-60.

Blumen, W. 1972 Geostrophic Adjustment. *Rev. Geophys. Space Phys.* **10**, 485-528.

Borenäs, K. M., Lundberg, P. A. 1986. Rotating hydraulics of flow in a parabolic channel. *J. Fluid Mech.* **167**, 309-26.

Borenäs, K. M., P. A. Lundberg 1988. On the deep-water flow through the Faroe Bank Channel. *J. Geophys. Res.* **93**(C2), 1281-92.

Borenäs, K. M., P. A. Lundberg 1990. Some questions arising from the application of hydraulic theory to the Faroe Bank Channel deep-water flow. *Pure Appl. Geophys.*, **133**, 574-585.

Borenäs, K. M., A. Nikolopoulos 2000. Theoretical calculations based on real topography of the maximum deep-water flow through the Jungfern passage. *Journal of Marine Research*, **58** 709-719.

Borenäs, K. M. and L. J. Pratt 1994. On the use of Rotating Hydraulic Models. *J. Phys. Oceanogr.* **24**, 108-123.

Borenäs, K. M. and J. A. Whitehead 1998. Upstream separation in a rotating channel flow. *J. Geophys. Res.* **103**, C4, 7567-7578.

- Bormans, M. and C. Garrett 1989. The effects of nonrectangular cross section, friction, and barotropic fluctuations on the exchange through the Strait of Gibraltar. *J. Phys. Oceanogr.* **19**, 1543-1557.
- Bormans, M. and C. Garrett 1989. A simple criterion for gyre formation by the surface outflow from a strait, with applications to the Alboran Sea. *J. Geophys. Res.* **94**, 12,637-12,644.
- Broecker, WS, 1991. The great ocean conveyor belt. *Oceanography*, **4**, 79 - 89.
- Bryden, H. L. and T. H. Kinder 1991. Steady two-layer exchange through the Strait of Gibraltar. *Deep-Sea Res.*, **38 (Suppl. 1)**, S445-S463.
- Bryden, H. L. and H. M. Stommel 1984. Limiting processes that determine basic features of the circulation in the Mediterranean Sea. *Oceanologica Acta*, **7**, 289-296.
- Burk, S. D., T. Haack and R. M. Samelson 1999. Mesoscale Simulation of Supercritical, Subcritical and Transcritical Flow and Coastal Topography. *J. Atmos. Sci.* **58**, 2780-2795.
- Bye, John A. T. and J. A. Whitehead, Jr. 1975. A theoretical model of the flow in the mouth of Spencer Gulf, South Australia. *Estuarine and Coastal Marine Science*, **3**, 477-481.
- Cahn, A. 1945. An Investigation of the free oscillations of a simple current system. *J. Met.* **2**, 113-199.
- Cenedese, C., J. A. Whitehead, T. A. Ascarelli and M. Ohiwa, M. 2004. A dense current flowing down a sloping bottom in a rotating fluid. *J. Fluid Mech.* **34**, 188-203.
- Charney, J. G. 1955. The Gulf Stream as an inertial boundary layer. *Proc. Nat. Acad. Sci.*, **41**, 731-740.
- Charney, J. G. and M. Stern 1962. On the stability of internal baroclinic jets in a rotating atmosphere. *J. Atmos. Sci.* **19**, 159-172.
- Chow, V. T. 1959. *Open Channel Hydraulics*. McGraw-Hill, New York, 680pp.
- Christodoulou, G. C. 1986. Interfacial mixing in stratified flows. *J. Hydr. Res.* **24**, 77-92.
- Cole, S. L. 1985. Transient waves produced by flow past a bump. *Wave Motion* **7**, 579-587.
- Collings, I. L. and R. Grimshaw 1980. The effect of topography on the stability of a barotropic coastal current. *Dyn. Atmos. Ocean.* **5**, 83-106.
- Courant, R. and K. O. Friedrichs 1976. *Supersonic Flow and Shock Waves*. Interscience, 464 pp.

- Csanady, G. T. 1978. The arrested topographic wave. *J. Phys. Oceanogr.* **8**, 47-62.
- Crease, J. 1965. The flow of Norwegian Sea water through the Faroe Channel. *Deep-Sea Res.* **12**, 143-50.
- Crocco, L. 1937. Eine neue Stromfunktion für die Erforschung der Bewegung der Gas mit Rotation. *Zeits. f angew. Math. u. Mech.* **17**,1.
- Cushman-Roisin, B. 1994 *Introduction to Geophysical Fluid Dynamics*, Prentice-Hall, 320 pp.
- Cushman-Roisin, B., L. Pratt and E. Ralph 1993 A General Theory for Equivalent Barotropic Thin Jets. *J. Phys. Oceanogr.* **23**, 92-103.
- Dale, A. C. and J. A. Barth 2001. The hydraulics of an Evolving Upwelling Jet Flowing Around a Cape. *J. Phys. Oceanogr.* **31**, 226-243.
- Dalziel, S. B. 1988 *Two-layer hydraulics: maximal exchange flows*, PhD thesis. Univ. Cambridge, Engl.
- Dalziel, S. B. 1990. Rotating two-layer sill flows. In *The Physical Oceanography of Sea Straits. NATO-ASI Ser.*, ed. L. J. Pratt. Dordrecht: Kluwer. 587 pp.
- Dalziel, S.B. 1991. Two-layer hydraulics: a functional approach. *J. Fluid Mech.* **223**, 135-163.
- Dalziel, S. B. 1992 Maximal Exchange in Channels with Nonrectangular Cross Sections. *J. Phys. Oceanogr.* **22**, 1188-1206.
- Davies, P. A., Y. Guo, and E. Rotenberg 2002 Laboratory model studies of Mediterranean outflow adjustment in the Gulf of Cadiz. *Deep-Sea Res. II*, **49**, 4207-4223.
- Davies, P. A., A. K. Wåhlin, and Y. Guo. 2006 Laboratory and analytical model studies of the Faroe Bank Channel deep water overflow. *J. Phys. Oceanogr.* (in press).
- Dickson, R. R., E. M. Gmitrowicz, and A. J. Watson 1990. Deep water renewal in the northern Atlantic, *Nature*, **344**, 848-850.
- Dorman, C. E. 1987. Possible role of gravity currents in northern California's coastal summer wind reversals. *J. Geophys. Res.* **92**, 1497-1506.
- Dorman, C. E. 1985. Evidence of Kelvin Waves in California's Marine Layer and Related Eddy Generation. *Monthly Weather Review*, **113**, 828-839.

- Dorman, C.E., D. P. Rogers, W. Nuss and W. T. Thompson, 1999. Adjustment of the Summer Marine Boundary Layer Around Pt. Sur, California. *Monthly Weather Review*, **127**, 2143-2159.
- Drazin, P. G. and W. H. Reid 1981. *Hydrodynamic Instability*. Cambridge University Press, 527 pp.
- Dyer, K. R., 1997. *Estuaries, A Physical Introduction*, 2nd Edition. John Wiley & Sons, Chichester, 195 pp.
- Eady, E. T. 1949. Long waves and cyclone waves. *Tellus* **1**, 33-52.
- Edwards, K. A., P. MacCready, J. N. Moum, G. Pawlak, J. M. Klymak, and A. Perlin. 2004. Form Drag and Mixing Due to Tidal Flow past a Sharp Point. *J. Phys. Oceanogr.* **34**, 1297-1312.
- Edwards, K. A., A. M. Rogerson, C. D. Winant and D. P. Rogers, 2001. Adjustment of the marine atmospheric boundary layer to a coastal cape. *J. Atmos. Sci.* **58**, 1511-1528.
- Ellison, T. H. and J. S. Turner 1959. Turbulent entrainment in stratified flows. *J. Fluid Mech.* **6**, 423-448.
- Farmer, D. M. and L. Armi 1986. Maximal two-layer exchange flow over a sill and through a combination of a sill and contraction with barotropic flow. *J. Fluid Mech.* **164**, 53-76.
- Farrell, B. F. and P. J. Ioannou 1996. Generalized Stability Theory. Part I: Autonomous Operators. *J. Atmos. Sci.*, **53**, 2025-2040.
- Finnigan, T. D. and G. N. Ivey 1999. Submaximal exchange between a convectively forced basin and a large reservoir. *J. Fluid Mech.* **378**, 357-378.
- Finnigan, T. D. and G. N. Ivey 2000. Convectively driven exchange flow in a stratified sill-enclosed basin. *J. Fluid Mech.* **418**, 313-338.
- FjØrft, R. 1950. Application of integral theorems in deriving criteria of stability for laminar flows and for the baroclinic circular vortex. *Geophys. Publ.* **17**, 1-52.
- Fofonoff, N. P. 1954. Steady flow in a frictionless homogeneous ocean. *J. Marine. Res.* **13**, 254-262.
- Fornberg, B. and G. B. Whitham 1978. A numerical and theoretical study of certain nonlinear wave phenomena. *Phil. Trans. Roy. Soc. A* **289**, 373-404.

- Fratantoni, D. M., R. J. Zantopp, W. E. Johns, and J. L. Miller 1997. Updated bathymetry of the Aneгада-Jungfern Passage complex and implications for Atlantic inflow to the abyssal Caribbean Sea. *J. Marine Res.* **55**, 847-860.
- Freeman, N. C. and R. S. Johnson 1970. Shallow water waves on shear flows. *J. Fluid Mech.* **42**, 401-409.
- Garrett, C. (2004) Frictional processes in straits. *Deep-Sea Res. II*, **51**, 393-410.
- Garrett, C. and F. Gerdes 2003. Hydraulic control of homogeneous shear flows. *J. Fluid Mech.* **475**, 163-172.
- Garvine, R. W. 1981. Frontal jump conditions for models of shallow, buoyant surface layer hydrodynamics. *Tellus* **33**, 301-312.
- Garvine, R. W. 1987. Estuary Plumes and Fronts in Shelf Waters: A Layer Model. *J. Phys. Oceanogr.* **17**, 1877-1896.
- Gerdes, F., C. Garrett, and D. Farmer 2002. On internal hydraulics with entrainment. *J. Phys. Oceanogr.* **32**, 1106-1111.
- Gill, A. E. 1976. Adjustment under gravity in a rotating channel. *J. Fluid Mech.* **77**, 603-621.
- Gill, A. E. 1977. The hydraulics of rotating-channel flow. *J. Fluid Mech.* **80**, 641-71.
- Gill, A. E. 1982. *Atmosphere-Ocean Dynamics*, Academic Press, San Diego 662 pp.
- Gill, A. E. and E. H. Schumann 1979. Topographically induced changes in the structure of an inertial jet: application to the Agulhas Current. *J. Phys. Oceanogr.* **9**, 975-991.
- Girton, J. B., T. B. Sanford, and R. H. Käse 2001. Synoptic sections of the Denmark Strait Overflow, *Geophys. Res. Lett.*, **28**, 1619-1622.
- Girton, J. B., L. J. Pratt, D. A. Sutherland and J. F. Price 2006. Is the Faroe Bank Channel Overflow Hydraulically Controlled. *J. Phys. Oceanogr.* (in press).
- Greenspan, H. P. 1968 *The Theory of Rotating Fluids*. Cambridge University Press, 327 pp.
- Gregg, M.C. and E. Özsoy 2002. Flow, water mass changes, and hydraulics in the Bosphorus, *J. Geophys. Res.*, 107, 10.1029/2000JC000485.
- Griffiths, R. W. 1986 Gravity currents in rotating systems. *Ann. Rev. Fluid Mech.* **18**, 59-86.

- Griffiths, R. W. and Hopfinger, E. J. 1983. Gravity currents moving along a lateral boundary in a rotating fluid. *J. Fluid Mech.* **134**, 357-399.
- Griffiths, R. W., P. D. Killworth and M.E. Stern 1982. Ageostrophic instability of ocean currents. *J. Fluid Mech.* **117**, 343-377.
- Grimshaw, R. H. J. 1987. Resonant Forcing of Barotropic Coastally Trapped Waves. *J. Phys. Oceanogr.*, **17**, 53-65.
- Grimshaw, R. H. J. and Z. Lee 1990. Finite-amplitude long waves on coastal currents. *J. Phys. Oceanogr.* **20**, 3-18.
- Grimshaw, R. H. J. and N. Smyth 1986. Resonant flow of a stratified fluid over topography. *J. Fluid Mech.* **169**, 429-464.
- Hacker, J. N. and P. F. Linden 2002. Gravity currents in rotating channels. Part 1. Steady-state theory. *J. Fluid Mech.* **457**, 295-324.
- Hall, M., M. McCartney, and J. A. Whitehead 1997. Antarctic Bottom Water flux in the equatorial western Atlantic, *J. Phys. Oceanogr.*, **27**, 1903-1926.
- Hannah, C. G. 1992. Geostrophic Control with Wind Forcing: Application to the Bass Strait. *J. Phys. Oceanogr.* **22**, 1596-1599.
- Hansen, G., W.R. Turnbull, and S. Østerhus 2001. Decreasing overflow from the Nordic Seas through the Atlantic Ocean through the Faroe Bank Channel since 1950. *Nature*, **411**, 927-930.
- Hayashi, Y.-Y. and W. R. Young 1987. Stable and unstable shear modes of rotating parallel flows in shallow water. *J. Fluid Mech.* **184**, 477-504.
- Haynes, P. H., E. R. Johnson, and R. G. Hurst 1993. A simple model of Rossby-wave hydraulic behavior. *J. Fluid Mech.* **253**, 359-384.
- Helfrich, K. R., A. C. Kuo and L. J. Pratt 1999. Nonlinear Rossby adjustment in a channel. *J. Fluid Mech.* **390**, 177-222.
- Helfrich, K. R. and J. C. Mullarney 2005. Gravity currents from a dam-break in a rotating channel. *J. Fluid Mech.* **536**, 253-283.
- Helfrich, K. R. and L. J. Pratt 2003. Rotating Hydraulics and Upstream Basin Circulation. *J. Phys. Oceanogr.* **33**, 1651-1663.
- Henderson, F. M. 1966. *Open Channel Flow*. Macmillan. 522 pp.

- Herman, A.J., P.B. Rhines and E.R. Johnson 1989. Nonlinear Rossby adjustment in a channel: beyond Kelvin waves. *J. Fluid Mech.* **205**, 469-502.
- Hogg, A. McC. and G. O. Hughes 2006. Shear flow and viscosity in single-layer hydraulics. *J. Fluid Mech.* **548**, 431-443.
- Hogg, N. G. 1983. Hydraulic control and flow separation in a multi-layered fluid with application to the Vema Channel. *J. Phys. Oceanogr.* **13**, 695-708.
- Hogg, N. J. 1989. Finite-amplitude effects on deep planetary circulation over topography. *J. Phys. Oceanogr.* **19**, 1697-1706.
- Hogg, N. G., P. Biscaye, W. Gardner, W. J. Schmitz, 1982. On the transport and modification of Antarctic Bottom Water in the Vema Channel. *J. Mar. Res. (Supp.)* **40**, 231-63.
- Hogg, Nelson G., G. Siedler, and W. Zenk 1999. Circulation and variability at the Southern Boundary of the Brazil Basin, *J. Phys. Oceanogr.*, **29**, 145-157.
- Holland, D. M. Rosales, R.R., Stefanica, D. and Tabak, E.G. 2002. Internal Hydraulic Jumps and Mixing in Two-Layer Flows" *J. Fluid Mech.*, **470**, 63-38.
- Houghton, D. D. 1969 Effect of rotation on the formation of hydraulic jumps. *J. Geophys. Res.* **74**, 1351-60.
- Houghton, D. D. and E. Isaacson 1970. Mountain winds. *Stud. Numer. Anal.* **2**, 21-52.
- Howard, L. N. 1961. Note on a paper of John W. Miles. *J. Fluid Mech.* **10**, 509-512.
- Hughes, R. L. 1985a. On inertial currents over a sloping continental shelf. *Dyn. Atmos. Oceans* **9**, 49-73.
- Hughes, R. L. 1985b. Multiple criticalities in coastal flows. *Dyn. Atmos. Oceans* **9**, 321-340.
- Hughes, R. L. 1986a. On the role of criticality in coastal flows over irregular bottom topography. *Dyn. Atmos. Oceans* **10**, 129-147.
- Hughes, R. L. 1986b. On the conjugate behaviour of weak along-shore flows. *Tellus* **38A**, 277-284.
- Hughes, R. L. 1987. The role of the higher shelf modes in coastal hydraulics. *J. Mar. Res.* **45**, 33-58.
- Hughes, R. L. 1989. The hydraulics of local separation in a coastal current, with application to the Kuriosho meander. *J. Phys. Oceanogr.* **19**, 1809-1820.

- Hunkins, K. and J. A. Whitehead 1992. Laboratory Simulation of Exchange Through Fram Strait. *J. Geophys. Res.* **97** (C7) 11,299-11,321.
- Iacono, R. 2006. Critical flow solution to Gill's model of rotating channel hydraulics. *J. Fluid Mech.*, **552**, 381-392.
- Jiang, Q. and R. B. Smith 2001a. Ideal shocks in two-layer flow. Part I: Under a rigid lid. *Tellus, A*, **53**, 129-145.
- Jiang, Q. and R. B. Smith 2001b. Ideal shocks in two-layer flow. Part II: Under a passive layer. *Tellus, A*, **53**, 146-167.
- Johnson, E. R. and S. R. Clarke 1999. Dispersive effects in Rossby-wave hydraulics. *J. Fluid Mech.* **401**, 27-54.
- Johnson, E. R. and S. R. Clarke 2001. Rossby Wave Hydraulics. *Annu. Rev. Fluid Mech.* **33**, 207-230.
- Johnson, G. C. and T. B. Sanford 1992. Secondary circulation in the Faroe Bank Channel Outflow. *J. Phys. Oceanogr.* **22**, 927-933.
- Johnson, G. C. and Ohlsen D. R. 1994. Frictionally Modified Rotating Hydraulic Channel Exchange and Ocean Outflows. *J. Phys. Oceanogr.* **24**, 66-78.
- Jonsson, S. and H. Valdimarsson 2004. A new path for the Denmark Strait Overflow Water from the Iceland Sea to Denmark Strait. *Geophys. Res. Lett.* **31**, L03305, doi:10.1029/2003GL019214, 2004.
- Jungclauss, J. H., J. Hauser, and R. Käse, 2001. Cyclogenesis in the Denmark Strait overflow plume. *J. Phys. Oceanogr.*, **31**, 3214– 3229.
- Käse, R. H. and Andreas Oschlies 2000. Flow through Denmark Strait. *J. of Geophys. Res.*, **105** (C12), 28,527-28,546.
- Kelvin, Lord 1879. *Proc. Roy. Soc. Edin.* **10**, 92. (Also see *Phil. Mag.* **10** (1980), 97; *Math. Phys. Papers*, vol. IV, p. 141, Cambridge University Press 1910.)
- Killworth, P.D. 1977. Mixing on the Weddell Sea continental slope. *Deep-Sea Res.* **24**, 427-448.
- Killworth, P. D. 1992. Flow properties in rotating, stratified hydraulics. *J. Phys. Oceanogr.* **22**, 997-1017.
- Killworth, P. D. 1994. On Reduced-Gravity Flow Through Sills. *Geophys. Astrophys. Fluid Dynamics* **75**, 91-106.

Killworth, P. D. and N. R. McDonald 1993. Maximal Reduced-Gravity Flux in Rotating Hydraulics. *Geophys. Astrophys. Fluid Dynamics* **70**, 31-40.

Klemp, J. B., R. Rotunno and W. K. Skamarock 1994. On the dynamics of gravity currents in a channel. *J. Fluid Mech.* 269, 169-198.

Klemp, J. B., R. Rotunno and W. K. Skamarock 1997. On the propagation of internal bores. *J. Fluid Mech.* 331, 81-106.

Klinger, B. A. 1994. Inviscid Separation from Rounded Capes. *J. Phys. Oceanogr.* **24**, 1805-1811.

Kösters, F. 2004. Denmark Strait overflow: Comparing model results and hydraulic transport estimates. *J. of Geophys. Res.*, **109**, (C10), doi:10.1029/2004JC002297.

Krauss, W. and R. H. Käse, 1998. Eddy formation in the Denmark Strait overflow, *J. Geophys. Res.*, **103** (C8), 15,525-15,538.

Kubokawa A. and K. Hanawa 1984a. A theory of semigeostrophic gravity waves and its application to the intrusion of a density current along a coast. Part 1. Semigeostrophic gravity waves. *J. Oceanographical Society of Japan*, **40**, 247-259.

Kubokawa A. and K. Hanawa 1984b. A theory of semigeostrophic gravity waves and its application to the intrusion of a density current along a coast. Part 2. Intrusion of a density current along a coast of a rotating fluid. *J. Oceanographical Society of Japan*, **40**, 260-270.

Lacombe H. and C. Richez 1982. The regime of the Strait of Gibraltar. In: *Hydrodynamics of semi-enclosed seas*. J.C.J. Nihoul, editor, Elsevier, Amsterdam, 13-73.

Lake, I., K. M. Borenäs, and P. A. Lundberg 2005. Potential-vorticity characteristics of the Faroe-Bank Channel deep-water overflow. *J. Phys. Oceanogr.* **35**, 921-932.

Lamb, H. 1932 *Hydrodynamics*, 6th edn. Cambridge University Press.

Laanearu, J. 2001. Topographically constrained deep-water flows in channels (rotating-channel flow modeling, Baltic straits overflows.) Ph. D. Dissertation, University of Tartu, 59pp.

Lane-Serff, G. F., D. A. Smeed and C. R. Postlethwaite 2000. Mult-layer hydraulic exchange flows. *J. Fluid Mech.* **416**, 269-296.

Lawrence, G. A. 1990. On the hydraulics of Boussinesq and non-Boussinesq two-layer flows. *J. Fluid Mech.* **215**, 457-480.

- Lawrence G. A. 1993. The hydraulics of steady two-layer flow over a fixed obstacle. *J. Fluid Mech.* **254**, 605-633.
- Lipps, F. B. 1963. Stability of jets in a barotropic, divergent fluid. *J. Atmos. Sci.* **20**, 120-129.
- Long, R. R. 1954. Some aspects of the flow of stratified fluids. II. Experiments with a two-fluid system. *Tellus* **6**, 97-115.
- Long, R. R. 1955. Some aspects of the flow of stratified fluids. III. Continuous density Gradients. *Tellus* **7**, 341-357.
- Long, R. R. 1970. Blocking effects in flow over obstacles. *Tellus* **22**, 471-80.
- MacCready, Parker, W. E. Johns, C. G. Rooth, D. M. Fratantoni, and R. A. Watlington, 1999. Overflow into the Deep Caribbean Effects of plume variability, *J. of Geophys. Research*, **104**, C11, 25913-25935.
- Martin, J. R. and G. F. Lane-Serff 2005. Rotating gravity currents. Part 1. Energy loss theory. *J. Fluid Mech.* **522**, 35-62.
- Martin, J. R., D. A. Smeed and G. F. Lane-Serff 2005. Rotating gravity currents. Part 2. Potential vorticity theory. *J. Fluid Mech.* **522**, 63-89.
- Mauritzen, C., J. Price, T. Sanford, D. Torres 2005. Circulation and mixing in the Faroese Channels. *Deep-Sea Research*, I, 52, 883-913.
- McCartney, M. S., S. L. Bennett, and M. E. Woodgate-Jones, Eastward flow through the Mid-Atlantic Ridge at 118N and its influence on the abyss of the eastern basin, *J. Phys. Oceanogr.*, **21**, 1089-1120, 1991.
- McClimans, T.A., 1994. Entrainment/detrainment along river plumes. in *Recent research advances in the fluid mechanics of turbulent jets and plumes*. Eds. P.A. Davies and M.J. Valente Neves. Kluwer Academic Publishers. Dordrecht. pp. 391-400.
- McIntyre, M. E. 1972. On Long's hypothesis of no upstream influence in uniformly stratified or rotating flow. *J. Fluid Mech.* **52**, 209-243.
- Mercier, H. and Kevin G. Speer 1998. Transport of Bottom Water in the Romanche Fracture Zone and the Chain Fracture Zone, *J. Phys. Oceanog.* **28**, 779-790.
- Middleton, J. F. and F. Viera, 1991. The forcing of low frequency motions within the Bass Strait. *J. Phys. Oceanogr.*, **21**, 695-708.

- Munchow, A. and R. W. Garvine 1993. Dynamical properties of a buoyancy-driven coastal current. *J. Geophys. Res.* **98**, 20063-20077.
- Nielsen, M. H., L. J. Pratt and K. R. Helfrich 2004. Mixing and entrainment in hydraulically-driven, stratified sill flows. *J. Fluid Mech.* **515**, 415-443.
- Nielson, J. N. 1912. Hydrography of the Mediterranean and adjacent waters. *Report on the Danish Oceanographical Expeditions 1908-1910*, **1**, 77-191.
- Nikolopoulos, A., K. Borenäs, R. Hietala and P. A. Lundberg 2003. Hydraulic Estimates of Denmark Strait Overflow. *J. Geophys. Res.* **108** C3 3095, doi:10.1029/2001JC001283.
- Niiler, P. P. and L. A. Mysak 1971. Barotropic waves along an eastern continental shelf. *Geophys. Fluid Dyn.* **2**, 273-288.
- Nof, D. 1983. The translation of isolated cold eddies on a sloping bottom. *Deep-Sea Research*, **30**, 171-182.
- Nof, D. 1984. Shock waves in currents and outflows. *J. Phys. Oceanogr.* **14**, 1683-1702.
- Nof, D. 1986. Geostrophic shock waves. *J. Phys. Oceanogr.* **16**, 886-901.
- Nof, D. 1987. Penetrating outflows and the dam-break problem. *J. Marine Res.* **45**, 557-577.
- Ocean Circulation and Climate: Observing and Modeling the Global Ocean.* (ed. G. Siedler, J. Church and J. Gould), 2001, Academic Press, 715pp.
- Ou, H.-S. and P. M. De Ruijter 1986. Separation of an inertial boundary current from a curved coastline. *J. Phys. Oceanogr.* , **16**, 280-289.
- E. Özsoy, A. Hecht, Ü. Ünlüata, S. Brenner, H. I. Sur, J. Bishop, M. A. Latif, Z. Roentraub and T. Oguz 1993. A synthesis of the Levantine Basin circulation and hydrography, 1985–1990. *Deep Sea Research II*, **40**, 6, 1075-1119.
- Paldor, N. 1983 Stability and Stable Modes of Coastal Fronts. *Geophys. Astrophys. Fluid Dyn.* **27**, 217-218.
- Pedlosky, J. 1968. An overlooked aspect of the wind-driven oceanic circulation. *J. Fluid Mech.* **43**, 809-821.
- Pedlosky, J. 1987. *Geophysical Fluid Dynamics*. Springer-Verlag, New York, 710 pp.
- Pedlosky, J. 1996. *Ocean Circulation Theory*, Springer-Verlag, 453 pp.

- Pedlosky, J. 2003. *Waves in the Ocean and Atmosphere: Introduction to Wave Dynamics*. Springer-Verlag, 260 pp.
- Peregrin, D. H. 1968. Calculations of the development of an undular bore. *J. Fluid Mech.* **25**, 321-330.
- Perlin, N. R. M. Samelson, and D. B. Chelton 2004. Scatterometer and model wind and wind stress in the Oregon-northern California coastal zone. *Monthly Weather Review*, **132**, 2110-2129.
- Phillips, O. M. 1966. On turbulent convection currents and the circulation of the Red Sea. *Deep-Sea Res.* **13**, 1147-1160.
- Poincaré, S. 1910 *Théorie des Marées. Lecons de Mécanique Celeste*, vol. 3, Paris: Gauthier-Villars.
- Pratt, L. J. 1983a. A note on nonlinear flow over obstacles. *Geophys. Astrophys. Fluid Dyn.* **24**, 63-68.
- Pratt, L. J. 1983b. On inertial flow over topography. Part 1. Semigeostrophic adjustment to an obstacle. *J. Fluid Mech.* **131**, 195-218.
- Pratt, L. J. 1984a. On inertial flow over topography. Part 2. Rotating channel flow near the critical speed. *J. Fluid Mech.* **145**, 95-110
- Pratt, L. J. 1984b. A time-dependent aspect of hydraulic control in straits. *J. Phys. Oceanogr.* **14**, 1414-18.
- Pratt, L. J. 1984c. On nonlinear flow with multiple obstructions. *J. Atmos. Sci.* **41**, 1214-25.
- Pratt, L. J. 1986. Hydraulic control of sill flow with bottom friction. *J. Phys. Oceanogr.* **16**, 1970-80.
- Pratt, L. J. 1987. Rotating shocks in a separated laboratory channel flow. *J. Phys. Oceanogr.* **17**, 483-91.
- Pratt, L. J. 1989. Critical control of zonal jets by bottom topography. *J. Mar. Res.* **47**, 111-130.
- Pratt, L.J. 1991. Geostrophic Versus Critical Control in Straits. *J. Phys. Oceanogr.* **21**, 728-732.
- Pratt, L. J. 1997. Hydraulically Drained Flows in Rotating Basins. Part I: Steady Flows. *J. Phys. Oceanogr.* **27**, 2522-2535.

- Pratt, L. J., Armi, L. 1987 Hydraulic control of flows with nonuniform potential vorticity. *J. Phys. Oceanogr.* **17**, 2016-29.
- Pratt, L. J. and L. Armi. 1990 Two-layer rotating hydraulics: strangulation, remote and virtual controls. *Pure Appl. Geophys.* **133**(4), 587-617.
- Pratt, L. J. and M. Chechelnitsky 1997. Principles for capturing the upstream effects of deep sills in low resolution ocean models. *Dynamics of Atmospheres and Oceans* **26**, 1-25.
- Pratt, L. J., H. E. Deese, S. P. Murray and W. Johns 2000. Continuous Dynamical Modes in Straits Having Arbitrary Cross sections, with Applications to the Bab al Mandab. *J. Phys. Oceanogr.* **30**, 2515-2534.
- Pratt, L. J. and K. R. Helfrich 2005. Generalized Conditions for Hydraulic Criticality of Oceanic Overflows. *J. Phys. Oceanogr.* **35**, 1782-1800.
- 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.
- Pratt, L. J. and S. G. Llwwellyn Smith 1997. Hydraulically Drained Flows in Rotating Basins. Part I: Method. *J. Phys. Oceanogr.* **27**, 2509-2521.
- Pratt, L. J., Lundberg, P. A. 1991. Hydraulics of rotating strait and sill flow. *Ann. Rev. Fluid. Mech.* **23**, 81-106.
- Pratt, L. J., and M. E. Stern 1986. Dynamics of Potential Vorticity Fronts and Eddy Detachment. *J. Phys. Oceanogr.* **16**, 1101-1120.
- Price, J. F. and M. O. Baringer 1994. Outflows and deep water production by marginal seas. *Prog. Oceanogr.* **33**, 161-200.
- Princevac, M., H. J. S. Fernando and D. C. Whiteman 2005. Turbulent entrainment into natural gravity driven flows. *J. Fluid Mech. (in press)*
- Rabe, B., D. A. Smeed, S. B. Dalziel, and G. F. Lane-Serff 2006. Experimental studies of rotating exchange flow. *Deep Sea Research I.* (accepted)
- Rayleigh, J. W. S. 1880. On the stability, or instability of certain fluid motions. *Proc. Lond. Math. Soc.* **9**, 57-70.
- Rennie, S. Largier, J. L. and S. J. Lentz 1999. Observations of low-salinity coastal pulses downstream of Chesapeake Bay. *J. Geophys. Res.* **104**, 18227-18240.
- Rhines, P. B. 1989 Deep planetary circulation and topography: simple models of mid-ocean flows. *J. Phys. Oceanogr.* **19**, 1449-1470.

- Ripa, P. 1983. General stability conditions for zonal flows in a one layer model on a beta-plane or the sphere. *J. Fluid Mech.* **126**, 463-487.
- Röed, L. P. 1980. Curvature effects on hydraulically driven inertial boundary currents. *J. Fluid Mech.* **96**, 395-412.
- Rogerson, A. M. 1999. Transcritical Flows in the Coastal Marine Atmospheric Boundary Layer. *J. Atmos. Sci.* **56**, 2761-2779.
- Rossby, C. G. 1938. On the mutual adjustment of pressure and velocity distributions in certain simple current systems II. *J. Marine. Res.* **2**, 239-263.
- Rossby, C. G. 1950. On the dynamics of certain types of blocking waves. *J. Chinese Geophys. Soc.* **2**, 1-13.
- Rudnick, D., 1997 Direct velocity measurements in the Samoan Passage, *J. Geophys. Res.*, *102*, 3293-3302.
- Rydberg, L. 1980 Rotating hydraulics in deep-water channel flow. *Tellus*, **32**, 77-89.
- Sambuco, E., Whitehead J. A. 1976 Hydraulic control by a wide weir in a rotating fluid. *J. Fluid Mech.* **73**, 521-28.
- Samelson, R. M. Supercritical marine-layer flow along a smoothly varying coastline. *J. Atmos. Sci.* **49**, 1571-1584.
- Salmon, R. 1998. *Lectures on Geophysical Fluid Dynamics*, Oxford, 400 pp.
- Saunders, P. M. 1987. Flow through Discovery Gap. *J. Phys. Oceanogr.* , **17**, 631-643.
- Saunders, P. M. 1990. Cold outflow from the Faroe Bank Channel. *J. Phys. Oceanogr.* **20**, 29-43.
- Schär, L. and R. B. Smith 1993. Shallow-Water Flow past Isolated Topography. Part I: Vorticity Production and Wake Formation. *J. Atmos. Sci.* **50**, 1373-1400.
- Schmitz, W. J. 1995 On the Interbasin-Scale Thermohaline Circulation. *Reviews of Geophysics*, **32**, 151-173.
- Shen, C. Y. 1981. The rotating hydraulics of open-channel flow between two basins. *J. Fluid Mech.* **112**, 161-88.
- Simson, J. E. 1997. *Gravity Currents in the Environment and the Laboratory*, 2nd edn. Cambridge University Press.

- Shi, Xiao Bing, L. P. Röed and B. Hackett 2001. Variability of the Denmark Strait Overflow: a numerical Study. *J. Geophys. Res.*, 106, (C10) 22,277-22,294.
- Slagstad, D. and T. McClimans, 2005. Modeling the ecosystem dynamics of the Barents Sea including the marginal ice zone: physical and chemical oceanography. *J. Mar. Sys.* **58**, 1-18.
- Smith, P. 1975. A streamtube model for bottom boundary currents in the ocean. *Deep-Sea Research*, **22**, 853-873.
- Smith, R. B., A. C. Gleason, P. Gluhosky, and V. Grubisic 1997. The Wake of St. Vincent. *J. Atmos. Sci.* **54**, 606-623.
- Smith, T. 1684. A conjecture about an under-current at the Streights mouth. *Phil. Trans.*, **14**, 30-31.
- Stalcup, M. C., Metcalf, W. G., Johnson, R. G. 1975 Deep Caribbean inflow through the Anegada-Jungfern Passage. *J. Mar. Res.* **33**, 15-35.
- Stern, M. E. 1972. Hydraulically critical rotating flow. *Phys. Fluids* **15**, 2062-2064.
- Stern M. E. 1974. Comment on rotating hydraulics. *Geophys. Fluid Dyn.* **6**, 127-130.
- Stern, M. E. 1980. Geostrophic fronts, bores, breaking and blocking waves. *J. Fluid Mech.* **99**, 687-703.
- Stern, M. E., J. A. Whitehead and B. L. Hua 1982. The intrusion of a density current along the coast of a rotating fluid. *J. Fluid Mech.* **132**, 237-265.
- Stoker, J. J. 1957 *Water Waves*. New York: Interscience. 567 pp.
- Stommel, H. M. 1948. The westward intensification of wind-driven currents. *Trans. Amer. Geophys. Union* **99**, 202-206.
- Stommel, H. M. 1960. *The Gulf Stream*. University of California Press, 202 pp.
- Stommel, H. M. and H. G. Farmer 1952. Abrupt change in width in two-layer open channel flow. *J. Marine Res.*, **11**, 205-214.
- Stommel, H. M. and H. G. Farmer 1953. Control of salinity in an estuary by a transition. *J. Marine Res.*, **12**, 13-20.
- Sturges, W. 1975. Mixing of renewal water flowing into the Caribbean Sea. *J. Mar. Res.* **33**, 117-30 (Suppl.).

- Swift, J. H. 1984. The circulation of the Denmark Strait and Iceland-Scotland overflow waters in the North Atlantic. *Deep-Sea Res.* **28**, 1107-29.
- Swift, J. H., Aagaard, K., Malmberg, S.-A. 1981. The contribution of the Denmark Strait overflow to the deep North Atlantic. *Deep-Sea Res.* **27**, 29-42.
- Timmermans M-L. E. (1998) Hydraulic control and mixing in a semi-enclosed reservoir. *Geophysical Fluid Dynamics Summer Study Program Technical Report #WHOI-98-09*, 1998.
- wo-layer rotating exchange flow between two deep basins: theory and application to the Strait of Gibraltar. *Journal of Physical Oceanography*, 35(9), 1568-1592.
- Timmermans M-L. E. and L. J. Pratt 2005. Two-layer exchange flow between two deep basins: theory and application to the Strait of Gibraltar. *J. Phys. Oceanogr.* **35**, 1568-1592.
- Tomasson G. G. and W. K. Melville 1992. Geostrophic adjustment in a channel: nonlinear and dispersive effects. *J. Fluid Mech.* **241**, 23-57.
- Toulany, B. and C.J.R. Garrett, 1984. Geostrophic control of fluctuating flow through straits. *J.Phys. Oceanogr.*, **14**, 649-655.
- Tsimplis, M. N. and Bryden, H. L. 2000. Estimation of the transports through the Strait of Gibraltar. *Deep-Sea Research Part I*, **47**, 2,219-2,242.
- Turner, J. S. 1973. Buoyancy Effects in Fluids. *Cambridge University Press*, 367 pp.
- Wåhlin A. K. and G. Walin 2001. Downward Migration of Dense Bottom Currents. *Environmental Fluid Mechanics* **1**, 257-279.
- Warren, B. A., 1981. Deep circulation of the world ocean. In: *Evolution of Physical Oceanography, Scientific Surveys in Honor of Henry Stommel*, B. A. Warren and C. Wunsch, editors, The MIT Press, Cambridge, Massachusetts; pp. 6-41.
- Wells, M. G. and J. S. Wettlaufer 2005. Two dimensional density currents in a confined basin. *Geophys. Astro. Fluid Dyn.* **99**, 199-218.
- Whitham, G. B. 1974. *Linear and Nonlinear Waves*, J. Wiley and Sons, New York, 636 pp.
- Whitehead, J. A. 1986. Flow of a homogeneous rotating fluid through straits. *Geophys. Astrophys. Fluid Dyn.* **36**, 187-205.
- Whitehead, J. A. 1989a. Surges of Antarctic Bottom Water into the North Atlantic. *J. Phys. Oceanogr.* **19**, 853-61.

- Whitehead, J. A. 1989b. Internal hydraulic control in rotating fluids---applications to oceans. *Geophys. Astrophys. Fluid Dyn.* **48**, 169-92.
- Whitehead, J. A. 2005. The Effect of Potential Vorticity on Flow Rate Through a Gap. *J. Geophys. Res.*, Vol. 110, No. C7, C07007 10.1029/2004JC002720.
- Whitehead, J. A., Leetma, A., Knox, R. A. 1974. Rotating hydraulics of strait and sill flows. *Geophys. Fluid Dyn.* **6**, 101-25.
- Whitehead, J. A. and A. R. Miller, 1979. Laboratory simulation of the gyre in the Alboran Sea. *J. Geophys. Res.* **84**, 3733-3742.
- Whitehead, J. A. and J. Salzig 2001. Rotating channel flow: Control and upstream currents. *Geophys. Astrophys. Fluid Dyn.*, **95**, 185-226.
- Whitehead, J. A., M.-L. Timmermans, W. Gregory Lawson, S. N. Bulgakov, A. M. Zatarian, J. F. A. Medina and J. Salzig 2003. Laboratory studies of thermally and/or salinity driven flows with partial mixing 1. Stommel transitions and multiple flow states. *J. Geophys. Res.*, **108**(C2), 3036, doi:10.1029/2001JC000902.
- Whitehead, J. A., Worthington, L. V. 1982. The flux and mixing rates of Antarctic Bottom Water within the North Atlantic. *J. Geophys. Res.* **87**(C10), 7903-24.
- Wilkinson D. L. and I. R. Wood 1971. A rapidly varied flow phenomenon in a two layer-flow. *J. Fluid Mech.* **47**, 241-256.
- Williams, R. T., Hori, A. M. 1970. Formation of hydraulic jumps in a rotating system. *J. Geophys. Res.* **75**, 2813-21.
- Winant, C. D., C. E. Dorman, C. A. Friehe and R. C. Beardsley 1988. The Marine Layer off Northern California: An Example of Supercritical Channel Flow. *J. Atmos. Sci.* **45**, 3588-3605.
- Wood, I. R. 1970. A lock exchange flow. *J. Fluid Mech.* **42**, 671-687.
- Woods, A. W. 1993. The topographic control of planetary-scale flow. *J. Fluid Mech.* **247**, 603-621.
- Worthington, L. V. 1969. An attempt to measure the volume transport of Norwegian Sea overflow water through the Denmark Strait, *Deep-Sea Res.*, **16** (supp) 421-432.
- Worthington, L. V. and W. R. Wright 1970. North Atlantic Ocean Atlas. Woods Hole Oceanographic Institution Atlas Series, Volume II.
- Yih, C. S. 1980. *Stratified Flows*, Academic Press, San Diego, 418pp.

8/22/06

Yih, C. S., Gascoigne, H. E., Debler, W. R. 1964. Hydraulic jump in a rotating fluid. *Phys. Fluids* **7**, 638-42.

Zabusky, N. J., M. H. Hughes, and K. V. Roberts 1979. Contour dynamics for the Euler equations in two dimensions. *J. Comp. Phys.* **30**, 96-106.

Zenk, W. 1981. Detection of Overflow Events in the Shag Rocks Passage, Scotia Ridge. *Science*, **213**, 1113-1114.

Zenk, W., G. Seidler, B. Lenz, and N. G. Hogg 1999. Antarctic Bottom Water Flow through the Hunter Channel. *J. Phys. Oceanogr.* , **29**, 2769-2784.

Zhu, D. Z. and G. A. Lawrence 2000. Hydraulics of Exchange Flows. *J. Hydr. Engrg.*, ASCE, **126**, 921-928.

Zhu, D. Z. and G. A. Lawrence 1998. Non-hydrostatic effects in layered shallow water flows. *J. Fluid Mech.* **355**, 1-16.