

Biographical Sketch  
**WILLIAM GEORGE LARGE**

**PROFESSIONAL**

- University of British Columbia, Engineering Physics, B.A.Sc. 1972
- University of British Columbia, Physical Oceanography, Ph.D. 1979
- Institute of Oceanographic Sciences, Wormley, England, Air-Sea Interaction, Postdoctoral Fellow, 1979-80

**APPOINTMENTS**

- 2007-Present: Division Director, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, U.S.A.
- 2005-Present: Head, Ocean Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, U.S.A.
- 1997-Present: Senior Scientist, National Center for Atmospheric Research, Boulder, U.S.A.
- 1986-97: Scientist III, National Center for Atmospheric Research, Boulder, U.S.A.
- 1988-89: Associate Professor, University of British Columbia, Vancouver, Canada
- 1988-89: Visiting Scientist, MEOM, LEFI, Grenoble, France
- 1983-86: Scientist II, National Center for Atmospheric Research, Boulder, U.S.A.
- 1980-83: Scientist I, National Center for Atmospheric Research, Boulder, U.S.A.

**AWARDS**

- Canadian Meteorological and Oceanographic Society, Graduate Student Prize for 1979.
- Captain Thomas Byrne Prize, 1980, U.B.C.
- American Meteorological Society Editor's Award, 1994.

**RELATED PUBLICATIONS**

Large, W.G. and G. Danabasoglu, 2006: Attribution and impacts of upper ocean biases in CCSM3. *J. Climate*, **19**, 2325-2346.

Large, W.G. and P.R. Gent, 1999: Validation of vertical mixing in an equatorial ocean model using large eddy simulations and observations. *J. Phys. Oceanogr.*, **29**, 449-464.

Large, W.G., G. Danabasoglu, S.C. Doney and J.C. McWilliams, 1997: Sensitivity to surface forcing and boundary layer mixing in a global ocean model: Annual mean climatology. *J. Phys. Oceanogr.*, **27**, 2418-2447.

Large W.G., G. Danabasoglu, J.C. McWilliams, P.R. Gent, and F.O. Bryan, 2001: Equatorial circulation of a global ocean climate model with anisotropic horizontal viscosity. *J. Phys. Oceanogr.*, **31**, 518-536.

Doney SC, Yeager S, Danabasoglu G, et al., 2007: Mechanisms governing interannual variability of upper-ocean temperature in a global ocean hindcast simulation. *J. Phys. Oceanogr.*, **37**, 1918-1938.

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## **SIGNIFICANT PUBLICATIONS**

Large, W.G., J.C. McWilliams, and S.C. Doney, 1994: Oceanic vertical mixing: A review and a model with a nonlocal boundary layer parameterization. *Rev. Geophys.*, **32**, 363-403.

Yeager, S. and W.G. Large, 2004: Later Winter Generation of Spiciness on Subducted Isopycnals. *Phys. Oceanogr.*, **34**, 1528-1547.

Yeager, S. and W.G. Large, 2007: Observational evidence of winter spice injection. *J. Phys. Oceanogr.*, **37**, 2895-2919.

Danabasoglu, G., W.G. Large, J.J. Tribbia, P.R. Gent, B.P. Briegleb, and J.C. McWilliams, 2005: Diurnal coupling in the tropical oceans of CCSM3. *J. Climate*, **19**, 2347-2365.

Gent, P.R., W.G. Large, and F.O. Bryan, 2001: What sets the mean transport through Drake Passage? *J. Geophys. Res.*, **106**, 2693-2712.

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## **SYNERGISTIC ACTIVITIES**

Developed and maintain the interannually varying surface forcing data set for oceans and sea-ice models used internationally for the Coordinated Ocean Research Experiments.

Developed the K-Profile Parameterization of ocean vertical mixing and its numerical implementation, which is used in many current ocean general circulation models.

Developed the anisotropic viscosity scheme to enable more realistic ocean model currents in a number of current ocean general circulation models.

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## **CURRENT RESEARCH COLLABORATORS**

F.O. Bryan (NCAR), G. Danabasoglu (NCAR), L. Donner (GFDL), P. Klein, (IFREMER, Brest), J.C. McWilliams (UCLA, NCAR), B. Barnier (LEGI, Grenoble), R.F. Milliff (CoRA), S. Legg (GFDL), T. Powell (U.C. Berkeley), R. Ferrari (MIT), S. Griffies (GFDL), E. Curchister (Rutgers), Alexey Kaplan, (LDEO), M. Hecht (LANL), S. Yeager (NCAR)