

## Biographical sketch of W.R. Young

William Roy Young  
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DATE AND PLACE OF BIRTH: 21 November 1955 in Brisbane, Australia  
CITIZENSHIP: United States and Australia  
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### EDUCATION:

Undergraduate degree, 1977 B.Sc. (Theoretical Physics) and M.Sc. 1978 (Applied Mathematics), from the Australian National University (ANU).

Graduate degree, 1981 Ph. D. from the Massachusetts Institute of Technology (MIT) and Woods Hole Oceanographic Institution (WHOI) Joint Program in Oceanography Ph.D. (Physical Oceanography).

Postdoctoral training, 1981 to 1984 at SIO.

### EMPLOYMENT HISTORY:

July 1991 to present, Professor of Physical Oceanography, SIO.

Jan. 1988 to June 1991, Associate Professor of Physical Oceanography, SIO.

Feb. 1985 to Dec. 1987, Assistant Professor of Physical Oceanography, Department of Earth, Atmospheric, and Planetary Sciences, MIT.

### AWARDS:

University Medal, ANU, 1976. Carl-Gustav Rossby Award, MIT, 1982. McElwane Medal from the American Geophysical Union, 1989. Fellow of the American Geophysical Union, 1989. Houghton Lecturer, MIT, 1999. G.K. Batchelor Lecturer, University of Cambridge, 2006. Fellow of the American Meteorological Society, 2008. Fellow of the National Academy of Sciences 2012. UCSD Faculty Lecturer 2014.

### PROFESSIONAL ACTIVITIES:

W.R. Young is the author or co-author of over one hundred and twenty scientific publications on oceanography, fluid mechanics and applied mathematics. He teaches graduate classes in Applied Mathematics and Geophysical Fluid Dynamics at the University of California, San Diego. Current research interests include passive scalar mixing, two-dimensional turbulence, ocean internal waves and Jovian atmospheric dynamics.

## SELECTED RECENT SCIENTIFIC PUBLICATIONS OF W.R. YOUNG

Google h-index is 52, with 28 since 2017; i10-index is 102, with 60 since 2017.

1. Siegelman, L., William R. Young, W.R. and Ingersoll, A.P. (2022). Polar vortex crystals: Emergence and structure *Proceedings of the National Academy of Sciences* **119**.17: e2120486119.
2. Vanneste, J., & Young, W. R. (2022). *Stokes drift and its discontents*. Philosophical Transactions of the Royal Society A, 380(2225), 20210032
3. Siegelman, L., Klein, P., Ingersoll, A. P., Ewald, S. P., Young, W. R., Bracco, A., ... & Sindoni, G. (2022). Moist convection drives an upscale energy transfer at Jovian high latitudes. *Nature Physics*, **18**(3), 357-361.
4. Kafiabad, H.A., Vanneste, J. & Young, W.R. (2021). Interaction of near-inertial waves with an anticyclonic vortex *Journal of Physical Oceanography* **51**.6: 2035-2048.
5. Asselin, O. & William R. Young W.R. (2020). Penetration of wind-generated near-inertial waves into a turbulent ocean. *Journal of Physical Oceanography* **50**.6: 1699-1716.
6. Villas Bôas, A.B. & Young W.R. (2020). Directional diffusion of surface gravity wave action by ocean macro-turbulence. *Journal of Fluid Mechanics* **890**.
7. Rocha, C. B., Constantinou, N. C., Smith, S. G. L., & Young, W. R. (2020). The Nusselt numbers of horizontal convection. *Journal of Fluid Mechanics*, **894**.
8. Asselin, O. & Young W.R. (2019). An improved model of near-inertial wave dynamics. *Journal of Fluid Mechanics* **876**: 428-448.
9. Rocha, C.B., Wagner G.L. & Young, W.R. (2018). Stimulated generation: extraction of energy from balanced flow by near-inertial waves. *Journal of Fluid Mechanics* **847**: 417-451.
10. Marcotte, F., Doering, C. R., Thiffeault, J. L., & Young, W. R. (2018). Optimal heat transfer and optimal exit times. *SIAM Journal on Applied Mathematics*, **78**(1), 591-608.