

## Curriculum Vitae

Eli Tziperman

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Born 1957, married + 3.

### Areas of Interest:

Large scale climate and ocean dynamics: El Nino, thermohaline circulation, past and future climate dynamics, including abrupt climate change, warm climates, glacial cycles, Snowball Earth; advanced methods of ocean data assimilation.

### Education:

Hebrew Univ., Jerusalem	B.A., with distinction	1982	Physics and Math
MIT – Woods Hole Oceanographic Institution	Ph.D.	1987	Physical Oceanography
<i>Adviser:</i> Carl Wunsch			
Weizmann Inst. of Science	Postdoctoral Fellow	1987-89	Physical Oceanography

### Appointments:

2003–	Prof of Oceanography & Applied Physics, Harvard University, Dept of Earth and Planetary Sciences and School of Engineering and Applied Sciences
1998–2003	Prof., Dept. of Environmental Sciences, Weizmann Institute of Science
1994–1998	Associate Prof., Dept. of Environmental Sciences, Weizmann Inst. of Science
1990–1993	Senior Scientist, Dept. of Environmental Sciences, Weizmann Inst. of Science
1989–1990	Scientist, The Weizmann Institute of Science

### Misc:

Prof. E.D. Bergman Memorial Award, 1990. Israeli-US Binational Science foundation.

Alon Scholarship, 1989. Israeli Academic Planning and Grant Committee (VATAT).

Carl-Gustav Rossby Award for the most outstanding thesis submitted to the Center for Meteorology and Physical Oceanography, MIT, in the academic year 1986-1987.

Meirbaum Oceanographic Scholarships, Hebrew University, 1984, 1985, 1987.

## Publications: Eli Tziperman.

- E. Tziperman. On the role of interior mixing and air-sea fluxes in determining the stratification and circulation of the oceans. *Journal of Physical Oceanography*, 16:680–693, 1986. [download](#).
- E. Tziperman. The Mediterranean outflow as an example of a deep buoyancy - driven flow. *Journal of Geophysical Research*, 92(C13):14510–14520, 1987. [download](#).
- E. Tziperman. Calculating the time-mean oceanic general-circulation and mixing coefficients from hydrographic data. *Journal of Physical Oceanography*, 18(3):519–525, March 1988. [download](#).
- E. Tziperman and A. Hecht. Circulation in the Eastern Levantine Basin determined by inverse methods. *Journal of Physical Oceanography*, 18(3):506–518, March 1988. [download](#).
- E. Tziperman and W. C. Thacker. An optimal-control adjoint-equations approach to studying the oceanic general-circulation. *Journal of Physical Oceanography*, 19(10):1471–1485, October 1989. [download](#).
- K. Speer and E. Tziperman. Convection from a source in an ocean-basin. *Deep-sea Research Part a-oceanographic Research Papers*, 37(3):431–446, March 1990. [download](#).
- E. Tziperman and P. Malanotte-Rizzoli. The climatological seasonal circulation of the Mediterranean-Sea. *Journal of Marine Research*, 49(3):411–434, August 1991. [download](#).
- A. R. Robinson, P. Malanotte-Rizzoli, A. Hecht, A. Michelato, W. Roether, A. Theocharis, U. Unluata, N. Pinardi, A. Artegiani, A. Bergamasco, J. Bishop, S. Brenner, S. Christianidis, M. Gacic, D. Georgopoulos, M. Golnaraghi, M. Hausmann, H. G. Junghaus, A. Lascaratos, M. A. Latif, W. G. Leslie, C. J. Lozano, T. Oguz, E. Ozsoy, E. Papageorgiou, E. Paschini, Z. Rozentroub, E. Sansone, P. Scarazzato, R. Schlitzer, G. C. Spezie, E. Tziperman, G. Zodiatis, L. Athanassiadou, M. Gerges, and M. Osman. General-circulation of the eastern mediterranean. *Earth-science Reviews*, 32(4):285–309, July 1992. [download](#).
- K. Speer and E. Tziperman. Rates of water mass formation in the North-Atlantic Ocean. *Journal of Physical Oceanography*, 22(1):93–104, January 1992. [download](#).
- E. Tziperman, W. C. Thacker, and K. Bryan. Computing the steady oceanic circulation using an optimization approach. *Dynamics of Atmospheres and Oceans*, 16(5):379–403, April 1992. [download](#).
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- K. Speer, E. Tziperman, and Y. Feliks. Topography and grounding in a simple bottom layer model. *Journal of Geophysical Research*, 98(C5):8547–8558, may 15 1993. download.
- E. Tziperman and K. Bryan. Estimating global air-sea fluxes from surface-properties and from climatological flux data using an oceanic general-circulation model. *Journal of Geophysical Research*, 98(C12):22629–22644, dec 15 1993. download.
- E. Tziperman, I. Yavneh, and S. Taasan. Multilevel turbulence simulations. *Europhysics Letters*, 24(4):239–244, nov 1 1993. download.
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- E. Tziperman, L. Stone, M. A. Cane, and H. Jarosh. El-Nino chaos: overlapping of resonances between the seasonal cycle and the Pacific ocean-atmosphere oscillator. *Science*, 264(5155):72–74, apr 1 1994. download.
- E. Tziperman, J. R. Toggweiler, Y. Feliks, and K. Bryan. Instability of the thermohaline circulation with respect to mixed boundary-conditions: Is it really a problem for realistic models? *Journal of Physical Oceanography*, 24(2):217–232, February 1994. download.
- S. M. Griffies and E. Tziperman. A linear thermohaline oscillator driven by stochastic atmospheric forcing. *Journal of Climate*, 8(10):2440–2453, October 1995. download.
- E. Tziperman, M. A. Cane, and S. E. Zebiak. Irregularity and locking to the seasonal cycle in an ENSO prediction model as explained by the quasi-periodicity route to chaos. *Journal of the Atmospheric Sciences*, 52(3):293–306, feb 1 1995. download.
- J. R. Gat, A. Shemesh, E. Tziperman, A. Hecht, D. Georgopoulos, and O. Basturk. The stable isotope composition of waters of the eastern Mediterranean Sea. *Journal of Geophysical Research*, 101(C3):6441–6451, mar 15 1996. download.
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- E. Tziperman, H. Scher, S. E. Zebiak, and M. A. Cane. Controlling spatiotemporal chaos in a realistic El Nino prediction model. *Physical Review Letters*, 79(6):1034–1037, aug 11 1997. download.
- E. Tziperman, S. E. Zebiak, and M. A. Cane. Mechanisms of seasonal - ENSO interaction. *Journal of the Atmospheric Sciences*, 54(1):61–71, jan 1 1997. download.
- E. Tziperman, M. A. Cane, S. E. Zebiak, Y. Xue, and B. Blumenthal. Locking of El Nino’s peak time to the end of the calendar year in the delayed oscillator picture of ENSO. *Journal of Climate*, 11(9):2191–2199, September 1998. download.
- E. Galanti and E. Tziperman. ENSO’s phase locking to the seasonal cycle in the fast SST, fast wave, and mixed mode regimes. *Journal of the Atmospheric Sciences*, 57:2936–2950, 2000. download.
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