

Curriculum Vitae

Eli Tziperman

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Born: September 21, 1957, Israel. Married + 3.

Areas of Interest:

Large scale climate and ocean dynamics, including El Nino, thermohaline circulation, abrupt climate change, glacial cycles and equable climates; 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:

Aug 2003 –	Prof of Oceanography & Applied Physics, Harvard University, Dept of Earth and Planetary Sciences and Division 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:

Professor 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. *J. Phys. Oceanogr.*, 16:680–693, 1986. download.
- E. Tziperman. The Mediterranean outflow as an example of a deep buoyancy - driven flow. *J. Geophys. Res.*, 92(C13):14510–14520, 1987. download.
- E. Tziperman. Calculating the time-mean oceanic general-circulation and mixing coefficients from hydrographic data. *J. Phys. Oceanogr.*, 18(3):519–525, March 1988. download.
- E. Tziperman and A. Hecht. Circulation in the Eastern Levantine Basin determined by inverse methods. *J. Phys. Oceanogr.*, 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. *J. Phys. Oceanogr.*, 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. *J. Mar. Res.*, 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. *J. Phys. Oceanogr.*, 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.
- E. Tziperman, W. C. Thacker, R. B. Long, and S. M. Hwang. Oceanic data-analysis using a general-circulation model. Part 1: Simulations. *J. Phys. Oceanogr.*, 22(12):1434–1457, December 1992. download.
- E. Tziperman, W. C. Thacker, R. B. Long, S. M. Hwang, and S. R. Rintoul. Oceanic data-analysis using a general-circulation model. Part 2: A North-Atlantic model. *J. Phys. Oceanogr.*, 22(12):1458–1485, December 1992. download.
- K. Speer, E. Tziperman, and Y. Feliks. Topography and grounding in a simple bottom layer model. *J. Geophys. Res.*, 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. *J. Geophys. Res.*, 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.
- E. Tziperman and K. Speer. A study of water mass transformation in the Mediterranean-Sea – analysis of climatological data and a simple 3-box model. *Dynamics of Atmospheres and Oceans*, 21(2-3):53–82, December 1994. download.
- 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. *J. Phys. Oceanogr.*, 24(2):217–232, February 1994. download.
- S. M. Griffies and E. Tziperman. A linear thermohaline oscillator driven by stochastic atmospheric forcing. *J. 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. *J. Atmos. Sci.*, 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. *J. Geophys. Res.*, 101(C3):6441–6451, mar 15 1996. download.
- J. R. Toggweiler, E. Tziperman, Y. Feliks, K. Bryan, S. M. Griffies, and B. Samuels. Instability of the thermohaline circulation with respect to mixed boundary conditions: Is it really a problem for realistic models? reply. *J. Phys. Oceanogr.*, 26(6):1106–1110, June 1996. download.
- I. Rivin and E. Tziperman. Linear versus self-sustained interdecadal thermohaline variability in a coupled box model. *J. Phys. Oceanogr.*, 27(7):1216–1232, July 1997. download.
- I. Rivin and E. Tziperman. Sensitivity of air-sea fluxes to sst perturbations. *J. Climate*, 10(10):2431–2446, October 1997. download.
- Z. Sirkes and E. Tziperman. Finite difference of adjoint or adjoint of finite difference? *Mon. Weath. Rev.*, 125(12):3373–3378, December 1997. download.
- E. Tziperman. Inherently unstable climate behaviour due to weak thermohaline ocean circulation. *Nature*, 386(6625):592–595, apr 10 1997. download.
- 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. *J. Atmos. Sci.*, 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. *J. 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. *J. Atmos. Sci.*, 57:2936–2950, 2000. download.
- H. Gildor and E. Tziperman. Sea ice as the glacial cycles climate switch: role of seasonal and orbital forcing. *Paleoceanography*, 15:605–615, 2000. download.
- E. Tziperman. Proximity of the present-day thermohaline circulation to an instability threshold. *J. Phys. Oceanogr.*, 30(1):90–104, January 2000. download.
- E. Tziperman. Uncertainties in thermohaline circulation response to greenhouse warming. *Geophys. Res. Lett.*, 27:3077–3080, 2000. download.
- H. Gildor and E. Tziperman. Physical mechanisms behind biogeochemical glacial-interglacial CO_2 variations. *Geophys. Res. Lett.*, 28:2421–2424, 2001. download.
- H. Gildor and E. Tziperman. A sea-ice climate-switch mechanism for the 100 kyr glacial cycles. *J. Geophys. Res.*, 106(C5):9117–9133, 2001. download.
- H. Gildor, E. Tziperman, and R. J. Toggweiler. The sea-ice switch mechanism and glacial-interglacial CO_2 variations. *Global Biogeochem. Cycles*, 16:10.1029/2001GB001446, 2002. download.
- R. Samelson and E. Tziperman. Predictability of the chaotic ENSO: the growth phase predictability barrier. *J. Atmos. Sci.*, 58:3613–3625, 2001. download.
- Z. Sirkes and E. Tziperman. Identifying a damped oscillatory thermohaline mode in a general circulation model using an adjoint model. *J. Phys. Oceanogr.*, 31:2297–2306, 2001. download.
- E. Tziperman and H. Gildor. The stabilization of the thermohaline circulation by the temperature-precipitation feedback. *J. Phys. Oceanogr.*, 32:2707–2714, 2002. download.
- E. Galanti, E. Tziperman, M. Harrison, A. Rosati, R. Giering, and Z. Sirkes. The equatorial thermocline outcropping - a seasonal control on the tropical Pacific ocean-atmosphere instability strength. *J. Climate*, 15(19):2721–2739, 2002. download.
- M. J. Harrison, A. Rosati, B. J. Soden, E. Galanti, and E. Tziperman. An evaluation of air-sea flux products for enso simulation and prediction. *Monthly Weather Review*, 130(3):723–732, March 2002. download.
- E. Tziperman and P. J. Ioannou. Transient growth and optimal excitation of thermohaline variability. *J. Phys. Oceanogr.*, 32(12):3427–3435, December 2002. download.

- E. Galanti and E. Tziperman. A mid-latitude enso teleconnection mechanism via baroclinically unstable long rossby waves. *J. Phys. Oceanogr.*, 33:1877–1888, 2003. download.
- E. Galanti, E. Tziperman, M. Harrison, A. Rosati, and Z. Sirkes. A study of enso prediction using a hybrid-coupled model and the adjoint method for data assimilation. *Mon. Weath. Rev.*, 131:2748–2764, 2003. download.
- A. Timmermann, H. Gildor, M. Schulz, and E. Tziperman. Coherent resonant millennial-scale climate oscillations triggered by massive meltwater pulses. *J. Climate*, 16(15):2569–2585, aug 1 2003. download.
- E. Tziperman and H. Gildor. The mid-Pleistocene climate transition and the source of asymmetry between glaciation and deglaciation times. *Paleoceanography*, 18(1):10.1029/2001PA000627, 2003. download.
- E. Tziperman and K. Speer. Optimal near-ideal age tracer from transient tracer data, with application to CFC-based ages in the North Atlantic ocean. *unpublished*, (): , 2004.
- Y. Ashkenazy and E. Tziperman. Are the 41kyr glacial oscillations a linear response to Milankovitch forcing? *Quat. Sci. Rev.*, 23(18-19):1879–1890, 2004. download.
- F. Eccles and E. Tziperman. Nonlinear effects on ENSO’s period. *J. Atmos. Sci.*, 61:474–482, 2004. download.
- Y. Kaspi, R. Sayag, and E. Tziperman. A ‘triple sea-ice state’ mechanism for the abrupt warming and synchronous ice sheet collapses during heinrich events. *Paleoceanography*, 19(3):PA3004, 10.1029/2004PA001009, 2004. download.
- C. Pasquero and E. Tziperman. Effects of a wind-driven gyre on thermohaline circulation variability. *J. Phys. Oceanogr.*, 34(4):805–816, April 2004. download.
- R. Sayag, E. Tziperman, and M. Ghil. Rapid switch-like sea ice growth and land ice-sea ice hysteresis. *Paleoceanography*, 19(PA1021, doi:10.1029/2003PA000946), March 2004. download.
- I. Eisenman, L. S. Yu, and E. Tziperman. Westerly wind bursts: ENSO’s tail rather than the dog? *J. Climate*, 18(24):5224–5238, December 2005. download.
- C. Li, D. S. Battisti, D. P. Schrag, and E. Tziperman. Abrupt climate shifts in greenland due to displacements of the sea ice edge. *Geophys. Res. Lett.*, 32(19), oct 1 2005. download.
- J. Shaman and E. Tziperman. The effect of ENSO on Tibetan Plateau snow depth: A stationary wave teleconnection mechanism and implications for the South Asian monsoons. *J. Climate*, 18(12):2067–2079, 2005. download.
- L. Zanna and E. Tziperman. Non normal amplification of the thermohaline circulation. *J. Phys. Oceanogr.*, 35(9):1593–1605, 2005. download.
- Y. Ashkenazy and E. Tziperman. Scenarios regarding the lead of equatorial sea surface temperature over global ice volume. *Paleoceanography*, 21, 2006. download.

- D. G. MacMynowski and E. Tziperman. Two-way feedback interaction between the thermohaline and wind-driven circulations. *J. Phys. Oceanogr.*, 36(5):914–929, 2006. download.
- E. Tziperman, M. Raymo, P. Huybers, and C. Wunsch. Consequences of pacing the pleistocene 100 kyr ice ages by nonlinear phase locking to milankovitch forcing. *Paleoceanography*, 21(PA4206):doi:10.1029/2005PA001241, 2006. download.
- Y. Ashkenazy and E. Tziperman. Wind-induced thermohaline circulation hysteresis and millennial variability regimes. *J. Phys. Oceanogr.*, 37(10), 2007. download.
- G. Gebbie, I. Eisenman, A. T. Wittenberg, and E. Tziperman. Modulation of westerly wind bursts by sea surface temperature: A semi-stochastic feedback for ENSO. *J. Atmos. Sci.*, 64:3281–3295, 2007. download.
- C. Pasquero and E. Tziperman. Statistical parameterization of heterogeneous ocean convection. *J. Phys. Oceanogr.*, 37(DOI: 10.1175/JPO3008.1):214–229, 2007. download.
- J. Shaman and E. Tziperman. Summertime ENSO-North African-Asian Jet teleconnection and implications for the Indian monsoons. *Geophys. Res. Lett.*, 34():L11702, doi:10.1029/2006GL029143, 2007. download.
- E. Tziperman and L. Yu. Quantifying the dependence of westerly wind bursts on the large scale equatorial pacific sst. *J. Climate*, 20(12):2760–2768, 2007. download.
- D. G. MacMynowski and E. Tziperman. Factors affecting ENSO’s period. *J. Atmos. Sci.*, 65(5):1570–1586, 2008. download.
- R. Sayag and E. Tziperman. Spontaneous generation of pure ice streams via flow instability: Role of longitudinal shear stresses and subglacial till. *J. Geophys. Res.*, 113:B05411, 1–17, 2008. download.
- D. S. Abbot and E. Tziperman. A high latitude convective cloud feedback and equable climates. *Q. J. R. Meteorol. Soc.*, 134:165–185, DOI: 10.1002/qj.211, 2008. download.
- D. S. Abbot and Eli Tziperman. Sea ice, high latitude convection, and equable climates. *Geophys. Res. Lett.*, 35:L03702. doi:10.1029/2007GL032286, 2008. download.
- P. Huybers and E. Tziperman. Integrated summer insolation controls 40,000 year glacial cycles in an ice-sheet energy-balance model. *Paleoceanography*, 23:PA1208, doi:10.1029/2007PA001463, 2008. download.
- E. Tziperman, L. Zanna, and C. Penland. Non-normal thermohaline circulation dynamics in a coupled ocean-atmosphere gcm. *J. Phys. Oceanogr.*, 38(3):588–604. DOI: 10.1175/2007JPO3769.1, 2008. download.
- L. Zanna and E. Tziperman. Optimal surface excitation of the thermohaline circulation. *J. Phys. Oceanogr.*, 38(8):1820–1830, 2008. download.
- Y. Ashkenazy, Y. Feliks, H. Gildor, and E. Tziperman. Asymmetry of daily temperature records. *J. Atmos. Sci.*, 65:3327–3336, oct 2008. download.

- D. S. Abbot and E. Tziperman. Controls on the activation and strength of a high latitude convective-cloud feedback. *J. Atmos. Sci.*, 66:519–529, February 2009. download.
- E. Tziperman and B. F. Farrell. The pliocene equatorial temperature — lessons from atmospheric superrotation. *Paleoceanography*, 24:PA1101, doi:10.1029/2008PA001652, 2009. download.
- R. Sayag and E. Tziperman. Spatiotemporal dynamics of ice streams due to a triple valued sliding law. *J. Fluid Mech.*, 640:483–505, 2009. download.
- R. Sayag and E. Tziperman. Interaction and variability patterns of ice streams under a triple-valued sliding law and a non-newtonian rheology. *J. Geophys. Res.*, 116:F01009, 1–17, doi:10.1029/2010JF001839, 2011. download.
- L. Zanna, P. Heimbach, A. M. Moore, and E. Tziperman. The role of ocean dynamics in the optimal growth of tropical sst anomalies. *J. Phys. Oceanogr.*, 40(5, DOI:10.1175/2009JPO4196.1):983–1003, 2010. download.
- G. Gebbie and E. Tziperman. Predictability of sst-modulated westerly wind bursts. *J. Climate*, 22:3894–3909, 2009. download.
- I. Eisenman, C. Bitz, and E. Tziperman. Rain driven by receding ice sheets as a cause of past climate change. *Paleoceanography*, 24(PA4209):doi:10.1029/2009PA001778, 2009. download.
- D. S. Abbot, C. Walker, and E. Tziperman. Can a convective cloud feedback help to eliminate winter sea ice at high CO_2 concentrations? *J. Climate*, 22(21):5719–5731, DOI: 10.1175/2009JCLI2854.1, 2009. download.
- L. Zanna, P. Heimbach, A. M. Moore, and E. Tziperman. Optimal excitation of interannual Atlantic meridional overturning circulation variability. *J. Climate*, 24(DOI: 10.1175/2010JCLI3610.1):413–427, 2011. download.
- D. G. MacMynowski and E. Tziperman. Testing and improving enso models by process using transfer functions. *Geophys. Res. Lett.*, 37:L19701, doi:10.1029/2010GL044050, 2010. download.
- Y. Feliks, E. Tziperman, and B. Farrell. Nonnormal frontal dynamics. *J. Atmos. Sci.*, 67(DOI: 10.1175/2009JAS3214.1):1218–1231, 2010. download.
- Y. Ashkenazy, I. Eisenman, H. Gildor, and E. Tziperman. The effect of milankovitch variations in insolation on equatorial seasonality. *J. Climate*, 23(23):6133–6142, 2010. download.
- A. Solodoch, W. Boos, Z. Kuang, and E. Tziperman. Excitation of intraseasonal variability in the equatorial atmosphere by Yanai wave-group via WISHE-induced convection. *J. Atmos. Sci.*, 68(2):210–225, 2011. download.
- J. Shaman and E. Tziperman. An atmospheric teleconnection linking ENSO and southwestern European precipitation. *J. Climate*, 24(DOI: 10.1175/2010JCLI3590.1):124–139, 2011. download.

- Y. Ashkenazy, Martin Losch, H. Gildor, Dror Mirzayof, and E. Tziperman. Multiple sea-ice states and abrupt moc transitions in a general circulation ocean model. *submitted*, 2011.
- L. Zanna, P. Heimbach, Andrew M. Moore, and E. Tziperman. Upper-ocean singular vectors of the north atlantic climate with implications for linear predictability and variability. *Q. J. R. Meteorol. Soc.*, doi:10.1002/qj.937, 2011. download.
- B. D. Leibowicz, D. S. Abbot, K. A. Emanuel, and E. Tziperman. Correlation between reanalysis arctic cloud radiative forcing and sea ice consistent with positive winter convective cloud feedback. *submitted*, 2011.
- Y. Feliks, E. Tziperman, and B. Farrell. Non normal growth of kelvin-helmholtz eddies in a sea breeze. *submitted*, 2011.
- N. Arnold, E. Tziperman, and B. F. Farrell. Abrupt transition to strong superrotation driven by equatorial wave resonance in an idealized GCM. *JAS*, 69:626640, 2012. download.
- Hosmay Lopez, Ben P. Kirtman, Eli Tziperman, and Jeffrey Gebbie. Impact of interactive westerly wind bursts on CCSM3. *in prep*, (): , 2011.
- D. G. MacMynowski and E. Tziperman. Using transfer functions to quantify ENSO dynamics in data and models. *submitted*, : , 2011. download.
- H. Gildor, Y. Ashkenazy, E. Tziperman, and I. Lev. The role of sea ice in the temperature-precipitation feedback of glacial cycles. *in prep*, 2011. download.
- E. Tziperman, I. Halevy, D. T. Johnston, A. H. Knoll, and D. P. Schrag. Biologically induced initiation of neoproterozoic snowball-earth events. *Proc. Natl. Acad. Sci. U.S.A.*, 108(37):1509115096, doi/10.1073/pnas.1016361108, 2011. download.
- J. Shaman, R. M. Samelson, and E. Tziperman. Complex wavenumber rossby wave ray tracing. *J. Atmos. Sci.*, 69():doi:10.1175/JAS-D-11-0193.1, 2012. download.
- Eli Tziperman, Dorian Schuyler Abbot, Yossi Ashkenazy, Hezi Gildor, David Pollard, Christian Schoof, and Daniel P. Schrag. Continental constriction and sea ice thickness in a snowball-earth scenario. *in press*, (): , 2012. download.
- N. Arnold, Z. Kuang, and E. Tziperman. Enhanced MJO-like variability at high SST. *in prep*, (): , 2012.

Chapters in books

- P. Malanotte-Rizzoli and E. Tziperman. The oceanographic data assimilation problem: Overview, motivation and purposes. In P. Malanotte-Rizzoli, editor, *Modern approaches to data assimilation in ocean modeling*. Elsevier Oceanography Series, 1995. download.
- Z. Sirkes, E. Tziperman, and C. W. Thacker. Combining data and a global primitive equation ocean general circulation model using the adjoint method. In P. Malanotte-Rizzoli, editor, *Modern approaches to data assimilation in ocean modeling*, Malanotte-Rizzoli, P. Ed., Elsevier. Elsevier Oceanography Series, 1996. download.

- E. Tziperman. Controlling chaos in a high-dimensional continuous spatiotemporal model. In H. Schuster, editor, *Handbook of Chaos Control*. Wiley-VCH, 1998. download.

Refereed proceedings

- E. Tziperman. Methods of testing parameterizations: vertical ocean mixing. In *Global Change Institute on Earth System Modeling, Snowmass, Colorado*, pages 335–358. University Corporation for atmospheric research, Office for Interdisciplinary Studies, POB 3000, Boulder CO 80307-3000, 1992. download.
- E. Tziperman and Z. Sirkes. Using the adjoint method with the ocean component of coupled ocean-atmosphere models. *journal of the Meteorological Society of Japan*, 75(1B):463–470, March 1997. download.
- H. Gildor and E. Tziperman. Sea ice, the glacial cycles’ climate switch, and inter-hemispheric thermohaline teleconnections. *Annals of Glaciology*, 33:501–506, 2001. download.
- H. Gildor and E. Tziperman. Sea-ice switches and abrupt climate change. *Philosophical Transactions of the Royal Society of London Series a-mathematical Physical and Engineering Sciences*, 361(1810):1935–1942, sep 15 2003. download.
- D. G. MacMynowski and E. Tziperman. Applying engineering feedback analysis tools to climate dynamics. *American Control Conference*, 2008. download.
- G. Gebbie and E. Tziperman. Incorporating a semi-stochastic model of ocean-modulated westerly wind bursts into an enso prediction model. *Theoretical and Applied Climatology*, 97(DOI 10.1007/s00704-008-0069-6):65, 2009. download.

Misc

- P. Cessi, R. Pierrehumbert, and E. Tziperman. Lectures on enso, the thermohaline circulation, glacial cycles and climate basics. In Neil J. Balmforth, editor, *Conceptual Models of the Climate*. Woods Hole Oceanographic Institution, 2001. download .
- Aviv Solodoch, William Boos, Zhiming Kuang, and Eli Tziperman. Excitation of slow MJO-like Kelvin waves in the equatorial atmosphere by Yanai wave-group via a WISHE-induced convection. *arXiv:1002.2340, physics.ao-ph*, <http://arxiv.org/abs/1002.2340>, 2010.