

ELISA MANZINI

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EXPERTISE & RESEARCH INTEREST

Assessing and understanding the role of stratospheric dynamical variability and change in climate.

EDUCATION

- *Doctor of Philosophy in Atmospheric and Oceanic Sciences*, 1992. Princeton University, USA
- *Master of Arts in Atmospheric and Oceanic Sciences*, 1989. Princeton University, USA.
- *Laurea in Physics*, 1985. Università degli Studi di Bologna, Bologna, Italy.

PROFESSIONAL EXPERIENCES

- *Max-Planck-Institut für Meteorologie, Hamburg, Germany*. February 2010-present
- *Centro Euro-Mediterraneo per i Cambiamenti Climatici (CMCC), Bologna, Italy*. October 2006-January 2010.
- *Istituto Nazionale di Geofisica e Vulcanologia (INGV), Bologna, Italy*. October 2002-January 2010.
- *Max-Planck-Institut für Meteorologie, Hamburg, Germany*. February 1992-September 2002.

SELECTED PROFESSIONAL & ORGANIZATIONAL ACTIVITIES

- President of the *International Commission on the Middle Atmosphere (ICMA/IAMAS)*. 2016-2019.
- Co-chair of DynVarMIP, a Model Intercomparison Project endorsed by the *Coupled Model Intercomparison Project Phase 6 (CMIP6)* of the *World Climate Research Programme (WCRP)*, from 2016
- Coordinator of the *SPARC DynVar Activity: Modelling the Dynamics and Variability of the Stratosphere-Troposphere System of the Stratospheric Processes and their Role in Climate (SPARC)*, a core project of the *World Climate Research Programme (WCRP)*. 2009-2017.
- Member of the *Climate Dynamics Panel of Climate and Ocean: Variability, Predictability and Change (CLIVAR)*, a core project of the *World Climate Research Programme (WCRP)*, 2015-2017.
- Member of the *International Commission on the Middle Atmosphere (ICMA/IAMAS)*. 2008-2019.
- Member of the Scientific Steering Group of *SPARC/WCRP*. 2005-2010.
- Lecturer at Universität Hamburg, Germany (2015-2017)
- PhD Lecturer at Università 'Ca' Foscari di Venezia, Italy (2008-2010)
- Chair of the Local Organizing Committee *SPARC 4th General Assembly*, 2008, Bologna, Italy.
- Executive Editor: *Climate Dynamics*, 2001 - 2007.
- Associate Editor: *Journal of Geophysical Research*, 2001 - 2002.
- Reviewer for a number of journals.

SELECTED REFEREED PUBLICATIONS

- Manzini, E., A. Yu. Karpechko, and L. Kornblueh, 2018: Nonlinear response of the stratosphere and the North Atlantic-European climate to global warming. *Geophysical Research Letters*, 45. DOI: 10.1029/2018GL077826
- Karpechko, A. Yu., and E. Manzini, 2017: Arctic Stratosphere Dynamical Response to Global Warming. *Journal of Climate*, 30, 7071-7086, DOI: 10.1175/JCLI-D-16-0781.1
- Schirber, S., E. Manzini, T. Krismer, M. Giorgetta, 2015: The quasi biennial oscillation in a warmer climate: sensitivity to different gravity wave parameterizations. *Clim. Dyn.* 45, 825–836, DOI 10.1007/s00382-014-2314-2
- Manzini, E., et al., 2014: Northern winter climate change: Assessment of uncertainty in CMIP5 projections related to stratosphere-troposphere coupling. *J. Geophys. Res. Atmos.* 119, 7979–7998. DOI 10.1002/2013JD021403
- Manzini, E., C. Cagnazzo, P.G. Fogli, A. Bellucci and W. Müller, 2012: Stratosphere - Troposphere coupling at inter-decadal time scales: Implications for the North Atlantic Ocean. *Geophys. Res. Lett.*, 39, L05801.
- Cagnazzo, C., and E. Manzini, 2009: Impact of the stratosphere on the winter tropospheric teleconnections between ENSO and the North Atlantic and European Region. *J. Climate* 22, 1223-1238. DOI: 10.1175/2008JCLI2549.1.
- Manzini, E., M.A. Giorgetta, M. Esch, L. Kornblueh, and E. Roeckner, 2006: The influence of sea surface temperatures on the Northern winter stratosphere: Ensemble simulations with the MAECHAM5 model. *J. Climate*, 19, 3863-3881.
- Manzini, E., B. Steil, C. Brühl, M.A. Giorgetta, and K. Krüger, A new interactive chemistry-climate model: 2. Sensitivity of the middle atmosphere to ozone depletion and increase in greenhouse gases and implications for recent stratospheric cooling. 2003: *J. Geophys. Res.*, 108(D14), 4429, DOI: 10.1029/2002JD002977.
- Charron, M. and E. Manzini, 2002: Gravity waves from fronts: Parameterization and middle atmosphere response in a general circulation model. *J. Atmos. Sci.*, 59, 923-941.
- Manzini, E., and N.A. McFarlane, 1998: The effect of varying the source spectrum of a gravity wave parameterization in a middle atmosphere general circulation model. *J. Geophys. Res.*, 103, 31523-31539.