

PERSONAL INFORMATION

Claudia Pasquero



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ORCID: 0000-0002-2211-7977

Spoken languages Italian, French, English

Current position Associate Professor

EDUCATION AND TRAINING

- 2001 PhD in Fluid dynamics, Politecnico di Torino, IT
- 1996 Laurea degree in Physics, University of Torino, IT (*110/110 Summa cum Laude*)

APPOINTMENTS

- 2021-2022 Invited Visiting Professor, Ecole Normale Supérieure, Paris, FR (6 weeks)
- 3-4/2018 Invited Visiting Researcher, Harvard University, Cambridge, MA, USA (2 months)
- Since 2011 Associate professor, Department of Earth and Environmental Sciences, Univ. Milano - Bicocca, IT
- 2009-2020 Associate researcher, Institute of Atmospheric Sciences and Climate, CNR, IT
- 2006-2010 Assistant professor, Department of Earth System Sciences, Univ. of California, Irvine, CA, USA
- 2004-2006 Senior Research fellow, California Institute of Technology, Pasadena, CA, USA
- 2003-2005 Invited Visiting Assistant Professor, University of California, Los Angeles, CA, USA (3 x 3 months)
- 2002-2003 Post-doc, Institute of Atmospheric Sciences and Climate, CNR
- 2001 Post-doc, Weizmann Institute, Rehovot, Israel

TEACHING ACTIVITIES

- Summary Instructor for classes of Geophysics, Physical Oceanography, Atmospheric Physics, Physics of Climate, Atmospheric and Oceanic Dynamics, Earth System Physics, Ocean Monitoring and Data Analysis, Communication of Climate Change (undergraduate, master, and PhD levels) at Univ. Milano Bicocca, UCLA, Caltech. Excellent scores in student evaluations of teaching activities.
- Instructor for summer schools (USSP Summer School “Past Global Change Reconstruction and Modelling Techniques”, Urbino, Italy; “The fluid dynamics of climate”, CISM, Udine)
- Advisor for 5 post-docs, 9 PhD students, 15 master thesis, 18 undergrad thesis. External member of PhD committee for 10 PhD students (Norway, USA, France, Italy).

Classes

A.A. 2023/2024

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (6 CFU), Scuola di Scienze, Università di Milano, Bicocca.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca.
- Docente dell'insegnamento *Communication of Climate Change* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (1 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Ocean Monitoring and Data Analysis* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (3CFU), Scuola di Scienze, Università di Milano, Bicocca.

A.A. 2022/2023

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (6 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.29/10.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 8.73/10.
- Docente dell'insegnamento *Climate Journal Club* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (2 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Ocean Monitoring and Data Analysis* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (3CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 10/10

A.A. 2021/2022

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (6 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.01/10.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 8.83/10.
- Docente dell'insegnamento *Ocean Monitoring and Data Analysis* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (3.5CFU), Scuola di Scienze, Università di Milano, Bicocca.

A.A. 2020/2021

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (6 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.1/10.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.04/10.
- Docente dell'insegnamento *Ocean Monitoring and Data Analysis* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (3CFU), Scuola di Scienze, Università di Milano, Bicocca.

A.A. 2019/2020

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (6 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.18/10.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 9.29/10.
- Docente dell'insegnamento *Climate Journal Club* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (2 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Ocean Monitoring and Data Analysis* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (3CFU), Scuola di Scienze, Università di Milano, Bicocca.

A.A. 2018/2019

- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.93/3.
- Docente dell'insegnamento *Laboratorio di Fisica 1* (4 CFU), Corso di **Laurea** in *Fisica*, Università di Milano, Bicocca. Valutazione: 2.6/3.
- Docente dell'insegnamento *Climate Journal Club* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (2 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Climatologia* (2 CFU), Corsi di **Master** in *Gestione delle Risorse Idriche nella Cooperazione Internazionale*, Università di Milano, Bicocca.
- Docente dell'insegnamento *Meteorologia e Climatologia* (1 CFU), Corsi di **Master** in *Comunicazione Scientifica*, Università di Milano, Bicocca.

A.A. 2017/2018

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (8 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.5/3.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.66/3.
- Docente dell'insegnamento *Climate Journal Club* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (2 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Climatologia* (2 CFU), Corsi di **Master** in Gestione delle Risorse Idriche nella Cooperazione Internazionale, Università di Milano, Bicocca.
- Docente dell'insegnamento *Meteorologia e Climatologia* (1 CFU), Corsi di **Master** in Comunicazione Scientifica, Università di Milano, Bicocca.

A.A. 2016/2017

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (8 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.49/3.
- Docente dell'insegnamento *Physics of the Sea* nell'ambito del Corso di **Laurea Magistrale** in *Marine Sciences* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.79/3.
- Docente dell'insegnamento *Climate Journal Club* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (2 CFU), Università di Milano, Bicocca.
- Docente dell'insegnamento *Climatologia* (2 CFU), Corsi di **Master** in Gestione delle Risorse Idriche nella Cooperazione Internazionale, Università di Milano, Bicocca.

A.A. 2015/2016

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (8 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.57/3.
- Docente dell'insegnamento *Oceanografia Fisica* nell'ambito del Corso di **Laurea Magistrale** in *Scienze e tecnologie Geologiche* (6CFU), Scuola di Scienze, Università di Milano, Bicocca.
- Docente dell'insegnamento *Extreme climatic events* nell'ambito del Corso di **Dottorato** in *Scienze Ambientali, Geologiche e Chimiche* (1 CFU), Università di Milano, Bicocca.

A.A. 2014/2015

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (8 CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.48/3.
- Docente dell'insegnamento *Fisica dell'Atmosfera e dell'Oceano* nell'ambito del Corso di **Laurea Magistrale** in *Scienze e tecnologie Geologiche* (6CFU), Scuola di Scienze, Università di Milano, Bicocca. Valutazione: 2.7/3.

A.A. 2012/2013

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze e Tecnologie Geologiche* (8 CFU), Scuola di Scienze, Università di Milano, Bicocca.
- Docente dell'insegnamento *Fisica dell'Atmosfera e dell'Oceano* nell'ambito del Corso di **Laurea Magistrale** in *Scienze e tecnologie Geologiche* (6CFU), Scuola di Scienze, Università di Milano, Bicocca.

A.A. 2011/2012

- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze Geologiche e Geotecnologiche* (8 CFU), Facoltà di Scienze MMFFNN, Università di Milano, Bicocca.

A.A. 2008/2009

- Docente dell'insegnamento *Ocean Dynamics* nell'ambito del Corso di **Dottorato** in *Earth System Science* (PhD degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.83/4.
- Docente dell'insegnamento *Physical Oceanography* nell'ambito del Corso di **Laurea** in *Earth System Science* (BS degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.53/4.
- Docente dell'insegnamento *Geofisica* nell'ambito del Corso di **Laurea** in *Scienze Geologiche e Geotecnologiche* (5 CFU), Facoltà di Scienze MMFFNN, Università di Milano, Bicocca.

A.A. 2007/2008

- Docente dell'insegnamento *Atmospheric Dynamics* nell'ambito del Corso di **Dottorato** in *Earth System Science* (PhD degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.80/4.
- Docente dell'insegnamento *Physical Oceanography* nell'ambito del Corso di **Laurea** in *Earth System Science* (BS degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.75/4.
- Docente dell'insegnamento *Earth System Physics* nell'ambito del Corso di **Dottorato** in *Earth System Science* (PhD degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.81/4.

A.A. 2006/2007

- Docente dell'insegnamento *Earth's Atmosphere* nell'ambito del Corso di **Laurea** in *Earth System Science* (BS degree), School of Physical Sciences, University of California, Irvine. Valutazione: 3.77/4.

A.A. 2005/2006

- Docente dell'insegnamento *Atmospheric and Oceanic Transport* nell'ambito del Corso di **Dottorato** in *Geological and Planetary Sciences* (PhD degree), California Institute of Technology.

A.A. 2004/2005

- Docente dell'insegnamento *Introduction to Physical Oceanography* nell'ambito del Corso di **Laurea** in *Atmospheric and Ocean Sciences* (BS degree), University of California, Los Angeles.

A.A. 2003/2004

- Docente dell'insegnamento *Introduction to Physical Oceanography* nell'ambito del Corso di **Laurea** in *Atmospheric and Ocean Sciences* (BS degree), University of California, Los Angeles.
- Docente dell'insegnamento *Fisica dell'Atmosfera* nell'ambito del Corso di **Master** in *Esperti in idrometeorologia e in metodi e tecniche per le osservazioni della Terra - COS(o)T*, Università di Genova e della Basilicata.

A.A. 2002/2003

- Docente dell'insegnamento *Introduction to Physical Oceanography* nell'ambito del Corso di **Laurea** in *Atmospheric and Ocean Sciences* (BS degree), University of California, Los Angeles.

Supervisor

Assegnisti di ricerca post-doc: Hossein Hassantabar (2024-); Matteo Borgnino (2021-); Agostino N. Meroni (2021-); Fabien Desbiolles (2020-2022); Francesco Ragone (2016-2018)
Borsisti: Iman Goudarzi (2024-); Paolo Bassi (2020).

PhD thesis advisor

Relatrice delle seguenti tesi di dottorato:

- *TBD*, Alice Guccione, UniMiB (2024-)
- *Intensification rate of tropical cyclones*, Andrea Davin, UniMiB (2023-)
- *A Sub-mesoscale Study of Shallow Convective Circulation and Trade-cumuli in the North-West Atlantic Tropical Region*, Lorenzo F. Davoli, UniMiB (2023-)
- *Convective precipitation in a changing climate*, Lisa Bernini, UniGe (2022-)
- *Extratropical climate variability: Longitudinal characterization of mid- and high- latitude interactions* Alice Portal, UniMiB (2019-2023)
- *Effects of aerosols on orographic precipitations* Anna Napoli, UniGe (2018-2022)
- *Extreme meteorological events in the Alpine region* Mostafa E. Hamouda, UniMiB (2017-2021)
- *Ocean circulation in the Maldivian Archipelago* Chiara De Falco, UniMiB (2017-2021)
- *Interactions between the ocean and extreme meteorological events*, Agostino Niyonkuru Meroni, PhD program in Marine Sciences, UniMiB (2014-2017).
- *Impacts of High-Wind Events on the Variability of Upper-Ocean Heat Content*, Wei Mei, PhD degree in Earth System Science, University of California, Irvine (2007-2012).

Master thesis advisor

Relatrice delle tesi di Laurea Magistrale:

- *Studio di eventi meteorologici estremi nell'area Alpina da dati di downscaling dinamico di rianalisi*, Dario Russo, Scienze e Tecnologie Geologiche, UniMiB (2024)
- *Global extreme precipitation change in relation to altitude and urbanization*, Alice Guccione, Fisica, UniMiB (2024)
- *Analysis of climate change signatures on intense precipitation events and extreme winds in the Alpine region (GAR)*, Cristina Iacomino, Fisica, Univ. Roma Tre (2023)
- *Intensification mechanisms of tropical cyclones*, Andrea Polesello, Fisica, UniMiB (2023)
- *Influence of sea surface temperature spatial variability on tropical cyclone intensification*, Lisa Bernini, Université de Marseille, France (2022).
- *Microplastic fate modeling: parametrization of the main processes affecting plastic debris in the ocean and their integration in the PaTATO toolbox*, Lorena Calò, Marine Sciences, UNIMIB (2021).
- *The role of volcanism in climate change over the past 800,00 years*, Luca Castrogiovanni, Scienze e Tecnologie Geologiche, UniMiB (2021).
- *Multi-year analysis of snowfall types in Marquette, Michigan: a differentiation between synoptic snow events and Lake Effect Snow events impacted by the presence of Lake Superior*, Roberto Piemontese, Scienze e Tecnologie Geologiche, UniMiB (2020).
- *Orographic precipitation in the Alps: analysis of rain gauge data and atmospheric model output*, Anna Napoli, Fisica, UniMi (2018)
- *Mechanism of heat accumulation and release in the deep glacial ocean*, Chiara De Falco, Fisica, UniMI (2017),
- *Criteri di identificazione dei Medicanes: cicloni di tipo tropicale nel Mar Mediterraneo*, Monica Mariotti, Scienze e Tecnologie per l'Ambiente e il Territorio, UniMiB (2017),
- *Valutazione del tasso di scioglimento degli iceberg nel Nord Atlantico*, Michela Rampazzo, Scienze e Tecnologie Geologiche, UniMiB (2015),
- *Upper Ocean dynamical response to intense cyclonic winds*, Agostino Meroni, Fisica, UniMiB (2014),
- *Effects of submesoscale dynamics on the marine ecosystem*, Hiusuet Kung, Master degree in Earth System Science, University of California, Irvine (2010).
- *Crittografia quantistica: protocolli e loro efficienza.*, Eva Filoramo, Facoltà di Scienze MMFFNN, Università di Torino (2002, co-relatore con il Prof. Giovannini).

Laurea thesis advisor

- *Esperimenti con vasca rotante per la didattica dell'oceanografia fisica*, Alessia Cordoni, Fisica, UniMiB (2023)
- *Studio della relazione tra tasso di intensificazione degli uragani e temperature oceaniche nel Pacifico Occidentale*, Valentina Vitale, Scienze e Tecnologie Geologiche, UniMiB (2021)
- *Analisi della variabilità della pressione barometrica sui flussi d'aria in entrata e in uscita da un pozzo d'acqua a Sangano (TO)*, Emanuele Grimaldi, Scienze e Tecnologie Geologiche, UniMiB (2021)
- *Studio della relazione tra tasso di intensificazione degli uragani e temperature oceaniche*, Stefania Barbarossa, Scienze e Tecnologie Geologiche, UniMiB (2020)
- *Effetti della temperatura oceanica sul vento nello strato limite atmosferico*, Maria Alberti, Scienze e Tecnologie Geologiche, UniMiB (2020)
- *Effetti delle correnti oceaniche sul vento superficiale*, Teseo Tosi, Scienze e Tecnologie Geologiche, UniMiB (2020)
- *Studio climatologico delle relazioni tra temperatura superficiale oceanica e venti superficiali*, Tiziano Marchesi, Scienze e Tecnologie Geologiche, UniMiB (2019)
- *Sea surface temperature and winds in the Mediterranean: investigation of a two-way interaction*, Michele Giurato, Fisica, UniMiB (2018)
- *Analisi delle precipitazioni orografiche in relazione alla quota: studio da dati pluviometrici nelle Alpi, nell'Himalaya e nelle Montagne Rocciose*, Andrea Arrighi, Scienze e Tecnologie Geologiche, UniMiB (2018)
- *Comparison between three models of glacial – interglacial cycles*, Arianna Olivelli, Scienze e Tecnologie Geologiche, UniMiB (2017)
- *Criteri di identificazione dei Medicanes – i cicloni di tipo tropicale in ambiente Mediterraneo*, Michele Provera, Scienze e Tecnologie Geologiche, UniMiB (2017)
- *Convective Motion of the Mantle*, Simone Jovanovic, Scienze e Tecnologie Geologiche, UniMiB (2017)
- *Studio della variabilità dei venti superficiali nell'area Mediterranea a partire dai dati di rianalisi atmosferica ERA-Interim*, Elisa Terenghi, Fisica, UniMiB (2016).
- *Variabilità dei venti nella regione Mediterranea*, Luca Santagostini, Scienze Ambientali, UniMiB (2016).
- *Analisi osservativa dell'uragano mediterraneo Qendresa II/Vega*, Matteo Bargna, Scienze e Tecnologie Geologiche, UniMiB (2015).
- *Sea surface height response to strong winds in the Mediterranean*, Anna Napoli, Fisica, UniMiB (2015).
- *Extreme wind events over the Mediterranean Sea*, Andrea Meli, Fisica, UniMiB (2014).
- *Effetti del calore geotermico sul bilancio energetico oceanico*, Giacomo Redondi, Scienze e Tecnologie Geologiche, UniMiB (2014).

HONORS, AWARDS and RECOGNITIONS

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|------------|---|
| 2024 | Invited fellowship to participate to the TROPICANA program at Institute Pascal, Paris Saclay |
| Since 2022 | Associate editor for <i>Earth System Dynamics</i> - Elsevier |
| 2021 | Invited fellowship to participate to the Program “Machine Learning and the Physics of Climate”, KAVLI Institute for Theoretical Physics, California, USA (2 months, <i>declined</i>) |
| 2021 | Invited Professorship at Department of Geosciences, Ecole Normale Supérieure, Paris, FR (6 weeks) |
| 2021 | The paper “A breakdown of the link between Arctic and North Atlantic Oscillations in warm climate projections” published on Nature Climate Change was presented on Nature Reviews Earth and Environment in the section “Research Highlights”. |
| 2020 | AGU 2019 Editors’ Citation for Excellence in Refereeing, Geophysical Research Letters |
| 2020 | <i>Distinguished referee</i> for The European Physical Journal, Springer |
| Since 2018 | ESA Mission Advisory Group member, for Earth Explorer X Candidate Mission “Harmony” |
| 2019-2026 | Italian Alternate Delegate for the International Union of Geodesy and Geophysics |
| 2018 | National habilitation to Full Professor in Geophysics |
| 2018 | Invited fellowship at Earth and Planetary Sciences, Harvard University, USA (2 months) |
| 2012 | The paper “The effect of translation speed on the intensity of tropical cyclones over the tropical ocean” published on GRL was presented on EOS in the section “Research spotlight: highlighting exciting new research from AGU journals”. |

- 2008 Invited fellowship to participate to the Program “Physics of Climate”, Kavli Institute for Theoretical Physics, California, USA (1 month)
 - 2007 Invited Professorship at Center for Climate System Research, University of Tokyo (3 months, *declined*)
 - 2006-2012 Member of the Atmospheric and Oceanic Fluid Dynamics Committee of the American Meteorological Society
 - 2004 The paper “Effects of a Wind-Driven Gyre on Thermohaline Circulation Variability” published in Journal of Physical Oceanography was presented on the Bulletin of the American Meteorological Society in the section “Papers of note”.
 - 2003 Winner of the “young investigator research grant”, ISAC-CNR
 - 2001 Individual post-doctoral Feinberg fellowship recipient, Weizmann Institute, Israel
 - 1998-1999 Fellowship recipient for participation to the Woods Hole Summer Program in Geophysical Fluid Dynamics (twice, 10 weeks each)
- Travel grants to attend schools and conferences (Erasmus, TAO study center, Les Houches School, IUGG, ...)
- Invited / keynote speaker at over 50 international conferences and universities (including MIT, Harvard, Columbia Univ., UCLA, Univ. Hawaii, NASA JPL, Ecole Normale Paris)
- Reviewer/panelist for US NSF (Physical Oceanography, Biological Oceanography, Atmospheric Science, Mathematical Geophysics), for Israeli Science Foundation, for Italian ANVUR, and for over 30 international ISI journals.

GRANTS and PROJECTS

- 2023-2025 PRIN-PNRR Project “LocCLIMA: Impact of LOCAL conditions on the change of Italian microCLIMAtes”, PI, Euro 239,923
- 2023-2025 PRIN Project “ICREN: Intense Convective Rainfall Events Nowcasting”, co-I, Euro 242,438
- 2021-2023 ESA Climate Change Initiative Research “GLAUCO: Global and Local Atmospheric response to the Underlying Coupled Ocean”, PI, Euro 59,000, recipient: A.N. Meroni*
- 2020-2023 ESA Science Studies Phase 0-A “Mission performance” and “Data Utilization” for EE10 Candidate Mission “Harmony”, Euro 130,000.
- 2020-2023 “EUREC4A-OA: Elucidating the role of the ocean meso and submesoscale in air-sea interactions and in the related exchanges of heat, carbon, oxygen, water and momentum in cloud formation and their overall impact in the climate system”, JPI Climate and Oceans, PI for the Italian component, Euro 192,000
- 2020-2024 MedCyclones COST Action on Mediterranean Cyclones
- 2018-2021 “Submesoscale air-sea interactions” HPC-TRES for Climate Science, PI, Euro 60,000
- 2017-2020 “EXTRA: Extreme rains in the Alps”, Fondazione Cariplo, PI, Euro 100,000
- 2012-2016 MIUR “RITMARE” project, WP leader, Euro 70,000
- 2008-2010 US NSF “International Conference on Mathematical Geophysics: Student and Early Career Scientist support”, Euro 66,000

PUBLICATIONS

Bibliometric indicators

Scopus: h-index 21, citations 1765, documents 53 (since 2000), mean citations/doc 33, normalised h-index 0.875
 Google Scholar: h-index 23, citations 2435, i10-index 36
 Total impact factor: 226, mean impact factor: 4.5 [see below]

 Papers
 IF: Scopus 2-yr Impact Factor of the publication year

*asterisk indicates an advised student or post-doc

C. De Falco*, A. Bracco, F. Desbiolles, C. Pasquero (2024) *Kilometer-scale physical processes behind the seasonal variability of the Island Mass Effect in the Maldives*, **Scientific Reports**, in press. IF: 4.440

N. Tartaglione, F. Desbiolles, A. Del Moral-Méndez, A.N. Meroni*, A. Napoli, M. Borgnino*, A. Parodi, C. Pasquero (2024) *"Low cloud response to aerosol-radiation-cloud interactions: idealized WRF numerical experiments for EUREC4 A project"*, **Atmospheric Science Letters**, e1208 <https://doi.org/10.1002/asl.1208>. IF: 3.153

M.E. Hamouda, A. Portal*, C. Pasquero (2024) *"Polar Vortex Disruptions by High Latitude Ocean Warming"*, **Geophysical Research Letters**, <https://doi.org/10.1029/2023GL107567>. IF: 5.382

Portal*, F. D'Andrea, P. Davini, M. E. Hamouda, C. Pasquero (2023) *Atmospheric response to wintertime Tibetan Plateau cold bias in climate models*, **Weather and Climate Dynamics**, 4, 809-822, <https://doi.org/10.5194/wcd-4-809-2023>. IF: 3.449

A. N. Meroni*, F. Desbiolles, C. Pasquero (2023) *Satellite signature of the instantaneous wind response to mesoscale oceanic thermal structures*, **Quarterly Journal of the Royal Meteorological Society**, DOI: 10.1002/qj.4561. IF: 9.819

E. Flaounas, L. Aragão, L. Bernini*, S. Dafis, B. Doiteau, H. Flocas, S.L. Gray, A. Karwat, J. Kouroutzoglou, P. Lionello, F. Pantillon, C. Pasquero, P. Patlakas, M.A. Picornell, F. Porcù, M.D.K. Priestley, M. Reale, M. Roberts, H. Saaroni, D. Sandler, E. Scoccimarro, M. Sprenger, B. Ziv (2023) *A composite approach to produce reference datasets for extratropical cyclone tracks: Application to Mediterranean cyclones*, **Weather and Climate Dynamics**, 4, 639–661, doi: 10.5194/wcd-4-639-2023. IF: 3.449

A. Napoli*, J. von Hardenberg, A. Parodi, C. Pasquero (2023) *Altitudinal dependence of projected changes in occurrence of extreme events in the Great Alpine Region*, **International Journal of Climatology**, doi.org/10.1002/joc.8222. IF: 4.414

P. Fernández, S. Speich, M. Borgnino*, A.N. Meroni*, F. Desbiolles, C. Pasquero (2023) *On the importance of the atmospheric coupling to the small-scale ocean in the modulation of latent heat flux*, **Frontiers in Marine Sciences**, doi: 10.3389/fmars.2023.1136558. IF: 3.599

F. Desbiolles, A. N. Meroni*, L. Renault, C. Pasquero (2023) *Environmental Control of wind response to sea surface temperature patterns in reanalysis dataset*, **Journal of Climate**, doi:10.1175/JCLI-D-22-0373.1. IF: 5.051

Napoli*, F. Desbiolles*, A. Parodi, C. Pasquero (2022) *Aerosol indirect effects in complex orography areas: a numerical study over the Great Alpine Region*, **Atmospheric Chemistry and Physics**, doi: 10.1594/acp-22-3901-2022 IF: 6.339 [Media coverage]

C. De Falco*, F. Desbiolles*, A. Bracco, C. Pasquero (2022) *Island Mass Effect: a review of oceanic physical processes*, **Frontiers in Marine Science**, doi:10.3389/fmars.2022.894860. IF: 3.599

O. Mehling, K. Bellomo, M. Angeloni, C. Pasquero, J. von Hardenberg (2022) *High-latitude precipitation as a driver of multicentennial variability of the Atlantic Meridional Overturning Circulation in a climate model of intermediate complexity*, **Climate Dynamics**, doi:10.1007/s00382-022-06640-3. IF: 5.043

A. N. Meroni*, F. Desbiolles*, C. Pasquero (2022) *Introducing a new metrics for the atmospheric pressure adjustment to thermal structures at the ocean surface*, **JGR-Atmosphere**, doi:10.1029/2021JD035968. IF: 4.400

- A. Portal*, C. Pasquero, F. D'Andrea, P. Davini, M. Hamouda*, G. Rivière (2022) *Influence of reduced winter land-sea contrast on the mid-latitude atmospheric circulation*, **J. Climate**, doi:10.1175/JCLI-D-21-0941.1. IF: 5.051
- P. Sternai, V. A. P. Muller, L. Jolivet, E. Garzanti, G. Corti, C. Pasquero, A. Sembroni, C. Faccenna (2021) *Effects of asthenospheric flow and orographic precipitation on continental rifting*, **Tectonophysics**, 820, 229120, doi:10.1016/j.tecto.2021.229120. IF: 3.412
- M.E. Hamouda*, C. Pasquero (2021) *European Extreme Precipitation: the effects of spatio-temporal resolution of the data*, **Weather and Climate Extremes**, doi:10.1016/j.wace.2021.100337. IF: 7.505 Presented on *Nature Reviews Earth and Environment* in the section "Research Highlights". [Media coverage]
- F. Desbiolles*, M. Alberti*, M. Hamouda*, A.N. Meroni, C. Pasquero (2021) *Links between sea surface temperature structures, clouds and rainfall: Study case of the Mediterranean Sea*, **Geophysical Research Letters**, doi:10.1029/2020GL091839 IF: 4.685
- M.E. Hamouda*, C. Pasquero, E. Tziperman (2021) *Decoupling of the Arctic Oscillation and North Atlantic Oscillation in a warmer climate*, **Nature Climate Change**, doi: 10.1038/s41558-020-00966-8. IF: 12.910
- C. Pasquero, F. Desbiolles*, A.N. Meroni (2020) *Air-sea interactions in the cold wakes of tropical cyclones*, **Geophysical Research Letters**, doi: 10.1029/2020GL091185. IF: 4.642
- C. De Falco*, A. Bracco, C. Pasquero (2020) *Climatic and oceanographic controls on coral bleaching conditions in the Maldivian region*, **Frontiers in Marine Science**, doi: 10.3389/fmars.2020.539869. IF: 4.452
- A. N. Meroni*, M. Giurato*, F. Ragone*, C. Pasquero (2020) *Observational evidence of the preferential occurrence of wind convergence over sea surface temperature fronts in the Mediterranean*, **Quarterly Journal of the Royal Meteorological Society**, doi: 10.1002/qj.3745. IF: 3.790
- P. Sternai, L. Caricchi, C. Pasquero, E. Garzanti, D.J.J. van Hinsbergen, S. Castelltort (2020) *Magmatic forcing of Cenozoic climate*, **J. Geophysical Research - Solid Earth**, 125, e2018JB016460, https://doi.org/10.1029/2018JB016460. IF: 3.946
- A. Napoli*, A. Crespi, F. Ragone*, M. Maugeri, C. Pasquero (2019) *Variability of orographic enhancement of precipitation in the Alpine region*, **Scientific Reports**, doi: 10.1038/s41598-019-49974-5. IF: 4.149
- F. Ragone*, A. Meli*, A. Napoli*, C. Pasquero (2019) *Ocean surface anomalies after strong winds in the Western Mediterranean region*, **J. Marine Science and Engineering**, 7(6), 182; doi:10.3390/jmse7060182 IF: 1.893
- F. Ragone*, M. Mariotti*, A. Parodi, J. von Hardenberg, C. Pasquero (2018) *A climatological study of Western Mediterranean Medicanes in numerical simulations with explicit and parameterized convection*, **Atmosphere**, 9(10), 397, doi:10.3390/atmos9100397. IF: 2.108
- A.N. Meroni*, L. Renault, A. Parodi, C. Pasquero (2018) *Role of the oceanic vertical thermal structure in the modulation of heavy precipitations over the Ligurian Sea*, **Pure and Applied Geophysics**, doi:10.1007/s00024-018-2002-y. IF: 1.500
- A.N. Meroni*, A. Parodi, C. Pasquero (2018) *Role of SST patterns on surface wind modulation of a heavy midlatitude precipitation event*, **J. Geophys. Res. - Atmosphere**, doi: 10.1029/2018jd028276. IF: 2.567
- A. N. Meroni*, M. Miller, E. Tziperman, C. Pasquero (2017) *Nonlinear energy transfer among ocean internal waves in the wake of a moving cyclone*, **J. Physical Oceanography**, 47, 1961-1980. IF: 3.090

- W. Mei*, S.-P. Xie, F. Primeau, J.C. McWilliams, C. Pasquero (2015) *Northwestern Pacific typhoon intensity controlled by changes in ocean temperatures*, **Science Advances**, e1500014, doi:10.1126/sciadv.1500014 IF: 9.966
- W. Mei*, F. Primeau, J.C. McWilliams, C. Pasquero (2013) *Sea surface height evidence for long-term warming effects of tropical cyclones on the ocean*, **Proceedings of the National Academy of Science USA**, 110, 15207-15210. IF: 9.824
- W. Mei*, C. Pasquero (2013) *Spatial and temporal characterization of sea surface temperature response to tropical cyclones*, **J. Climate**, 26, 3745-3765. IF: 5.617
- W. Mei*, C. Pasquero, F. Primeau (2012) *The effect of translation speed on the intensity of tropical cyclones over the tropical ocean*, **Geophys. Research Letters**, 39, L07801, doi:10.1029/2011GL050765. IF: 4.117 Presented on EOS in the section "Research spotlight: highlighting exciting new research from AGU journals"
- W. Mei*, C. Pasquero (2012) *Restratification of the upper ocean after the passage of a tropical cyclone*, **J. Physical Oceanography**, 42, 1377-1401, doi: 10.1175/JPO-D-11-0209.1. IF: 3.311
- Bracco, S. Clayton, C. Pasquero (2009) *Horizontal advection, diffusion and plankton spectra at the sea surface*, **J. Geophysical Research - Oceans**, 114 C02001, doi:10.1029/2007JC00467. IF: 2.264
- C. Pasquero, K. Emanuel (2008) *Tropical cyclones and upper ocean warming*, **J. Climate**, 21, 149-162. IF: 4.894
- I. Koszalka, A. Bracco, C. Pasquero, A. Provenzale (2007) *Plankton cycles disguised by turbulent advection*, **Theoretical Population Biology**, doi:10.1016/j.tpb.2007.03.007. IF: 2.033
- C. Pasquero & E. Tziperman (2007) *Statistical parameterization of heterogeneous oceanic convection*, **J. Physical Oceanography**, 37, 214-229. IF: 2.204
- C. Pasquero (2005) *Differential eddy diffusion of biogeochemical tracers*, **Geophysical Research Letters**, 32, L17603, doi:10.1029/2005GL023662. IF: 2.467
- A. Kappler, C. Pasquero, K.O. Konhauser, D.K. Newman (2005) *Deposition of Banded Iron Formations by Photoautotrophic Fe(II)-Oxidizing Bacteria*, **Geology**, 33, 865-868. IF: 3.088
- C. Pasquero, A. Bracco, A. Provenzale (2005) *Impact of the spatiotemporal variability of the nutrient flux on primary productivity in the ocean*, **J. Geophysical Research - Oceans**, 110, C07005, doi:10.129/2004JC002738. IF: 2.667
- J.F. Adkins, A.P. Ingersoll, C. Pasquero (2005), *Rapid climate change and conditional instability of the glacial deep ocean from the thermobaric effect and geothermal heating*, **Quaternary Science Reviews**, 24, 581-594. IF: 3.325
- J.F. Adkins, C. Pasquero (2004) *Deep Ocean Overturning - Then and Now*, **Science**, 306, 1143-1144. IF: 17.224
- C. Pasquero & E. Tziperman (2004) *Effects of a Wind-Driven Gyre on Thermohaline Circulation Variability*, **Journal of Physical Oceanography**, 34, 805-816. IF: 2.499
- C. Pasquero & E. Tziperman (2004) *Wind energy effects on ocean circulation*, **Bulletin of the American Meteorological Society**, 85(6), 817-818. IF: 2.972
- C. Pasquero, A. Provenzale, E. A Spiegel (2003) *Suspension and fall of heavy particles in random two-dimensional flow*, **Phys. Rev. Lett.**, 91, 054502. IF: 5.565
- C. Pasquero, A. Provenzale, J. B. Weiss (2002) *Vortex statistics from Eulerian and Lagrangian time series*, **Phys. Rev. Lett.**, 89, 284501. IF: 7.003
- C. Pasquero & G. Falkovich (2002) *Stationary spectrum of vorticity cascade in two-dimensional turbulence*, **Physical Review E**, 65, 056305. IF: 1.805
- C. Pasquero, A. Babiano, A. Provenzale (2001) *Parameterization of dispersion in two-dimensional turbulence*, **Journal of Fluid Mechanics**, 439, 279-303. IF: 2.186

N. J. Balmforth, C. Pasquero, A. Provenzale (2000) *The Lorenz-Fermi-Pasta-Ulam experiment*, **Physica D**, 138, 1-43. IF: 1.683

A. Bracco, J. LaCasce, C. Pasquero, A. Provenzale (2000) *Velocity PDFs in barotropic turbulence*, **Physics of Fluids**, 12, 2478-2488. IF: 1.605

Abstracts

Abstracts presentati a convegni internazionali con comitato scientifico di revisione e pubblicati: *Gli abstract per alcuni anni non sono stati inseriti*

- L Castrogiovanni, P Sternai, C Pasquero, N Piana Agostinetti (2024) Input and output fluxes of surface CO₂ over the Late Quaternary, EGU General Assembly Conference Abstracts 2024, 10.5194/egusphere-egu24-1026.
 - L Bernini, L Cavicchia, F Desbiolles, A Parodi, C. Pasquero, E. Scoccimarro (2024) Environmental Characteristics Associated with the Tropical Transition of Mediterranean Cyclones, EGU General Assembly 2024, <https://doi.org/10.5194/egu24-7801>.
 - S Speich, et al [C Pasquero] (2024) Multi-platform high resolution in situ observations for understanding mesoscale and sub-mesoscale processes and their role in the air-sea exchanges: Experiences and prospects from the EUREC4A-OA/ATOMIC field experiment, EGU General Assembly 2024, <https://doi.org/10.5194/egusphere-egu24-19188>.
 - PL Dekker, et al [C. Pasquero] et al. (2024) High resolution observations of surface stress and current vectors and ocean wave spectra with the upcoming Harmony mission, 2024 Ocean Sciences Meeting. AGU, 2024.
 - F D'Andrea, A Portal, P Davini, ME Hamouda, C Pasquero (2023) Atmospheric conditions associated with cold East-Asian orography in climate models, EMS Annual Meetinf 2023, <https://doi.org/10.5194/ems2023-332>.
 - S Speich, et al [C. Pasquero] (2023) Lessons learned from the EUREC4A-OA experiment on the impact of ocean small scales on air-sea interactions in the Northwest Tropical Atlantic, EGU General Assembly, 10.5194/egusphere-egu23-3608.
 - A Polesello, CJ Muller, C Pasquero, AN Meroni (2023) Intensification mechanisms of tropical cyclones, EGU General Assembly Conference Abstracts, EGU-6157, 10.5194/egusphere-egu23-6157.
 - A Portal, F D'Andrea, P Davini, ME Hamouda, C Pasquero (2023) Atmospheric response to wintertime Tibetan Plateau cold bias in climate models, EGU sphere 2023, 1-18, <https://doi.org/10.5194/egusphere-2022-1499>.
 - G Bosio, et al [C. Pasquero] (2023) How old is the Humboldt Current System? 4th Palaeontological Virtual Congress 2023.
 - O Mehling, K Bellomo, M Angeloni, C Pasquero, J von Hardenberg (2022) A Coupled Atmosphere-Ocean Mode Driving Multicentennial AMOC Variability in a Climate Model of Intermediate Complexity, AGU Fall Meeting 2022, 2022AGUFMOS22C0906M.
 - ME Hamouda, C Pasquero (2022) Mid-latitude Precursors for Stratospheric Polar Vortex Weakening, AGU Fall Meeting 2022, 2022AGUFM.A42H..02H
-
- A Portal, C Pasquero, F D'Andrea, P Davini, M Hamouda, G Rivière (2022) How is the extratropical circulation affected by reduced Atlantic and Pacific land-sea thermal contrast?, EMS Annual Meeting 2022, <https://doi.org/10.5194/ems2022-19>
 - A Napoli, J von Hardenberg, C Pasquero, A Parodi (2022) Altitudinal dependence of historical and future extreme events in the Great Alpine Region modelled with WRF, EGU General Assembly 2022, 10.5194/egusphere-egu22-2752 .
 - A Portal, C Pasquero, F D'Andrea, P Davini, M Hamouda, G Rivière (2022) The effects of reduced Atlantic and Pacific land-sea thermal contrast on the extratropical circulation, EGU General Assembly 2022, 10.5194/egusphere-egu22-6394
 - P Lopez-Dekker, et al [C. Pasquero] (2022) Harmony: science objectives and mission overview, ESA Living Planet Symposium 2022, <https://elib.dlr.de/191575/>
 - A Portal, C Pasquero, F D'Andrea, P Davini, ME Hamouda (2021) The Impact of Pacific and Atlantic Land-Sea Thermal Contrast on the Mid-Latitude Atmosphere, AGU Fall Meeting, 2021AGUFM.A15M1835P
 - De Falco, C., Bracco, A., and Pasquero, C. (2021): Upwelling signature around small oceanic islands and the case of the Maldives Archipelago, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-15607, <https://doi.org/10.5194/egusphere-egu21-15607>, 2021.
 - Napoli, A., Pasquero, C., and Parodi, A. (2021): High resolution numerical investigation of the indirect effects of aerosols on orographic precipitation, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-4133, <https://doi.org/10.5194/egusphere-egu21-4133>, 2021.
-
- Portal, A., Pasquero, C., D'Andrea, F., Davini, P., and Hamouda, M. (2021): Reduced winter land sea contrast and its effects on mid-latitude atmospheric variability, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-1790, <https://doi.org/10.5194/egusphere-egu21-1790>, 2021.
 - Desbiolles, F., Meroni, A., Alberi, M., Hamouda, M. E., Giurato, M., Ragone, F., and Pasquero, C.: (2021) Climatic effects of mesoscale sea frontal structures in the Mediterranean Sea, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-5208, <https://doi.org/10.5194/egusphere-egu21-5208>, 2021.
 - Hamouda, M., Pasquero, C. (2020) European Precipitation Extremes Using High Resolution Model, A009-000, presented at 2020 Fall Meeting, AGU, Virtual, 1-17 Dec.
 - De Falco, C., A. Bracco, and C. Pasquero (2020) Climatic and Oceanographic Controls on Coral Bleaching Conditions in the Maldivian Region, GC082-0010, presented at 2020 Fall Meeting, AGU, Virtual, 1-17 Dec.
 - Lopez Dekker, P., B. Buongiorno Nardelli, B. Chapron, S. Masina, C. Pasquero (2020) The ESA Earth Explorer 10 candidate satellite mission HARMONY: a focus on ocean submesoscales, A124A-2311 presented at 2020 Ocean Sciences Meeting, AGU, San Diego, CA, 16-21 Feb.
 - Hamouda, M., Pasquero, C., and Tziperman, E. (2020): A breakdown of the link between the Arctic and North Atlantic Oscillations in warm climate projections, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-5528, <https://doi.org/10.5194/egusphere-egu2020-5528>.
 - Hamouda, M., Pasquero, C., and Tziperman, E. (2019): Breakdown of the link between the Arctic and North Atlantic Oscillations in a warm climate, A53J-2993 presented at 2019 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
 - Lopez Dekker, P, J Biggs, B Chapron, A Hooper, A Käåb, S Massina, J Mougnot, B Buongiorno Nardelli, C Pasquero, P. Prats-Iraola, P. Rampal, J. Stroeve, K. Scipal (2019) The Harmony mission: applications and preliminary performance, Paper presented at 6th Workshop on Advanced RF Sensors and Remote Sensing Instruments, ARSF'19, Noordwijk, Netherlands.
 - Kleinherenbrink, M., P Lopez Dekker, J. Stroeve, T. Newman, P. Rampal, A. Korosov, J. Biggs, A. J Hooper, J. Mougnot, A. Käåb, C. Pasquero, S. Masina, B Buongiorno Nardelli, P. Prats-Iraola (2019) The performance of Harmony's two-dimensional sea-ice-drift observations, C54B-06, presented at 2019 Fall Meeting, AGU, San Francisco, CA, 9-13 Dec.
 - W.MeI, C. Pasquero (2015) *Northwestern Pacific Typhoon Intensity Controlled by Changes in Ocean Temperatures*, Eos Trans. AGU, Fall Meet. Suppl., Abstract

- W. Mei, **C. Pasquero**, F. Primeau (2011) *Effects of tropical cyclones on the ocean heat content*, Eos Trans. AGU, Fall Meet. Suppl., Abstract GC44B-02.
- W. Mei, **C. Pasquero** (2010) *Restratification of the upper ocean after the passage of a tropical cyclone*, Eos Trans. AGU, Fall Meet. Suppl., Abstract GC51G-0811.
- A. Bracco, S. Clayton, **C. Pasquero** (2009) *Horizontal advection, diffusion and plankton spectra at the sea surface*, Geophys. Res. Abstracts, vol. 11, EGU2009-11508.
- **C. Pasquero**, E. Tziperman (2007) *Statistical parameterization of oceanic deep convection*, IUGG XXIV General Assembly, US011, 69, ISBN : 978-88-95852-25-4.
- **C. Pasquero**, K. Emanuel (2007) *Strong tropical winds and upper ocean heat content*, Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract GC54B-08.
- **C. Pasquero**, K. Emanuel (2007) *Upper ocean warming and tropical cyclones*, AMS, 13 Fluid, Paper 124149.
- **C. Pasquero**, E. Tziperman (2006) *Statistical parameterization of oceanic convection*, Geophysical Research Abstracts, EGU06-A-05307.
- **C. Pasquero** (2005) *Mesoscale turbulence effects on transport of marine biogeochemical tracers*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract NG33C-0189.
- E. Tziperman, **C. Pasquero** (2005) *Statistical representation of heterogeneous oceanic convection*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract OS14A-02.
- J.F. Adkins, **C. Pasquero** (2005) *Conditional instability of the glacial deep ocean*, Eos Trans. AGU, 86(52), Fall Meet. Suppl., Abstract PP12B-08.
- **C. Pasquero**, J.F. Adkins, A.P. Ingersoll (2005) *Large scale circulation and convective buoyancy losses*, AMS, 15 Fluid, Abstract 4.3.
- **C. Pasquero** (2005) *Parameterization of turbulent transport in marine ecosystems*, SIAM, DS Abstracts, MS72.
- **C. Pasquero**, A. Bracco, A. Provenzale (2005) *Impact of spatio-temporal variability of nutrient fluxes on primary productivity in the ocean*, Geophysical Research Abstracts, 7, EGU05-A-01860.
- **C. Pasquero**, J.F. Adkins, A.P. Ingersoll (2005) *Ocean convection and buoyancy fluxes: conditional instability of the glacial deep ocean*, Geophysical Research Abstract, 7, EGU05-A-10449.
- J.F. Adkins and **C. Pasquero** (2004) *Storage of heat in the glacial deep ocean and the importance of seawater thermodynamics in climate change*, Eos. Trans. AGU, 85(47), Fall Meet. Suppl., Abstract A14B-04.
- **C. Pasquero**, A. Bracco, A. Provenzale (2004) *Vortical shelters and plankton competition*, Geophys. Res. Abs. EGU04-A-03550.
- **C. Pasquero**, V. Armenio (2003) *Particle dispersion in a stably stratified channel flow*, Geophys. Res. Abs. EAE03-A-08705.
- **C. Pasquero**, A. Provenzale, E.A. Spiegel (2003) *Suspension and fall of heavy particles in random two-dimensional flows*, Geophys. Res. Abs. EAE03-A-02793.
- **C. Pasquero**, M. Manuguerra, A. Provenzale (2003) *A kinematic model for cloud droplet motion and growth*, Euromech EFM4-4, BDP-4, *solicited*.
- **C. Pasquero**, A. Provenzale, J.B. Weiss (2002) *Vortex statistics from Eulerian and Lagrangian velocity time series*, Geophys. Res. Abs. EGS02-A-04003.
- **C. Pasquero**, E. Tziperman (2002) *Coupled variability of the thermohaline circulation and a wind driven gyre*, Geophys. Res. Abs. EGS02-A-03224.
- A. Babiano, A. Griffa, **C. Pasquero**, A. Provenzale (2000) *Parameterization of transport in barotropic turbulence*, Geophys. Res. Abs. NP9.2.
- F. Brini, **C. Pasquero**, A. Trevisan (1998) *An alternative method to four dimensional variational assimilation*, Ann. Geophys. 16 C793.
- **C. Pasquero**, A. Provenzale, E. A. Spiegel (1997) *Chaotic resonance in a solar-climate model*, Ann. Geophys., 15 C594.

RESEARCH ACTIVITIES

Research interests

Mesoscale and submesoscale ocean structures. Interactions between ocean dynamics and marine ecosystems. Air-sea interactions. Extreme weather events such as tropical(-like) cyclones, heavy rainfalls, strong winds. Climate modes of variability. Effects of aerosols on meteorological conditions.

Methodologies to investigate those topics include analysis of observational data, both from in situ and remote measurements, inverse modelling, ocean, atmosphere, and Earth system models of different complexity, both local, regional, and global.

 EUREC4A
2020-2024

International collaboration. We participated to the field campaign onboard of the RV Atalante in January-February 2020, in the Northwest Tropical Atlantic, and in the subsequent modelling study, with the overall goal of understanding the role of fine-scale processes in internal ocean dynamics and air-sea interaction. Tasks: documentation of the daily cycle and mapping and quantification of different terms of the air-sea fluxes and their impacts on the marine atmospheric boundary-layer water budget, in an area largely affected by Amazon river outflow, North Brazil current, and several eddies. Main collaboration with ENS, Paris, and French CNRS. Coordination of the Italian Partners (UniMiB and CIMA Foundation).

 WHIRLS
2023-2029

International collaboration. We participate to the field campaign that will be held in 2025 in the Agulhas Current System to study fine-scale ocean processes and explore their impact on climate, marine biogeochemistry and biodiversity. We will collect data from the ship using drones to measure marine boundary layer properties. Main collaboration with ENS, Paris. Participant.

 Air-sea interactions in tropical
cyclones

International collaboration. Currently the main collaboration on this theme is with Prof. Caroline Muller, ISTA. Our task is to study the intensification of tropical cyclones and the processes that affect it. We use satellite data, high resolution modelling (both in idealised settings, with SAM, and from large global projects such as Dyamond), and reanalysis data. The two research group (UniMiB and ISTA) currently co-advise 3 PhD students on this theme.

 Mediterranean Cyclones
2020-2024

Within the COST action MedCyclones (European network for Mediterranean Cyclones in weather and climate), we use reanalysis and modelling data to characterise tropical-like cyclones in the Mediterranean region. We also contribute to the international effort on the creation of a best track dataset for Mediterranean cyclones in historical data and in CMIP datasets. Participant.

ESA Earth Explorer X

Member of mission advisory group for ESA Earth Explorer X Harmony mission, to be launched in 2029. I have been the presenter at ESA selection meetings for the air-sea interactions components. Tasks: demonstration of the scientific achievement that will be obtained with the new satellite observations, definition of mission requirements, observational strategies (temporal and spatial localisation of observations). Participant.

Extreme precipitations

International collaboration. We currently collaborate with different groups, mainly at Ecole Normale Supérieure, Paris, and with different Italian institutes (PoliTO, PoliMI, ISAC CNR, UniTO, UniMI, CIMA) to study extreme precipitations in a changing climate. Tasks: document the effects of surface conditions (land use, sea surface temperature fronts, orographic features) on heavy precipitations and their changes, use a suite of dynamical and neural network algorithms to obtain reliable precipitations in regions with complex orography. PI and co-PI on different related grants.

 Communication of climate
change

Development of effective communication paradigms for climate change. Development of hands on experiments for students and young people in schools, public exhibitions, shows. Collaboration with authors, writers, actors to design and test the paradigms. I am the scientific director of Planetaria Festival (www.planetariafestival.it).

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	C1	C1	C1	C1	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

OUTREACH ACTIVITIES

Books

- 1) A.A.V.V. "Sta arrivando la fine del mondo? 15 punti di vista sulle paure e i rischi apocalittici del nostro presente", UTET, 2024, ISBN: 9791221211436
- 2) P. Baccalario, F. Taddia, Gud, C. Pasquero "Come sta la Terra? Il libro che ti spiega tutto sul clima", Le 15 domande, Il Castoro Publ., 2021, 144pp. ISBN: 8869668304
- 3) C. Pasquero "Gli eventi climatici catastrofici", in "Il mutamento climatico", Il Mulino Publ., 2013, ISBN: 9788815246394
- 4) E. Filoramo, A. Giovannini, C. Pasquero "Alla scoperta della crittografia quantistica", Bollati Boringhieri Publ., 2006, 256pp. ISBN: 8833957780

Media

Several interviews and contributions on weather and climate events to TV, radio, press, podcasts (Will Media podcast Per Terra, Chora Media podcast BelloMondo, TEDxMilano talk, Discovery Channel, SKY TG24, Rai TG1, Rai TG3, Rai TG Leonardo, Rai3 Geo, Rai3 Kilimangiaro, RaiScuola, Rai Cultura, La Repubblica, Il Corriere della Sera, Panorama, Focus, ...).

Live events

Numerous events for teachers, scholars from preschool to secondary schools, general public, science fairs and festivals, art-science-literature events.

Planetaria

Scientific director of the Planetaria Festival, Teatro la Pergola, Firenze, 7-9/6/2024.
www.planetariafestival.it

Personal data

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

Milan, 10 July 2024

Signature: Claudia Pasquero