

Dr. D'Agostino Roberta

**National Research Council (CNR),
Institute of Atmospheric Sciences and Climate (ISAC), Italy**
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Research Interests

Large-scale atmospheric dynamics and variability from interannual to longer timescales, with an emphasis on tropical atmospheric circulation in paleoclimate simulations and future scenarios. Monsoon dynamics. Atmospheric hydrological cycle. Paleoclimate simulations and sensitivity experiments. ENSO variability. Climate of the Euro-Mediterranean region.

Academic

PERMANENT RESEARCH SCIENTIST, ITALIAN NATIONAL RESEARCH COUNCIL (CNR-ISAC) – 11/2022

JUNIOR ASSISTANT PROFESSOR (Non-tenured, RTD-A), UNIVERSITY OF TRENTO, ITALY - 05/2022 - 11/2022

POST-DOC, MAX PLANCK INSTITUTE FOR METEOROLOGY, HAMBURG, GERMANY – 11/2016 – 04/2022

- 1) **CliCCS - Cluster of Excellence, Hamburg. African and Indian monsoon margins** under the supervision of Prof. Dr. Martin Claussen, Martin Claussen's Group, Land in the Earth System Department.
- 2) **PAleao-Constraints on Monsoon Evolution and Dynamics project** under the supervision of Dr. Johann Jungclaus, Jochem Marotzke's Group, Ocean in the Earth System Department.

RESEARCH FELLOW, ETH ZÜRICH, SWITZERLAND – 04/2016 – 08/2016 under the supervision of Prof. Dr. Tapio Schneider.

PH. D STUDENT, UNIVERSITY OF SALENTO, LECCE, ITALY – 2013/2016 **Climate Dynamics**. Thesis: Response of the Hadley Circulation to climate change. Supervisor Prof. Piero Lionello.

B.SC and M.SC, PARTHENOPE UNIVERSITY, NAPLES, ITALY – 2009/2012 **Science and Technologies of the Navigation (Climatology) - summa cum laude**. Thesis: Relationship between Sahel Rainfall and Mediterranean Summer Climate. Supervisors: Prof. Giannetta Fusco and Prof. Giorgio Budillon.

Visitings

ACADEMIC GUEST, UNIVERSITY OF SALENTO, LECCE, IT – 2017, 2018, 2019, 2020 **Climate Dynamics**. Collaborator Piero Lionello.

ACADEMIC GUEST, UNIVERSITY OF READING, READING, UK – 05/2019 **Climate Dynamics**. Collaborators David Ferreira, Sandy P. Harrison.

GUEST SCIENTIST, BUREAU OF METEOROLOGY, MELBOURNE, Australia – 10/2018 **Climate Dynamics**. Collaborators Dr. Hanh Nguyen and Dr. Aurel Moise.

AFFILIATED SCIENTIST AT EURO-MEDITERRANEAN CENTER ON CLIMATE CHANGE – 2014 – 2017. CSP – Climate Simulation and Prediction Division led by Dr. Silvio Gualdi.

ACADEMIC GUEST, CALIFORNIA INSTITUTE OF TECHNOLOGY, PASADENA, US – 12/2016 **Climate Dynamics**. Supervisor Prof. Dr. Tapio Schneider.

ACADEMIC GUEST, ETH ZÜRICH, SWITZERLAND – 2015/2016 **Climate Dynamics**. Supervisor Prof. Dr. Tapio Schneider.

Teaching/Work Experience

TEACHING, AT UNIVERISTY OF TRENTO, ITALY (30 hours) – 05/2023 – **Introduction to Climate Change**
TEACHING, AT UNIVERISTY OF TRENTO, ITALY (15 hours) – 05/2022 – **Introduction to Climate Change**
TEACHING, AT UNIVERISTY OF VENICE CA' FOSCARI, ITALY (30 hours) – 04/2022 – **Climate modelling and monitoring**
SEMINAR CYCLE AT UNIVERISTY OF SALENTO (10 hours), ITALY – 02/2022 - **Climate dynamics and modelling**
TEACHING, DE MARCO-VALZANI HIGH SCHOOL, BRINDISI, ITALY – 2015-2016 – **Maths and Physics.**
TEACHING, CRISTOFORO COLOMBO HIGH SCHOOL, T. DEL GRECO, ITALY – 2012-2013 – **Maritime Science.**
ONLINE SURVEYOR, RESEARCH VESSELS (Italian National Council of Research) – 2006/11, 2007/07, 2010/11, 2011/05. **Geophysical data acquisition. Multibeam, chirp, sparker.**

Fellowships & Awards

Seals of Excellence for Marie Skłodowska-Curie actions, call H2020-MSCA-IF-2020 of 9 September 2020 for the project proposal “**Disentangling Internal VARIability and FORced Response in MONSOON dynamics: implications for decadal predictions**” by **Roberta D’Agostino** and **Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici**. This is a certificate delivered by the European Commission, as the institution managing Horizon 2020, the EU Framework Programme for Research and Innovation 2014-2020, for high-quality project proposal in a highly competitive evaluation process.

Best Presentation Award, International Conference on Meteorology and Climate Science (2020), Dhaka, Bangladesh: *The energy budget of the tropical band in future climate* by David Ferreira and Roberta D’Agostino.

Early Career Scientist Best Poster Award, SPARC General Assembly, Kyoto (1 - 5 October 2018): *Moisture budget decomposition and mechanisms behind monsoon response in the mid-Holocene and future climate scenario* by Roberta D’Agostino et al.

Awarded by Green Cross Italy, Naples (2018). *Women in Science: Award for academic career and scientific activity.*

PAGES Open Science Meeting financial support, Spain (May 2017).

Fellowship in Climate Dynamics, 2016/03 – 2016/08. *Hadley Circulation strength in paleoclimate experiments (PMIP3) and coupled models (CMIP5) from LGM to RCPs*, under the supervision of Prof. Tapio Schneider, ETH Zürich.

Publications

Submitted/under review/in preparation:

1. Crétat J., Harrison S.P., Braconnot. P., D’Agostino R., Jungclaus J., Lohmann G., Xiaoxu S., Marti O. Looking at ecosystem engineering through a metabolic lens: mechanisms and implications in a context of climate change (in review, *Climate Dynamics*).
2. Lionello P., D’Agostino, R., Ferreira, D., Nguyen, H., Singh, M.: The Hadley Circulation in a changing climate. **INVITED REVIEW PAPER** (in review, *Annals of the New York Academy Sciences*).
3. Cozzoli F., Shokri M., Arduini D., Basset A., Bozzeda F., D’Agostino R., Lehuen A., Mori E., Orvain F., Bouma T., Looking at ecosystem engineering through a metabolic lens: mechanisms and implications in a context of climate change (in review to *Biological Reviews*).
4. Timmreck C., Olonscheck D., Ballinger A., D’Agostino R., Fang S.W., Hegerl G. and Schurer A. Linear precipitation response to increasingly strong volcanic eruptions and its emergence from internal variability (submitted to *Climate Dynamics*)
5. D’Agostino R., Khodri M., Pausata F., Rehfeld K., Timmreck C., Schurer A., Zanchettin D. The impact of volcanic forcing on tropical climate (in preparation, **INVITED REVIEW PAPER**, *Annual Reviews in Earth and Planetary Sciences*).
6. D’Agostino R., Bellomo K., Meccia V., Larson S.M. The impact of AMOC decline on global monsoon in the EC-Earth3 water hosing simulations (in preparation, *Climate Dynamics*).
7. Ferreira D., D’Agostino R. The link between Moist Static Energy and Moisture budgets (in preparation for *Climate Dynamics*).

Published/Accepted:

1. Bellomo, K., Meccia, V., D’Agostino, R., Fabiano, F., Larson, S.M., von Hardenberg, J., Corti, S. (2023). Impacts of a weakened AMOC on precipitation over the Euro- Atlantic region in the EC-Earth3 climate model. *Clim. Dyn.* [10.1007/s00382-023-06754-2](https://doi.org/10.1007/s00382-023-06754-2)
2. Shi, X., Werner, M., Krug, C., Brierley, C. M., Zhao, A., Igbinsosa, E., Braconnot, P., Brady, E., Cao, J., D’Agostino, R.... and Lohmann, G. (2022) Calendar effects on surface air temperature and precipitation based on model-ensemble equilibrium and transient simulations from PMIP4 and PACMEDY, *Clim. Past.* <https://doi.org/10.5194/cp-2021-163>.

3. [D'Agostino, R., & Timmreck, C. \(2022\). Sensitivity of regional monsoons to idealised equatorial volcanic eruption of different sulfur emission strengths. Environmental Research Letters. 17, 054001. **INVITED RESEARCH ARTICLE**. doi.org/ 10.1088/1748-9326.](#)
4. Carré M., Braconnot, P., Elliot M., [D'Agostino R.](#) and Harrison S.P. High-resolution marine data and transient simulations support orbital forcing of ENSO amplitude since the mid-Holocene. Quaternary Science Reviews, doi.org/10.1016/j.quascirev.2021.107125
5. [D'Agostino R., Scambiati A. L., Jungclaus, J., Lionello P., 2020: Northward Shift of Subtropics in winter: Time of Emergence of Zonal versus Regional Signals. Geophysical Research Letters., doi.org/10.1029/2020GL089325.](#)
6. Brierley, C., Zhao A., Zheng, W., ... [D'Agostino, R.](#), ... et al, 2020: Large-scale features and evaluation of the CMIP6/PMIP4 midHolocene simulations. Climate of the Past, doi.org/10.5194/cp-16-1847-2020.
7. Brown, J., Brierley C., ... [D'Agostino, R.](#), ... et al, 2020: Comparison of past and future simulations of ENSO in CMIP5 and CMIP6 models. Climate of the Past, doi.org/10.5194/cp-16-1777-2020.
8. [D'Agostino R., Brown, J. R., Moise, A., Nguyen, H., Silva Dias, P. L., & Jungclaus, J. \(2020\). Contrasting Southern Hemisphere monsoon response: midHolocene orbital forcing versus future greenhouse-gas induced global warming. Journal of Climate, 1-56. doi.org/10.1175/JCLI-D-19-0672.1.](#)
9. Fiedler, S., Crueger, T., [D'Agostino, R.](#), ... & Stevens, B. (2020): Tropical Precipitation Biases Across Three Generations of CMIP. Monthly Weather Reviews, doi.org/10.1175/MWR-D-19-0404.1.
10. [D'Agostino R. and Lionello P., 2020: The atmospheric moisture budget in the Mediterranean: mechanisms for seasonal changes in the Last Glacial Maximum and future warming scenario. **INVITED RESEARCH ARTICLE**, Quaternary Science Reviews, doi.org/10.1016/j.quascirev.2020.106392.](#)
11. [D'Agostino R., Bader J., Bordoni S., Ferreira D., Jungclaus J., 2019: Northern Hemisphere monsoon response to mid-Holocene orbital forcing and greenhouse-gas induced global warming. Geophysical Research Letters, doi.org/10.1029/2018GL081589.](#)
12. [D'Agostino R., Lionello P., Adam O., Schneider T., 2017: Factors controlling Hadley Circulation changes from the Last Glacial Maximum to the end of the 21st century. Geophysical Research Letters 4 \(16\), 8585-8591, doi.org/10.1002/2017GL074533.](#)
13. [D'Agostino R. and Lionello P., 2017: Evidence of global warming impact on the evolution of the Hadley Circulation in ECMWF centennial reanalyses. Climate Dynamics, Volume 48, Issue 9–10, pp 3047–3060, doi.org/10.1007/s00382-016-3250-0.](#)

Seminars

D'Agostino R, 2021: *An energy framework for understanding monsoon dynamics* at IUP Uni-Heidelberg, STACY seminars.

D'Agostino R, 2021: *Towards a regional energy framework for understanding monsoon changes in past and future climates* at CMCC, Euro-Mediterranean Center on Climate Change, group meeting.

D'Agostino R, 2020: *Mechanisms for past and future hydrological budget and monsoon changes: orbital forcing versus greenhouse gas-induced warming* at University of Trento, Environmental Meteorology Seminars.

- D'Agostino R, 2019: *Northern Hemisphere monsoon response to mid-Holocene orbital forcing and greenhouse-gas induced global warming* at University of Reading (United Kingdom)

D'Agostino R, 2018: *Past and future response of Cross-equatorial Hadley Circulation and monsoon dynamics: the mid-Holocene does not represent an analogue for future warming* at:

- Meteorological Research Institute (Tsukuba, Japan)
- University of Tokyo (Tokyo, Japan)
- Bureau of Meteorology (Melbourne, Australia)
- University of Melbourne (Melbourne, Australia)
- Monash University (Melbourne, Australia)

D'Agostino R, 2017: *Hadley circulation extent and strength in a wide range of simulated climates* at:

- Max Planck Institute for Meteorology (Hamburg, Germany)
- Euro-Mediterranean Center on Climate Change, CMCC (Lecce, Italy)
- Parthenope University (Naples, Italy)

D'Agostino R, 2016: *Hadley circulation extent and strength in a wide range of simulated climates* at ETH Zürich, Switzerland.

D'Agostino R, 2015: *Oceanography of marginal seas and the coastal zone* at University of Salento, Italy.

Conferences

Timmreck, C., Olonscheck, T., Ballinger, T., D'Agostino, R., Hegerl, G. and Schurer A. (2023). **INVITED TALK**. *Tropical precipitation response to stratospheric volcanic forcing: A large ensemble approach*. International Union in Geodesy and Geophysics (IUGG). 28th General Assembly. Berlin, Germany.

- Timmreck, C., Olonscheck, T., Ballinger, T., D'Agostino, R., Hegerl, G. and Schurer A. (2023). *When did the volcanic signal on surface climate emergence from internal variability?* Volcanic Impacts on Climate and Society. Bern, Switzerland.
- Bordoni, S., D'Agostino, R., Tompkins A., (2023). *Tropical precipitation biases in nextGEMS storm-resolving Earth System Models*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- Tootoonchi, R., D'Agostino, R., Bordoni, S. (2023). Revisiting the Moisture Budget of the Mediterranean Region in the ERA5 Reanalysis. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- Bellomo, K., Meccia V., D'Agostino, R., Fabiano, F., Larson, S.M., von Hardenberg, J., Corti, S. (2023). *Impacts of a weakened AMOC on the European climate*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- Timmreck, C., Olonscheck, T., Ballinger, T., D'Agostino, R., Hegerl, G. and Schurer A. (2023). *Linear precipitation response to increasingly strong volcanic eruptions and its emergence from internal variability*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- D'Agostino, R., Bellomo, K., Meccia V. (2023). *The impact of AMOC weakening on the global monsoon in EC-Earth3 water hosing simulations*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- Bordoni, S., D'Agostino R., Tompkins, A. 2022. *Tropical precipitation biases in storm-resolving Earth System Models*. American Geophysical Union (AGU) Fall Meeting, Chicago.
- D'Agostino et al. **INVITED TALK**, (2022) at Asia and Oceania Geosciences Society, 19th Annual meeting: "Northern Hemisphere Monsoon Response to Mid Holocene Orbital Forcing and Greenhouse Gas-induced Global Warming". Asian Paleomonsoon: reconstructions and simulations session. 1 – 5/08/2022. Online conference.
- Bellomo, K., Meccia, V., D'Agostino, R., Fabiano, F., von Hardenberg, J., Corti, S., 2022: *The climate impacts of an abrupt AMOC weakening on the European winters*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- D'Agostino R, Timmreck C, 2022: *Sensitivity of regional monsoons to idealised equatorial volcanic eruption of different sulfur emission strengths*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- D'Agostino R, 2021: *Towards a regional energy framework for understanding monsoon changes in past and future climates*, **INVITED SPEAKER** at TwoRains conference, Cambridge, UK.
- Ferreira, D., D'Agostino, R. 2021: *The energy budget of the tropical band in future climate*. European Geoscience Union (vEGU) General Assembly, Wien, Austria.
- D'Agostino, R., Timmreck, C.: 2021: *The volcanic impact on tropical hydrological cycle*. European Geoscience Union (vEGU) General Assembly, Wien, Austria.
- Ferreira D. and D'Agostino R., 2020. *The energy budget of the tropical band in future climate*. International Conference on Meteorology and Climate Science, Dhaka, Bangladesh.
- INVITED SPEAKER** at EGU 2020 - Past2Future session (CL 4.2): *Monsoon dynamics in past and future climates: the Holocene is not an analogue of future projections*. D'Agostino R., Bader J., Brown, J., Bordoni S., Ferreira D., Moise A., Nguyen H., Silva-Dias, P. L., Jungclaus J.
- D'Agostino R., Scambiatì A.L., Lionello P. 2020: *The poleward shift of the Subtropics in the Northern Hemisphere winter: time of emergence of the climate change signals*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster.
- D'Agostino R., Scambiatì A.L., Lionello P. 2019: *Time of emergence of the global and regional expansion of the boreal winter Hadley Circulation*. Themes conference, Venice, Italy.
- D'Agostino R., Bader J., Bordoni S., Ferreira D., Moise A., Jungclaus J. 2019: *Asian-Australasian monsoon response to mid-Holocene orbital forcing and greenhouse-gas induced global warming*. INQUA Conference. Dublin, Ireland.
- D'Agostino R., Fiedler S., Egerer S., Rast S., Niemeier U., Nguyen H., Jungclaus J., 2019: *The role of Saharan dust in modulating monsoon response in mid-Holocene MPI-ESM simulations*. INQUA Conference. Dublin, Ireland.
- Scambiatì A.L., D'Agostino R., Lionello P. 2019: *Width of the winter Hadley Circulation and its trend: weak consistency among methods based on different variables in ERA-20C*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- Ferreira D., D'Agostino R., Bader J., Bordoni S., Jungclaus J. 2019: *Northern Hemisphere monsoon response to mid-Holocene orbital forcing and greenhouse-gas induced global warming*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Oral
- D'Agostino R., S. Fiedler, H. Nguyen, S. Egerer, U. Niemeier, S. Rast, J. Jungclaus. 2019: *The role of Saharan dust in modulating monsoon response in MPI-ESM mid-Holocene simulations*. European Geoscience Union (EGU) General Assembly, Wien, Austria. PICO
- Lionello P., D'Agostino R. 2019. *Consensus and disagreement among models on Mediterranean climate changes from the last glacial maximum to future high emission scenarios*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- D'Agostino R., Bader J., Bordoni S., Ferreira D., Jungclaus J. 2018: *Warm Climates: Differences and analogies in monsoon response to past and future forcing*. Themes conference 2018, Venice, Italy. Talk
- Bordoni S., D'Agostino R., Bader J., Jungclaus J. 2018: *Warm Climates: Differences and analogies in monsoon response to past and future forcing*. American Geophysical Union (AGU) Fall Meeting, San Francisco. Talk
- D'Agostino R., Braconnot P., Harrison S.P., Raghavan K., Jungclaus J., Pausata FSR., Corrège T., Turcq B., Carré M., Beaufort L., Elliot M., Zorita E., Tudhope A., Brierley C., Lohmann G., Leite Da Silva Dias P., & PaCMEDy participants, PaCMEDy, *Paleoclimate Constraints on Monsoon Evolution and Dynamics*. SPARC Conference, Kyoto, Japan. Poster
- D'Agostino R., Bader J., Jungclaus J., 2018: *Moisture budget decomposition and mechanisms behind monsoon response in the mid-Holocene and future climate scenario*. SPARC Conference, Kyoto, Japan.

- Lionello P., D'Agostino R. 2018. *Changes of temperature and precipitation in the Mediterranean region from the Last Glacial Maximum to the end of the 21st century*. Italian Society for Climate Science (SISC) Sixth Annual Conference, Venice, Italy.
- Lionello P., D'Agostino R., 2018: *Comparing the simulated Mediterranean climate in different conditions: Last Glacial Maximum, Mid-Holocene and the RCP8.5 projection at the end of the 21st century*. MedClivar Conference, Belgrade, Serbia. Poster
- Scambiati A.L., D'Agostino R., Lionello P., 2018: *The relation between the global Hadley circulation and the climate in the Mediterranean region*. MedClivar Conference, Belgrade, Serbia. Poster
- Lionello P., D'Agostino R., 2018: *Learning about climate change in the Mediterranean region by comparing past and future climates*. European Meteorological Society Annual Meeting. Budapest, Hungary. Oral
- D'Agostino R., Egerer S., Rast S., Niemeier U., Bader J., Jungclaus J., 2018: *The role of dust in modulating monsoon dynamics in the MPI-ESM mid-Holocene simulations*. DUST Conference 2018, Bari, Italy. Oral.
- Scambiati A.L., D'Agostino R., Lionello P., 2018: *The role of the Hadley Circulation expansion in shaping the Mediterranean climate*. HyMeX Workshop, Lecce, Italy. Poster
- Scambiati A.L., D'Agostino R., Lionello P. 2018: *Estimate strength and extension of the Hadley Circulation: weak consistency among methods based on different variables*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- D'Agostino R., Bader J., Jungclaus J., 2018: *Warm climates: differences and similarities in monsoon behaviours between the mid-Holocene and future climate scenario*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- Lionello P., D'Agostino R., 2018: *Changes of temperature and precipitation in the Mediterranean region from the Last Glacial Maximum to the end of the 21st century*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- D'Agostino R., S. Lorenz, J. Bader, M. Claussen, J.H. Jungclaus, G. Lohmann, E. Zorita and the Hamburg Holocene Group, 2017. *PaCMEDy, Paleoclimate Constraints on Monsoon Evolution and Dynamics*. DKRZ workshop, Hamburg, Germany. Poster.
- D'Agostino R., Braconnot P., Harrison S.P., Raghavan K., Jungclaus J., Pausata FSR., Corrège T., Turcq B., Carré M., Beaufort L., Elliot M., Zorita E., Tudhope A., Brierley C., Lohmann G., Leite Da Silva Dias P., & PaCMEDy participants, 2017. *PaCMEDy, Paleoclimate Constraints on Monsoon Evolution and Dynamics*. PMIP4 Conference, Stockholm, Sweden. Poster.
- J. Bader, V. Brovkin, M. Claussen, R. D'Agostino, A. Dallmeyer, J. Jungclaus, S. Lorenz, T. Raddatz, C. Timmreck, and M. Toohey and the Hamburg Holocene Group, 2017. *Climate and climate variability over the last 8000 years in high-resolution transient palaeo-simulations*. 4th International Conference on Earth System Modelling, Hamburg, Germany.
- D'Agostino R, Lionello P., Adam O., Schneider T., 2017: *Hadley circulation extent and strength in a wide range of simulated climates*. Past Global Changes 5th Open Science Meeting. Zaragoza, Spain. Oral.
- D'Agostino R, Adam O., Lionello P., Schneider T., 2017: *Hadley circulation extent and strength in a wide range of simulated climates*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Oral.
- A. Dallmeyer, M. Claussen, and the Hamburg Holocene Group (2017): *Holocene climate change in North Africa and the end of the African humid period – results of new high-resolution transient simulations with the MPI-ESM 1.2*. European Geoscience Union (EGU) General Assembly, Wien, Austria.
- D'Agostino R., Lionello P., Conte D., Marzo L., Scarascia L., 2017. *Increasing mean sea level and decreasing storminess: a multi-model and multi-scenario estimate of contrasting factors that will affect the Mediterranean coastline in the 21st century*. American Geophysical Union (AGU) Fall Meeting, San Francisco.
- D'Agostino R, Adam O., Lionello P., Schneider T., 2016: *Hadley Circulation extent and strength in a wide range of simulated climates*. American Geophysical Union (AGU) Fall Meeting, San Francisco. Poster.
- D'Agostino R, Adam O., Lionello P., Schneider T., 2016. *A long-term perspective on the Hadley Cell evolution: from the last glacial maximum to climate change projections*. Italian Geological Society Meeting. Naples, Italy. Oral
- D'Agostino R., Lionello P., 2016: *Comparison of the evolution of the Hadley Circulation between ECMWF ERA-20C centennial reanalysis and the atmospheric model ensemble ERA-20CM*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- Lionello P., D'Agostino R., 2015: *Comparing the evolution of the Hadley Circulation in the ECMWF ERA-20C centennial reanalysis and in the atmospheric model ensemble ERA-20CM*. American Geophysical Union (AGU) Fall Meeting, San Francisco. Oral
- D'Agostino R. and Lionello P., 2015: *The effect of the global warming on Hadley Circulation trends in ECMWF centennial reanalyses*, Science Symposium on Climate, FAO, Rome. Oral
- D'Agostino R. and Lionello P., 2015: *Comparing the evolution of the Hadley Circulation in the ECMWF ERA-20C centennial reanalysis and in the atmospheric model ensemble ERA-20CM*. ICTP – CLIVAR workshop on Decadal Climate Variability and Predictability: Challenge and Opportunity, Trieste. Poster
- D'Agostino R. and Lionello P., 2015: *Investigating the trends of the Hadley Circulation in ERA-20C*. 15th European Meteorological Society (EMS) Annual Meeting and 12nd European Conference on Applications of Meteorology (ECAM), Sofia, Bulgaria. Poster
- D'Agostino R. and Lionello P., 2015: *Evolution of the Hadley Circulation in ERA-20CM Simulations*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster
- D'Agostino R. and Lionello P., 2014: *Response of the Hadley Circulation to El-Niño/La Niña in ERA-20CM Simulations*.

14th European Meteorological Society (EMS) Annual Meeting and 10th European Conference on Applied Climatology (ECAC), Praga, Czech Republic. Poster

D'Agostino R. and Lionello P., 2014: *Response of the Mean Meridional Circulation to global warming and its relationship with precipitation*. Italian Society for Climate Science (SISC) Second Annual Conference, Venice, Italy. Poster

D'Agostino R. and Lionello P., 2014: *Changes in the Mean Meridional Circulation associated to different condition in the global surface temperature*. European Geoscience Union (EGU) General Assembly, Wien, Austria. Poster

D'Agostino R. and Lionello P., 2013: *Relationship between Sahel Rainfall and Mediterranean Summer Climate*. Italian Society for Climate Science (SISC) First Annual Conference, Lecce, Italy. Poster

Additional training

Artificial Intelligence (AI) for Earth Monitoring by EUMETSAT: 6-week online course. 12/2021

WCRP Grand Challenge on Clouds, Circulation and Climate Sensitivity: 2nd meeting on Monsoons and Tropical Rain Belt, International Center for Theoretical Physics, ICTP, Trieste, Italy. Talk: Monsoon behaviours in past and future climates: a comparative study from mid-Holocene and RCP8.5 simulations 2018

ICTP Summer School on Theory, Mechanisms and Hierarchical Modelling of Climate Dynamics: *Multiple Equilibria in the Climate System*. International Center for Theoretical Physics, ICTP, Trieste, Italy. 2018

ICTP Targeted Training Activity (TTA): *Monsoons in a Changing Climate*, International Center for Theoretical Physics, ICTP, Trieste, Italy. Poster: Monsoons in a changing climate: a palaeoclimate perspective. 2017

Scientific Writing Class, Max Planck Institute for Meteorology led by Jochem Marotzke and Dallas Murphy. 2017

Earth System Modelling School (EaSyMS), Max Planck Institute for Meteorology, Hamburg. 2017.

Adaptation policies and practices in the Mediterranean Basin (MetAdapt), Venice, Italy. Talk: Differences in the Mean Meridional Circulation between warmest and coldest years of the 20th – 21st Century and its relationship with precipitation distribution. 2014

Climate Change Impacts and Policy in the Mediterranean Basin, Venice, Italy. Talk: Teleconnection between Sahel Rainfall and Mediterranean Summer Climate. 2013

Miscellanea

Italian national qualification for Associate Professor (ASN – Professore II Fascia) in 04/A4 Geophysics (2022 – 2032) and in 02/C1 Atmospheric Physics (2023 – 2033).

Co-Supervisor of Koushikh Karnunakar, Master Student at University of Hamburg, Germany and Ascanio Luigi Scambiati, PhD Student at University of Salento Italy.

Expert Reviewer for IPCC - AR6, Chapters 7, 8, 10, 2019 – 2020.

Editor for Earth System Dynamics, *Frontiers in Climate*, 2023 - present.

Reviewer for *Science Advance*, *Nature Communications*, *Nature Climate Change*, *Nature Geoscience*, *Nature Partners Journal - Climate and Atmospheric Science*, *Geophysical Research Letters*, *Journal of Climate*, *Climate Dynamics*, *Journal of Geophysical Research*, *Climate of the Past*, *Earth System Dynamics*, *Nonlinear processes in Geophysics*, *Geoscientific Model Development* and others.

Scientific committee for Themes conference, Venice, Italy, 2019, 2022.

Convener at European Geoscience Union General Assembly 2019, 2020, 2021, 2022, 2023 at Global Monsoon session.

Convener at European Geoscience Union General Assembly 2021, 2022, 2023 at Energy and Moisture exchanges (Climate Dynamics) session.

Convener at American Geoscience Union Fall Meeting 2022 at Monsoons in a Warmer Climate (Atmospheric Dynamics) session.

Erasmus tutor of Giuseppe La Monica, Master Student at University of Bologna Alma Mater, Italy.

Post-doc representative for Max Planck Institute for Meteorology, 2018 - 2021.

Organiser of multiple webinars for PaCMEDY project.

Excellent knowledge of MATLAB, Fortran90, NCAR Command Language, CDO, Python, NetCDF and GRIB datasets, UNIX and Windows, Latex and Office, Adobe Illustrator and Prezi.

According to Italian Law on Privacy D.Lgs. 196/2003.

