

Curriculum Vitae - Salvatore Pascale

Department of Physics and Astronomy "Augusto Righi",
Alma Mater Studiorum - Università di Bologna
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Institutional webpage
Personal webpage

Profile

I am a climate scientist focused on understanding the impact of climate natural variability and change on the hydroclimate, with a particular emphasis on extreme events (e.g., droughts, extreme precipitation) in monsoonal, mediterranean and semi-arid climates.

Professional Experience

- **Assistant professor (*Ricercatore Tenure Track*)**, University of Bologna (UNIBO), Department of Physics and Astronomy (DIFA), Italy (2024-present).
- **Researcher (RTD A)**, UNIBO, Department of Physics and Astronomy (DIFA), Italy (2021-2024).
- **Junior Assistant Professor of Climate Dynamics and Change**, Centre for Sustainability and Climate Change, Bologna Business School, Bologna, Italy (2021-present).
- **Physical Science Research Scientist**, Stanford University, Stanford, CA, USA (2019-2021).
- **Associate Research Scientist**, Princeton University and NOAA/Geophysical Fluid Dynamics Laboratory, Princeton, NJ, USA (2017-2019).
- **NOAA Climate & Global Change Postdoctoral Fellow**, California Institute of Technology, Pasadena, CA, USA (2015-2016).
- **Postdoctoral Fellow**, Meteorologisches Institut, Hamburg Universität, Germany (2011-2014).

Academic Education

- **Abilitazione Scientifica Nazionale** per professore di seconda fascia, settore concorsuale 02/C1 - Astronomia, astrofisica, fisica della terra e dei pianeti (29/03/2021 - 29/03/2032).
- **Abilitazione Scientifica Nazionale** per professore di seconda fascia, settore concorsuale 04/A4 - Geofisica (12/04/2021 - 12/04/2032).
- **Ph.D. in Meteorology**, University of Reading, Reading, UK (2007-2011). Thesis title: *Maximum entropy production as a constraint on the climate system*. Supervisor: Prof. Jonathan Gregory.
- **M.Sc. in Theoretical Physics**, 110/110 cum laude, Università degli studi di Napoli "Federico II", Italy (2004-2007).
- **B.Sc. in Physics**, 110/110 cum laude, Università degli studi di Napoli "Federico II", Italy (2001-2004).

Honors, Awards and Grants

- **PRIN 2022**, research project *ENCIRCLE (Evaluating the changing risk of cyclones for Italian precipitation extremes)*, co-PI and responsible of the UNIBO Local Research Unit (2023-2025). [Link](#)
- **World Meteorological Organization/World Weather Research Programme** (2019): awarded full travel support to attend the Workshop on Attribution of Monsoon Rainfall Climate Change, and deliver a keynote speaker seminar. Sun Yat-sen University, Zhuhai, China.
- **NOAA Climate and Global Change Fellowship** (2014-2016). Individual, highly-competitive post-doctoral fellowship. Funding agency: UCAR Visiting Scientist Programs, Boulder CO. Role: Principal Investigator. [Link](#).
- **The Reading Meteorology International PhD Studentship** (2007-2011). Full support for tuition fees, subsistence, travel and publication costs for postgraduate study in the U.K. Funded by the Department of Meteorology, University of Reading, UK.
- Travel award to the **NCAS Climate Modelling Summer School**, Sept. 2009, Cambridge, UK.

Publications

Publication list on [Google Scholar](#) and [Scopus](#).

Under review

- [38] Hidalgo, H.G., Chou-Chen, S.W., McKinnon, K. A.; **Pascale, S.**; Quesada-Chacón, D., Alfaro, E.J.; Bautista-Solís, P.; Pérez-Briceño, P.; Diaz, H.F., Maldonado, T., Rivera, E., Nakaegawa, T., (2024), "Detection and attribution of trends of meteorological extremes in Central America", *Climatic Change*, *under review*.
- [37] **Pascale, S.**, Ragone F. (2024), "Widespread multi-year droughts in Italy: identification and causes of development", *International Journal of Climatology*, *under review*.
- [36] Paolini, L. F. , Ruggieri, P. , **Pascale, S.**, Brattich, E., Di Sabatino, S. (2024), "Hybrid statistical-dynamical seasonal prediction of summer extreme temperatures in Europe", *QJRMS*, *under review*.

Published

- [35] Ruggieri P., A. Abid, J. Garcia-Serrano, C. Grancini, F. Kucharski, **S. Pascale**, D. Volpi (2024), "SPEEDY-NEMO: performance and applications of a fully-coupled intermediate-complexity climate model". *Climate Dynamics*, 62, 3763-3781. DOI: 10.1007/s00382-023-07097-8
- [34] Faranda D., **S. Pascale**, B. Burak (2023), "Persistent anticyclonic conditions and climate change exacerbated the exceptional 2022 European-Mediterranean drought", *Environmental Research Letters*, 28 (3), 034030.
- [33] Boos W. R., **Pascale, S.** (2022), "Thermal forcing expected to modulate convection in a mechanically forced stationary wave", EarthArXiv, <https://doi.org/10.31223/X5Z351>.
- [32] Boos W. R., **Pascale, S.** (2021), "Mechanical forcing of the North American monsoon by orography", *Nature*, 599, 611-615.
- [31] **Pascale, S.**, S.B. Kapnick, T.L. Delworth, H. G. Hidalgo (2021), "Natural variability vs forced signal in the 2015-19 Central American drought", *Climatic Change*, 168,16, <https://doi.org/10.1007/s10584-021-03228-4>.
- [30] Zhang H., R. Seager, J. He, H. Diao **S. Pascale** (2021), "Quantifying Atmosphere and Ocean origins of North American Precipitation Variability", *Climate Dynamics*, 56, 4051-4074.
- [29] Wang B., M. Biasutti, M. P. Byrne, C. Castro, C.-P. Chang, K. Cook, R. Fu, A. Grimm, K.-J. Ha, H. Hendon, A. Kitoh, R. Krishnan, J.-Y. Lee, J. Li, J. Liu, A. Moise, **S. Pascale**, M. K. Roxy, A. Seth, C.-H. Sui, A. Turner, S. Yang, K.-S. Yun, L. Zhang, T. Zhou (2021), "Monsoon Climate Change Assessment", *Bulletin of the American Meteorological Society*, 102 (1), E1-E19.
- [28] **Pascale, S.**, Kapnick S.B., Delworth T.L., Cooke W. F. (2020), "Increasing risk of another Cape Town 'Day Zero' drought in the twenty-first century", *Proceedings of the National Academy of Sciences*, 117 (47), 29495-29503.
- [27] Stanley T., D. Kirshbaum, **S. Pascale**, S. Kapnick (2020), "Extreme precipitation in the Himalayan landslide hotspot", [book chapter n. 55](#) in *Satellite Precipitation Measurement*, Levizzani, V., Kidd, C., Kirschbaum, D., Kummerow, C., Nakamura, K., Turk, F.J. (Eds.), Springer, 450 pp.
- [26] Kirshbaum D., S. Kapnick, T. Stanley, **S. Pascale**, (2020) "Changes in extreme precipitation and landslides over High Mountain Asia", *Geophysical Research Letters*, 47, e2019GL085347. **Selected press release:** [Stanford University](#) , [NASA](#), [NOAA](#)
- [25] Delworth T. L., W. F. Cooke, A. A. Adcroft, M. Bushuk, J.-H. Chen, P. Ginoux, R. Gudgel, R. W. Hallberg, L. Harris, M. J. Harrison, N. Johnson, S. B. Kapnick, S.-J. Lin, F. Lu, S. Malyshev, P. C. Milly, H. Murakami, V. Naik, **S. Pascale**, D. Paynter, A. Rosati, M. D. Schwarzkopf, E. Shevliakova, S. Underwood, A. T. Wittenberg, B. Xiang, X. Yang, F. Zeng, H. Zhang, L. Zhang, M. Zhao (2020) "SPEAR - the next generation GFDL modeling system for seasonal to multidecadal prediction and projection", *Journal of Advances in Modeling Earth Systems*, 12, e2019MS001895, DOI: 10.1029/2019MS001895.
- [24] Johnson N., L. Krishnamurthy, A. Wittenberg, B. Xiang, G.A. Vecchi, S. Kapnick, **S. Pascale** (2020), "The role of sea surface temperature biases on North American precipitation in a high-resolution climate model", *Journal of Climate*, 33, 2427-2447.
- [23] **Pascale, S.**, L. Carvalho, D. Adams, C. Castro, I. F. A. Cavalcanti (2019), "Current and future variations of the Monsoons of the Americas in a warming climate", *Current Climate Change Reports*, 5,

125-144.

- [22] **Pascale, S.**, B. Pohl, S.B. Kapnick, H. Zhang (2019), “On the Angola Low interannual variability and its role for modulating ENSO effects in southern Africa”, *Journal of Climate*, 32, 4783-4803.
- [21] Gonzalez-Aleman J. J., **S. Pascale**, J. Gutierrez-Fernandez, H. Murakami, M.A. Gaertner and G.A. Vecchi (2019), “Potential increase in hazard from Mediterranean hurricane activity with global warming”, *Geophysical Research Letters*, 46, 1754-1764, doi: 10.1029/2018GL081253. **Press release:** [La Repubblica](#), [la Stampa](#), [AGU blog](#), [Discover Magazine](#), [El Pais](#)
- [20] **Pascale, S.**, S. Kapnick, S. Bordoni, T. L. Delworth (2018), “The influence of CO₂ forcing on the North American monsoon moisture surges”, *Journal of Climate*, 31, 7949-7968.
- [19] Gualtieri L., S. Camargo, **S. Pascale**, F. E. Pons, G. Ekström, (2018), “The persistent signature of tropical cyclone in ambient seismic noise”, *Earth and Planetary Science Letters*, 484, 287-294. **Press release:** [Princeton University](#), [EARTH Magazine](#), [CPO NOAA](#)
- [18] **Pascale, S.**, W. R. Boos, S. Bordoni, T. L. Delworth, S. B. Kapnick, H. Murakami, G. A. Vecchi, W. Zhang (2017), “Weakening of the North American monsoon with global warming”, *Nature Climate Change*, 7, 806-812, doi: 10.1038/nclimate3412. **Press release:** [Princeton University](#), [Arizona Daily Star](#), [Arizona Daily Sun](#)
- [17] **Pascale, S.**, S. Bordoni, S. Kapnick, G. Vecchi, L. Jia, T. L. Delworth, S. Underwood and W. Anderson (2016): “The impact of horizontal resolution on North America Gulf of California moisture surges in a suite of high-resolution coupled global models”, *Journal of Climate*, 29, 7911-7936.
- [16] **Pascale, S.**, S. Bordoni (2016): “Tropical and extratropical controls of Gulf of California moisture surges and summertime precipitation over the southwestern United States”, *Monthly Weather Review*, 144, 2695-2718.
- [15] Hasson S., **S. Pascale**, V. Lucarini and J. Böhner (2016): “Seasonal cycle of precipitation over major river basins in South and South-East Asia: a review of the CMIP5 climate models data for present climate and future climate projections”, *Atmospheric Research*, 180, 42-63.
- [14] **Pascale S.**, V. Lucarini, X. Feng, A. Porporato, S. Hasson (2016): “Projected changes of rainfall seasonality and dry spells in a high greenhouse gas emissions scenario”, *Climate Dynamics*, 46, 1331-1350.
- [13] Linsenmeier M., **S. Pascale**, V. Lucarini (2015): “Climate of Earth-like planets with high obliquity and eccentric orbits: implications for habitability conditions”, *Planetary and Space Science*, 105, 43-59.
- [12] **Pascale S.**, V. Lucarini, X. Feng, A. Porporato, S. Hasson (2015): “Analysis of rainfall seasonality from observations and climate models”, *Climate Dynamics*, 44, 3281-3301.
- [11] Hasson S., V. Lucarini, **S. Pascale**, J. Böhner (2014): “Seasonality of the hydrological cycle in major South and Southeast Asian River Basins as simulated by PCMDI/CMIP3 experiments”, *Earth System Dynamics*, 5, 67-87.
- [10] Lucarini V., **S. Pascale** (2014): “Entropy production and coarse graining of the climate fields in a general circulation model”, *Climate Dynamics*, 43, 981-1000.
- [9] Boschi R., V. Lucarini, **S. Pascale** (2014), “Thermodynamic insights into transitions between climate states under changes in solar and greenhouse forcing”, [book chapter n. 10](#) in *Beyond the second law: entropy production and non-equilibrium systems*, RC Dewar, C Lineweaver, R Niven, K Regenerauer-Lieb (eds), Springer.
- [8] Lucarini V., R. Blender, **S. Pascale**, F. Ragone, J. Wouters, C. Herbert (2014): “Mathematical and physical ideas for Climate Science”, *Reviews of Geophysics*, 52, 809-859.
- [7] **Pascale S.**, F. Ragone, V. Lucarini, Y. Wang, R. Boschi (2013), “Nonequilibrium thermodynamics of circulation regimes in optically-thin, dry atmospheres”, *Planetary and Space Science*, 84, 48-65.
- [6] Hasson S., V. Lucarini, **S. Pascale** (2013): “Hydrological cycle over south and southeast Asian river basins as simulated by PCMDI/CMIP3 experiments”, *Earth System Dynamics*, 4, 199-217.
- [5] Lucarini V., **S. Pascale**, R. Boschi, E. Kirk, N. Iro (2013), “Habitability and multistability in earth-like planets”, *Astronomical Notes*, 334, 576-588.
- [4] Boschi R., V. Lucarini, **S. Pascale** (2013), “Bistability of the climate around the habitable zone: a thermodynamic investigation”, *Icarus*, 226, 1724-1742.
- [3] **Pascale S.**, J. M. Gregory, M.H.P. Ambaum, R. Tailleux, V. Lucarini (2012), “Vertical and horizontal processes in the global atmosphere and the maximum entropy production conjecture”, *Earth System*

Dynamics, 3, 19-32.

[2] **Pascale S.**, J. M. Gregory, M.H.P. Ambaum, R. Tailleux (2012), "A parametric sensitivity study of the entropy production and kinetic energy dissipation using the FAMOUS AOGCM", *Climate Dynamics*, 38, 1211-1227.

[1] **Pascale S.**, J. M. Gregory, M. Ambaum, R. Tailleux (2011), "Climate entropy budget of the HadCM3 atmosphere-ocean general circulation model and of FAMOUS, its low resolution version", *Climate Dynamics*, 36, 1189-1206.

Teaching and Supervising Experience

Teaching experience

- 2023-2024: "Modern Climate Change", M.Sc. (*Laurea Magistrale*) in "Science of Climate", UNIBO.
- 2022-2023: "Climate variability", M.Sc. (*Laurea Magistrale*) in "Science of Climate", UNIBO.
- 2021-2022: "The climate system: components", Degree programme: Minor "The challenge of climate change", UNIBO.
- 2020-2023: "Introduction to Climate Change", Master in Sustainability Transition Management, Bologna Business School, Bologna, Italy.
- 2020-2021: "Dynamical Meteorology" (guest lecturer), M.Sc. (*Laurea Magistrale*) in Physics of the Earth System, UNIBO.
- 2020-2021: "Planetary Atmospheres", B.Sc. (*Laurea Triennale*) in Astronomy, UNIBO.
- 2013-2014: "Theoretical Meteorology" (M.Sc. Meteorology), Hamburg Universität, Germany.
- 2012-2013: "Instabilities in Fluid Dynamics" (M.Sc. Meteorology), Hamburg Universität, Germany.
- 2008-2011: "Atmospheric Physics", "Oceanography" (B.Sc. Meteorology) and "Fluid Dynamics" (M.Sc. Atmosphere, Ocean and Climate), University of Reading, UK.

Researchers and Students Supervised

- 2024-2025: Dr. Cristina Iacomino, research fellow within the PRIN 2022 ENCIRCLE project.
- 2023-2025: Dr. Luca Famooss Paolini, postdoctoral researcher within the TRIGGER project.
- 2023: *Thesis supervisor* (relatore) for Clara Naldesi (M.Sc student, Physics of the Earth System) and Aurora Zucchini (B.Sc. student, Physics), UNIBO.
- 2022: *Thesis co-supervisor* (correlatore) for Carlo Grancini (M.Sc student, Physics of the Earth System), UNIBO.
- 2020: Terachet Rojrachsombat, summer intern undergraduate student, Stanford University.
- 2018: *Supervisor* for Laura Queen, summer intern undergraduate student at NOAA/GFDL.
- 2017: Co-supervisor for Haylie Mikulak, summer intern undergraduate student at NOAA/GFDL.
- 2013-2014: *Thesis supervisor* for M. Linsenmeier, B.Sc. student, Hamburg Universität.
- 2012-2015: *Co-supervisor* for R. Boschi, Ph.D. student, Hamburg Universität.

Scientific Outreach, Public Engagement

- Speaker at the event "*Fisica e ambiente: un'alleanza indispensabile*" (2024 Sustainable Development Festival promoted by ASVIS), Bologna 30/05/2024 [Link](#)
- Joint WCRP/WWRP webinar series: American monsoons [Link](#)
- SPRINGLAB Scuola Ambiente - Legambiente Bologna, 28/03/2024 [Link](#)
- Round Table Discussion *Droughts, flooding, landslides. Emilia-Romagna two months later* organized by the Centre for Sustainability and Climate Change, Bologna Business School, 13/07/2023 [Link](#)
- Speaker at the event "*Sustainable Future: the contribution of Geophysics*" (2023 Sustainable Development Festival promoted by ASVIS), Bologna 11/05/2023.
- Member of the Working Group on Climate Change (*GdL Cambiamenti Climatici*) within the RUS - Rete delle Università per lo Sviluppo sostenibile [Link](#).
- Interviews for the UNIBO official website on climate change and droughts [Link](#)
- Interviews for UNIBO MAGAZINE on my research [Link1](#) [Link2](#)

- Interviews with major national and international newspapers about climate and climate change (*la Repubblica, Corriere della Sera, la Stampa, il Post, EARTH Magazine, Discover Magazine, The Counter, Arizona Daily Star, Arizona Daily Sun*).
- Interview on the Swedish Broadcasting Radio (Sveriges Radio) about the 2022-2023 drought in Northern Italy [Link](#)
- Speaker in the *Business 4 Climate Podcast* series by the Bologna Business School [Link](#)
- Outreach program for WMO/WWRP at the Workshop on Attribution of Monsoon Rainfall Climate Change, Sun Yat-sen University, Zhuhai, China, December 2-3, 2019
- New Jersey *Ocean Fun Days* outreach event, 2018 [Link](#)

Institutional and Scientific Responsibilities

Participation to Research Projects

- **PRIN 2022**, research project *ENCIRCLE (Evaluating the changing risk of cyclones for Italian precipitation extremes)*. Role: co-PI and responsible of the UNIBO local Research Unit (2023-2025). [Link](#)
- **TRIGGER: SoluTions foR mltiGatinG climate-induced hEalth thReaths**, started in September 2022). Horizon Europe Research and Innovation project. TRIGGERS aims at deepening current understanding of the complex linkage between weather, climate and human health. Role: responsible of a Task in workpackage 5 on climate projections for climate-related health indicators.
- **National Biodiversity Future Center**, PNRR. Spoke 4, Activities 4.2. Role: collaborator.
- **NASA** project *Understanding changes in High Mountain Asia*. Role: production of climate simulation data for future warming scenarios, and quality control for public release of these data.

Workshop and Conferences Organization

- Organizer and chair for the session “High-Impact Weather and Climate Extremes”, 27th IUGG General Assembly, Montréal, Canada, July 2019.
- Organizer and convener of the session “Monsoons: Observations, Subseasonal, Seasonal, and Interannual to Decadal Variability, Forecast, Climate Change and Extremes”, 2018 AGU Fall Meeting, Washington DC, December 2018.
- Member of the program committee for the 33rd AMS Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, FL, April 2018.
- Organizer and main convener of the session “A21F/A24D: Monsoons of the Americas, Teleconnections, and the Subseasonal to Decadal Earth System Prediction Capability”, 2017 AGU Fall Meeting, New Orleans, LA, December 2017.
- Assisted in organizing the workshop “Monsoons: Past, Present and Future” at the California Institute of Technology, Pasadena, CA, May 2015.
- Assisted in organizing the workshop “Climate Thermodynamics 2010” at University of Reading, Department of Meteorology, April 2010.

Institutional and Scientific Responsibilities

- Member of the Department of Physics and Astronomy Board (*Giunta di Dipartimento*), (2024-2027)
- Member of the 3rd evaluation committee (IL FUTURO DELLA TERRA, CAMBIAMENTI CLIMATICI E SFIDE SOCIALI) for the UNIBO PhD program, (2024-present).
- Member of the evaluation and admission committee for the UNIBO two-year master’s degree *Science of Climate*, (2022-present).
- Member of the evaluation and admission committee for the Bologna Business School Master in *Sustainability Transition Management*, (2021-present).
- Member of CLIVAR/GEWEX Monsoon Panel (2022-2024). [Link to CLIVAR webpage](#)
- Invited panelist of the World Meteorological Organization (WMO)/World Weather Research Programme (WWRP) Working Group on Tropical Meteorology Research, “Identification and attributions of climate change in monsoon heavy rainfall”, Sun Yat-sen University, Zhuhai, China, December, 2019.
- Panelist and reviewer: NASA ROSES solicitation (2018), National Science Foundation (2019).

- Reviewer for the following journals: Nature Climate Change, Nature Geosciences, Science Advances, Journal of Climate, Climate Dynamics, International Journal of Climatology, Quarterly Journal of the Royal Meteorological Society, Geophysical Review Letters, Journal of Atmospheric Sciences, Journal of Applied Meteorology and Climatology, Earth System Dynamics, Atmospheric Research, Hydrological Processes, Journal of Advances in Modeling Earth Systems, Water Resources Research, Entropy, Journal of Advances in Modeling Earth Systems.

Presentations at Conferences, Webinars and Summer Schools

(Oral presentation denoted with **)

- (2024) - ** Joint WCRP/WWRP webinar series: American monsoons
- (2022) - ** 4th National Conference of the Italian Association of Atmospheric Science and Meteorology (AISAM), Milan, Italy - ** EGU General Assembly, Vienna.
- (2021) - ** International School on Migration. Session: Sustainability and Climate Change: from challenges to shared solutions for the future, Bologna, Italy.
- (2019) - ** Workshop on Attribution of Monsoon Rainfall Climate Change, WMO/WWRP Working Group on Tropical Meteorology Research, Sun Yat-sen University, Zhuhai, China - ** 27th IUGG General Assembly, Montréal, Canada - Workshop on Correlated Extremes, Columbia University, NY - ** AGU fall meeting, San Francisco, CA.
- (2018) - ** AMS 33rd Conference on Hurricanes and Tropical Meteorology, Ponte Vedra, FL - AMS annual meeting, Austin, TX - AGU fall meeting, Washington DC.
- (2017) - AGU fall meeting, New Orleans, LA.
- (2016) - ** AGU fall meeting, San Francisco, CA - ** AMS 32nd Conference on Hurricanes and Tropical Meteorology, San Juan, PR - Model Hierarchies Workshop (World Climate Research Programme), Princeton University, NJ - ** The Summer Institute for the NOAA Climate and Global Change Postdoctoral Fellowship Program and the PACE Fellowship Program, Steamboat Springs, Colorado.
- (2015) - AGU fall meeting, San Francisco, CA - Monsoon and ITCZ Workshop, Columbia University, New York, NY - 20th Conference on Atmospheric and Oceanic Fluid Dynamics, Minneapolis, MN - Monsoons - Past, Present and Future workshop, Caltech, Pasadena, CA - Tropical extremes: A workshop on high-impact weather events in monsoon regions, Yale Climate & Energy Institute, New Haven, CT.
- (2013) - AGU fall meeting, San Francisco, CA - PLATO 2.0 Science Workshop, ESTEC, Noordwijk, NL.
- (2012) - AGU fall meeting, San Francisco, CA - Characterizing and Modeling Extrasolar Planetary Atmospheres Theory and Observation, Max Planck for Astronomy, Heidelberg, Germany.
- (2011) - EGU General Assembly, May, 2011, Vienna, Austria.
- (2010) - ** EGU General Assembly, Vienna, Austria - Climate Thermodynamics Workshop, University of Reading, Department of Meteorology, UK.
- (2009) - EGU General Assembly, Vienna, Austria - NCAS Climate Modelling Summer School, Cambridge, UK.
- (2008) - Max-Planck-Institute for Biogeochemistry, Jena, Germany.

Invited Departmental Seminars

- (2022) University of Trento, Italy.
- (2021) Consiglio Nazionale delle Ricerche (CNR), Italy.
- (2020) Geophysical Fluid Dynamics Laboratory, Princeton, NJ - SMILE (Single Model Initial-condition Large Ensemble) invited webinar.
- (2019) University of California, Berkeley, CA - Stanford University, CA - Rutgers University, New Brunswick, NJ.
- (2018) Yale University, New Haven, CT - Florida State University, Tallahassee, FL - University of Nevada, Reno, NV - Penn State, State College, PA - University of Florida, Gainesville, FL.
- (2017) University of Reading, Reading, UK - Rutgers University, New Brunswick, NJ.
- (2016) Yale University, New Haven, CT - Lamont-Doherty Observatory, Columbia University, Pal-

isades, NY - Geophysical Fluid Dynamics Laboratory, Princeton, NJ - NASA Jet Propulsion Laboratory, Pasadena, CA.

- (2015) Caltech, Pasadena, CA.
- (2014) ETH, Zürich, Switzerland - Paris-Saclay - CEA, Paris, France.
- (2013) Zentrum für Interdisziplinäre Forschung, University of Bielefeld, Germany
- (2012) Department of Physics, Oxford, UK.

Bologna, 26-09-2023

DICHIARAZIONE SOSTITUTIVA DI CERTIFICAZIONE (art. 46 e 47 D.P.R. 445/2000)

Il sottoscritto Salvatore Pascale,
ai sensi e per gli effetti degli articoli 46 e 47 del D.P.R. 28 dicembre 2000, n. 445 e consapevole delle
sanzioni penali previste dal medesimo e s.m.i. nelle ipotesi di falsità in atti e dichiarazioni mendaci,
dichiara di essere in possesso di ogni titolo riportato nel presente curriculum vitae e che tutte le infor-
mazioni in esso riportate corrispondono a verità.

Bologna, 26-09-2023

Firma