



Personal information

Name / Surname

Email

Scientific profile

Expertise

Work experience

From 18/12/2023 to today
employer

From 11/07/2022 to 30/11/2023
employer

From 09/01/2022 to 08/07/2022
employer

From 09/01/2017 to 08/01/2022
employer

From 11/2018 to 03/2019

Emanuela Pichelli

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<https://orcid.org/0000-0003-3456-8799>

Google Scholar: <https://scholar.google.it/citations?user=OV3ho0AAAAAJ&hl=it>

SCOPUS Author ID: 18133885100

Researchgate: https://www.researchgate.net/profile/Emanuela_Pichelli



Numerical modelling for applications in Meteorology and Climate

Research Scientist (FT)

ENEA - Italian National Agency for new technologies, energy and sustainable economic development, Roma (Italia)

Research activity on Regional Climate Model applications within the Climate modeling and impacts laboratory (SSPT-MET-CLIM), division "Models and technologies for the reduction of anthropogenic impacts and natural risks". Funds from "NATIONAL CENTRE FOR HPC, BIG DATA AND QUANTUM COMPUTING, Piano Nazionale di Ripresa e Resilienza (PNRR); Missione 4; Componente 2, "Dalla Ricerca all'Impresa"; NextGenerationEU (Decr. Dir. MUR n.3138 del 16/12/2021)"

Research Associate Scientist

United Nations Educational, Scientific and Cultural Organisation (UNESCO) at the **International Centre for Theoretical Physics (ICTP)**, Trieste (Italy)

Research activity within the Earth System Physics (ESP) section. Contributing to EU H2020 XAIDA – eXtreme events : Artificial Intelligence for Detection and Attribution (n. 101003469, see list of Scientific Projects) and to development and applications of the new RegCM5 model (latest version with Moloch dynamical core) in particular for studies at the convection permitting scale ($< 5km$)

Researcher - Scientific consultant

International Centre for Theoretical Physics (ICTP), Trieste (Italy)

Research activity within the Earth System Physics (ESP) section within EU H2020 XAIDA – eXtreme events : Artificial Intelligence for Detection and Attribution (n. 101003469, see list of Scientific Projects) and for development and applications of the latest non-hydrostatic version of the new model RegCM5 (Moloch core)

Post Doc Researcher

International Centre for Theoretical Physics (ICTP), Trieste (Italy)

Research activity within the Earth System Physics (ESP) section for development and applications of the new non-hydrostatic version of the model RegCM4 for studies at the convection permitting scale ($< 5km$) within the Coordinated Regional Climate downscaling Experiment Flagship Pilot Study dedicated to convection (CORDEX-FPSCONV) and the Horizon 2020-European Climate Prediction System (EUCP, GA number: 776613) (see list of Scientific Projects)

Maternity leave

| | |
|---------------------------------------|---|
| 01/11/2015 – 31/12/2016 employer | <p>Post Doc Researcher Università degli Studi dell'Aquila/CETEMPS(*), L'Aquila (Italy) Numerical and theoretical studies of complex orography meteorology. Principal investigator for the Meteorology work package in the RAISS M/0010/01/X23 project (see Scientific Projects section) for the implementation of a high resolution forecast system through the WRF model which has been part of a meteo-hydrological alert system at CETEMPS(*).</p> <p>(*) Center of Excellence for integration of remote sensing techniques and numerical modeling for the forecast of severe weather</p> |
| 04/04/2016 – 08/06/2016 employer | <p>Scientific consultant International Centre for Theoretical Physics (ICTP), Trieste (Italy) Research for model solution stabilisation within the "Development and testing of the new non-hydrostatic version of RegCM4" activity. Partecipazione to the "8th ICTP Workshop on theory and use of Regional Climate Models" as lecturer and laboratory activity assistant.</p> |
| 01/11/2013 – 31/10/2015 employer | <p>Post Doc Researcher Università degli Studi dell'Aquila/CETEMPS, L'Aquila (Italy) WRF model applications in complex orography regions for investigation on severe weather processes peculiar of the alpine area. Multi-model inter-comparison for severe event forecast over western Mediterranean and investigation of key factors mesoscale convective systems predictability through convection parametrized and convection permitting models.</p> |
| 01/07/2013 – 21/12/2013 employer | <p>Scientific visitor National Center for Atmospheric Research (NCAR), Boulder (Colorado, USA) Research project in collaboration with Dr. Richard Rotunno for investigation on high impact weather events of the Hydrological cycle in Mediterranean Experiment (HyMeX 2012). The focus of the research activity has been the investigation of key processes for predictability of frontal convection by the WRF model. The study has been conducted by comparison to many conventional and non conventional experimental data (raing-gauges, RADAR, wind-profilers, PBL balloons and dropsonds, etc.).</p> |
| 01/11/2011 – 31/10/2013 employer | <p>Post Doc Researcher Università degli Studi dell'Aquila/CETEMPS, L'Aquila (Italy) Implementation of a high resolution topography and land-use database for model WRF and operational implementation within a weather alert system. Research activity within the project IDRA-2 appointed by the National Civil Protection department (see Scientific Projects section) dedicated to investigation on the WRF model sensitivity to PBL schemes for turbulence in complex terrain regions. Research activity within the METAWAVE project (N. ESTEC-21207/07/NL/HE) of European Space Agency (ESA) (see Scientific Projects section). Part of the research was dedicated to variational assimilation of Interferometric synthetic-aperture radar (InSAR) data in MM5 model, producing the first in literature study on this topic.</p> |
| 14/01/2011 – 14/07/2011 employer | <p>Research Scholarship Università degli Studi dell'Aquila/CETEMPS, L'Aquila (Italy) Study on PBL parameterizations in models MM5 and WRF. The activity contributed to the project IDRA-1 appointed by the National Civil Protection department (see Scientific Projects section).</p> |
| Other professional experiences | |
| 05/09/2012 – 06/11/2012 employer | <p>Weather forecaster and Experiment organizer CETEMPS/Università degli Studi dell'Aquila, L'Aquila (Italy)</p> |

Weather forecasting activity in the CETEMPS virtual operational center to launch alerts within the observational campaign SOP1 of HyMeX (2012, see Scientific Projects section).

Local organizing committee member for SOP1 activities.

02/05/2011 – 31/12/2015
employer

Weather forecaster

Himet S.r.l., L'Aquila (Italy)

Forecast reports over Italy for the www.xmeteo.it web; for daily newspaper, for highway society "Strada dei parchi" (motorways A24 e A25) and for national "Società Autostrade" (A1, A14, A16, A30).

20/09/2010 – 31/12/2016
employer

Weather forecaster

CETEMPS/Università degli Studi dell'Aquila on behalf of RAI (Italian radio-television), L'Aquila (Italy)

Weather forecaster for the television program "RAI Buongiorno Regione Abruzzo" (channel Rai Tre) and radio program "Meteo Regionale" (channel Rai Radio Uno).

01/01/2009 – 28/02/2012
employer

Weather forecaster

CETEMPS/Università degli Studi dell'Aquila, L'Aquila (Italy)

Supporting weather forecast activity for the meteo-hydrological alert service of the regional section of Abruzzo Civil Protection department.

Education and training

28/03/2011

Ph.D. in Physics (XXIII cycle)

University of L'Aquila, L'Aquila (Italy)

Field: Atmospheric Sciences

Advisor: Prof. Rossella Ferretti.

19/07/2007

Master Degree in Physics

University of L'Aquila, L'Aquila (Italy)

Grade: Summa Cum Laude

Curriculum: Atmospheric Sciences

Advisor: Prof. Rossella Ferretti

07/02/2005 – 06/05/2005

Trainee

Abruzzo Region Civil Protection department/CETEMPS, L'Aquila (Italy)

Weather Forecast and statistical evaluation: MM5 (before and after the new operational configuration).

International Schools

03/09/2007 – 07/09/2007

International Summer School on Atmospheric and Oceanic Sciences: Integrated ground-based observing system applications for Climate, Meteorology, and Civil Protection

CETEMPS-University of L'Aquila, L'Aquila (Italy)

01/09/2008 – 04/09/2008

ECMWF Annual Seminar: Parametrization of subgrid physical processes

European Centre for Medium-Range Weather Forecasts (ECMWF), Reading (UK)

30/08/2007 – 03/09/2010

International Summer School on Atmospheric and Oceanic Sciences: Climatic change and impacts on natural and protected areas

CETEMPS-University of L'Aquila, L'Aquila (Italy)

11/05/2015 – 21/05/2015

ECMWF Training course: Parametrization of subgrid physical processes

European Centre for Medium-Range Weather Forecasts (ECMWF), Reading (UK)

23/05/2016 – 03/06/2016

8th ICTP Workshop on theory and use of Regional Climate Models

20/06/2016 – 24/06/2016

Personal skills and competences

Mother tongue

language(s)

*Self-assessment
European level*

English

French

Technical skills and competences

Computing skills and competences

Other academic activities

International Centre for Theoretical Physics (ICTP), Trieste, Italy

6th CNR-ISAC Summer School: Advances in severe weather analysis, models and observations

Istituto di Scienze dell'Atmosfera e del Clima (CNR-ISAC), Castro Marina (LE, Italy)

Italian

| Understanding | | Speaking | | Writing | |
|---------------------|---------------------|---------------------|---------------------|---------------------|--|
| Listening | Reading | Spoken interaction | Spoken production | | |
| B2 Independent user | B2 Independent user | B2 Independent user | B2 Independent user | B2 Independent user | |
| A1 Basic user | A2 Basic user | A1 Basic user | A1 Basic user | A1 Basic user | |

Common European Framework of Reference (CEF) level

Advanced experience in **Implementation, validation and application of numerical models (MM5, WRF, RegCM)** for research study on weather, climate processes and climate change applications.

Advanced experience in statistical studies through **multi-model ensemble**

Experience in **integration and 3D variational assimilation** of experimental data (LiDAR, InSAR)

Large experience in elaboration and analysis of observations from conventional and unconventional source (weather station, RADAR, SODAR, LiDAR, sonic anemometer, radiosonds, weather balloons for boundary layer, satellite)

Programming Languages: Fortran, Matlab, Shell (bash, sh, csh, ksh), Python, NCL, Perl (basic)

SO: Linux, Windows

Numerical models: MM5, WRF-ARW, RegCM

Other: LaTeX, Office, GRADS, RIP4, CDO, VAPORgui

Reviewer for the following scientific journals:

- * Indian Journal of Radio and Space Physics ISSN 0367-8393
- * MDPI - Atmosphere - open access journal ISSN 2073-4433
- * Annales Geophysicae (EGU journals) eISSN 1432-0576 | ISSN 0992-7689
- * Quarterly Journal of the Royal Meteorological Society ISSN 1477-870X
- * Journal of Geophysical Research-Atmospheres ISSN 2169-8996



Scientific Lecturer Ninth ICTP Workshop on the Theory and Use of Regional Climate Models, May-June 2018, Trieste

Master Degree assistant Advisor on behalf of prof. Ferretti: scientific and technical support for 2 Master degree thesis about numerical modeling.

Organizing committee:

* Special Observation Period 1 (SOP1) of HyMeX 2012 (Hydrological cycle in Mediterranean Experiment) within operational alert center of CETEMPS (L'Aquila, IT)

* Celebration of 50th anniversary from faculty of Physics foundation at the University of L'Aquila: "50 Anni di Fisica a L'Aquila", 2016

* 7th International Med-CORDEX Workshop, 15th-16th, May 2023 (online form; <https://zenodo.org/record/7941434>)

* EGU 2024 - CL3.1.1: Regional to local climate change, processes, impacts, and extremes, April 2024, Vienna (Austria), <https://meetingorganizer.copernicus.org/EGU24/session/49138>

Scientific Research Projects

Scientific investigator [*other tasks*]

METAWAVE: Mitigation of Electromagnetic Transmission errors induced by Atmospheric Water Vapour Effects funded by the European Space Agency (ESA) contact N. ESTEC-21207/07/NL/HE

IDRA 1: Integrazione di Dati di sensori e modelli per il Rilevamento Atmo-idro-sferico funded by the National Civil Protection Department.

IDRA 2: follow-up of IDRA-1.

HyMeX: HYdrological cycle in Mediterranean Experiment (not funded). [*Organizing committee of the virtual alert operational center (VOC) at CETEMPS*]

Pilot projects funded by Abruzzo Region Government: annual projects for new techniques development, support and collaboration to the operational activities for hydro-meteorological monitoring and alert of the Abruzzo regional division for Civil Protection (CFA).

RAISS M/0010/01/X23: collaboration between CETEMPS and HIMET s.r.l. for development of technological innovations for weather forecast products (still operational). Responsible for the working package Met-RAISS dedicated to Meteorology [*PI; Scientific manager*]

EURO-CORDEX: Coordinated Downscaling Experiment - European Domain (European branch of the international CORDEX initiative, which is a program sponsored by the World Climate Research Program (WRCP) to organize an internationally coordinated framework to produce improved regional climate change projections for all land regions world-wide).

Horizon H2020-EUCP (Horizon 2020-European Climate Prediction System; GA number: 776613): Develop an innovative ensemble climate prediction system based on high-resolution climate models for Europe for the near-term (1-40years).

Scientific Projects Proposal

Horizon H2020-XAIDA (XAIDA – eXtreme events : Artificial Intelligence for Detection and Attribution (n. 101003469): the project consortium gathers experts in machine learning, statistics and climate modelling, whose research will draw new methods to apply to recent high-impact events, examining links to climate change and predicting how they will change in the future.

PNRR-ICSC (NATIONAL CENTRE FOR HPC, BIG DATA AND QUANTUM COMPUTING): Build advanced Big Data and Quantum Computing infrastructure available for Research centres and companies, with flexible web cloud interfaces for data access.

AXA The influence of water vapor on Mediterranean extreme weather events: improving forecasts - Axa Research Fund 2015 – Post Doctoral Fellowships [University of L'Aquila selection – 3rd place].

WVEMEW (Proposal number RBS114RP3C) - The influence of water vapor budget on Mediterranean extreme weather events – Scientific Independence of young Researchers selection (SIR 2014) – [first selection: High level category; not funded].

RHEA 700387 Horizon 2020 - Response Holistic system for Agile responses to natural disasters (submitted in collaboration with other partners).

Awards and fellowships

“Young Scientist Travel Award EGU (2008) by the X Plinius Conference Scientific Committee for Outstanding presentation titled "InSar, GPS data and high resolution simulations for studying the water vapor distribution in the urban area of Rome: A case study" among young scientists at the EGU X Plinius Conference on Mediterranean Storms, Nicosia (Cyprus), 2008

Young Scientists fellowship ISARS 2010 (International Symposium for the Advancement of Boundary-Layer Remote Sensing 2010)

Grant of University of L'Aquila assigned to young researchers that have obtained excellent results in the SIR 2014 (competition for Scientific Independence of young Researchers promoted by the Italian government).

Publications on peer-reviewed Journals

2024

Fosser, G., Gaetani, M., Kendon, E.J.,..., **Pichelli** et al. Convection-permitting climate models offer more certain extreme rainfall projections. *npj Clim Atmos Sci* 7, 51 (2024). <https://doi.org/10.1038/s41612-024-00600-w>

Cecile Caillaud, Samuel Somot, ..., **Pichelli** et al. (2024) Northwestern Mediterranean Heavy Precipitation Events in a warmer climate : robust versus uncertain changes with a large convection-permitting model ensemble. *Geophysical Research Letters*, DOI: 10.22541/essoar.168987136.64498273/v1

Coppola E., Giorgi F., Giuliani G., **Pichelli** E., et al. The Fifth Generation Regional Climate Modeling System, RegCM5: the first CP European wide simulation and validation over the CORDEX-CORE domains. *ESS Open Archive* . January 16, 2024. DOI: 10.22541/essoar.170542078.80092084/v1 [under revision]

M.O. Molina, ..., **Pichelli** et al., The added value of the km-scale multimodel ensemble of the FPS-Convection to describe wind speed over the Alps, [under revision]

2023

Muller, SK., **Pichelli**, E., et al. The Climate Change Response of Heavy Precipitation Events over the Alps and in the Mediterranean. *Clim Dyn* (2023). <https://doi.org/10.1007/s00382-023-06901-9>

Giorgi, F., Coppola, E., Giuliani, G., Ciarlo', J. M., **Pichelli**, E., Nogherotto, R., et al. (2023). The fifth generation regional climate modeling system, RegCM5: Description and illustrative examples at parameterized convection and convection-permitting resolutions. *Journal of Geophysical Research: Atmospheres*, 128, e2022JD038199. <https://doi.org/10.1029/2022JD038199>

Belušić Vozila, A., Belušić, D., Telišman Prtenjak, M., ... , **Pichelli** et al. Evaluation of the near-surface wind field over the Adriatic region: local wind characteristics in the convection-permitting model ensemble. *Clim Dyn* (2023). <https://doi.org/10.1007/s00382-023-06703-z>

Sangelantoni, L., Sobolowski, S., ... , **Pichelli**, et al. Investigating the representation of heatwaves from an ensemble of km-scale regional climate simulations within CORDEX-FPS Convection. *Clim Dyn* (2023). <https://doi.org/10.1007/s00382-023-06769-9>

2022

Soares, PMM, Careto, JAM, ... , **Pichelli**, E., et al. The added value of km-scale simulations to describe temperature over complex orography: the CORDEX FPS-Convection multi-model ensemble runs over the Alps. *Clim Dyn* (2022). <https://doi.org/10.1007/s00382-022-06593-7>

Muller, SK., Caillaud, C., ... , **Pichelli**, E., et al. Evaluation of Alpine-Mediterranean precipitation events in convection-permitting regional climate models using a set of tracking algorithms. *Clim Dyn* (2022). <https://doi.org/10.1007/s00382-022-06555-z>

Stocchi, P.; **Pichelli**, E.; Torres Alavez, J.A.; Coppola, E.; Giuliani, G.; Giorgi, F. Non-Hydrostatic Regcm4 (Regcm4-NH): Evaluation of Precipitation Statistics at the Convection-Permitting Scale over Different Domains. *Atmosphere* 2022, 13, 861. <https://doi.org/10.3390/atmos13060861>

2021

Coppola, E., Stocchi, P., **Pichelli**, E., Torres Alavez, J. A., Glazer, R., Giuliani, G., Di Sante, F., Nogherotto, R., and Giorgi, F.: Non-Hydrostatic RegCM4 (RegCM4-NH): Model description and case studies over multiple domains, *Geosci. Model Dev.*, 14, 7705–7723, 2021, <https://doi.org/10.5194/gmd-14-7705-2021>

Giorgi, F., Coppola, E., Jacob, D., ..., **Pichelli**, E., et al. (2021). The CORDEX-CORE EXP-I initiative: Description and highlight results from the initial analysis, *Bulletin of the American Meteorological Society* (published online ahead of print 2021). <https://journals.ametsoc.org/view/journals/bams/aop/BAMS-D-21-0119.1/BAMS-D-21-0119.1.xml>

Pichelli, E., Coppola, E., Sobolowski, S. et al. The first multi-model ensemble of regional climate simulations at kilometer-scale resolution part 2: historical and future simulations of precipitation. *Clim Dyn* (2021). <https://doi.org/10.1007/s00382-021-05657-4>

Ban N., Caillaud C., Coppola, E., **Pichelli** E., et al. The first multi-model ensemble of regional climate simulations at kilometer-scale resolution part 1: Evaluation of precipitation. *Clim Dyn* (2021). <https://doi.org/10.1007/s00382-021-05708-w>

Coppola E., Raffaele F., Giorgi F., ..., **Pichelli E.**, et al. Climate hazard indices projections based on CORDEX-CORE, CMIP5 and CMIP6 ensemble. *Clim Dyn* (2021). <https://doi.org/10.1007/s00382-021-05640-z>

2020

Teichmann, C., Jacob, D., Remedio, A.R., ..., **Pichelli E.**, et al. Assessing mean climate change signals in the global CORDEX-CORE ensemble. *Clim Dyn* (2020). <https://doi.org/10.1007/s00382-020-05494-x>

Ciarlo', J.M., Coppola, E., Fantini, A., ..., **Pichelli E.**, et al. A new spatially distributed added value index for regional climate models: the EURO-CORDEX and the CORDEX-CORE highest resolution ensembles. *Clim Dyn* (2020). <https://doi.org/10.1007/s00382-020-05400-5>

Jacob, D., Teichmann, C., Sobolowski, S., ..., **Pichelli E.**, et al. Regional climate downscaling over Europe: perspectives from the EURO-CORDEX community. *Reg Environ Change* 20, 51 (2020). <https://doi.org/10.1007/s10113-020-01606-9>

2018

Coppola E., Sobolowski S., **Pichelli E.**, Raffaele F. et al. (2018): A first-of-its-kind multi-model convection permitting ensemble for investigating convective phenomena over Europe and the Mediterranean. *Climate Dynamics*, 2018 DOI: 10.1007/s00382-018-4521-8

2017

Pichelli, E., Rotunno, R., Ferretti, R.: Influence of the Alps on two troughs affecting WRF forecasts of convection in the Po Valley during HyMeX, *Quarterly Journal of the Royal Meteorological Society*, 2017, DOI:10.1002/qj.3096

2016

Khodayar S., Fosser G., Berthou S., Davolio S., Drobinski P., Ducrocq V., Ferretti R., Nuret M., **Pichelli E.**, Richard E.: A seamless weather-climate multi-model intercomparison on the representation of a high impact weather event in the Western Mediterranean: HyMeX IOP12., *Quarterly Journal of the Royal Meteorological Society*, 2016, DOI: 10.1002/qj.2700

2015

S. Davolio, R. Ferretti, L. Baldini, M. Casaioli, D. Cimini, M. E. Ferrario, S. Gentile, N. Loglisci, I. Maiello, A. Manzato, S. Mariani, C. Marsigli, F. S. Marzano, M. M. Miglietta, A. Montani, G. Panegrossi, F. Pasi, **E. Pichelli**, A. Pucillo, A. Zinzi: The role of the Italian scientific community in the first HyMeX SOP: an outstanding multidisciplinary experience, *Meteorologische Zeitschrift*, Feb 11, 2015, DOI: 10.1127/metz/2014/0624 (WOS:000358784000003)

2014

Pichelli, E., Ferretti, R., Cimini, D., Panegrossi, G., Perissin, D., Pierdicca, N., Rocca F., and Rommen, B.: InSAR water vapor data assimilation into mesoscale model MM5: technique and a pilot study, *JSTARS (IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing)*, Volume: PP , Issue: 99, DOI: 10.1109/JSTARS.2014.2357685, 2014 , Article: 2357685. ([urlhttp://www.researcherid.com/rid/G-7723-2015](http://www.researcherid.com/rid/G-7723-2015))

Ferretti, R., **Pichelli, E.**, Gentile, S., Maiello, I., Cimini, D., Davolio, S., Miglietta, M. M., Panegrossi, G., Baldini, L., Pasi, F., Marzano, F. S., Zinzi, A., Mariani, S., Casaioli, M., Bartolini, G., Loglisci, N., Montani, A., Marsigli, C., Manzato, A., Pucillo, A., Ferrario, M. E., Colaiuda, V., and Rotunno, R.: Overview of the first HyMeX Special Observation Period over Italy: observations and model results, *Hydrol. Earth Syst. Sci.*, 18, 1953-1977, doi:10.5194/hess-18-1953-2014, 2014 (WOS:000337949000027)

Pichelli, E., Ferretti, R., Cacciani, M., Siani, A. M., Ciardini, V., and Di Iorio, T.: The role of urban boundary layer investigated with high-resolution models and ground-based observations in Rome area: a step towards understanding parameterization potentialities, *Atmos. Meas. Tech.*, 7, 315-332, doi:10.5194/amt-7-315-2014, 2014 (WOS:000330945400022)

2012

Cimini, D., Pierdicca, N., **Pichelli, E.**, Ferretti, R., Mattioli, V., Bonafoni, S., Montopoli, M., and Perissin, D.: On the accuracy of integrated water vapor observations and the potential for mitigating electromagnetic path delay error in InSAR, *Atmos. Meas. Tech.*, 5, 1015-1030, doi:10.5194/amt-5-1015-2012, 2012. (WOS:000304057300008)

2011

Sahoo S., S. C. Reising, S. Padmanabhan, J. Vivekanandan, F. Iturbide-Sanchez, N. Pierdicca, **E. Pichelli**, and D. Cimini, 3-D Humidity Retrieval using a Network of Compact Microwave Radiometers to Correct for Variations in Wet Tropospheric Path Delay in Spaceborne Interferometric SAR Imagery, *IEEE Transactions on Geoscience and Remote Sensing*, V. 49, 9, DOI: 10.1109/TGRS.2011.2119400, Sep. 2011. (WOS:000294536700013)

2010

Pichelli, E., R. Ferretti, D. Cimini, D. Perissin, M. Montopoli F. S. Marzano, N. Pierdicca, 2010: Water vapour distribution at urban scale using high-resolution numerical weather model and spaceborne SAR interferometric data, *Natural Hazards And Earth System Sciences (NHES)*, 2010, vol. 10; p. 121-132, ISSN: 1561-8633 (WOS:000274059200014)

2007

Di Carlo P., G. Pitari, E. Mancini, S. Gentile, **E. Pichelli** et G. Visconti, 2007: Evolution of surface ozone in central Italy based on observations and statistical model, *Journal of Geophysical Research*, 112; (Web of Science Accession Number: WOS:000246941700004)

Peer-reviewed conference proceedings

2012

The role of urban boundary layer investigated by high resolution models and ground based observations in Rome area: a step for understanding parameterizations potentialities. E. Pichelli, R. Ferretti, M. Cacciani, A.M. Siani, V.Ciardini, T. Di Iorio – 9th International Symposium on Tropospheric Profiling (ISTP 2012) Proceeding (<http://www.researcherid.com/rid/G-7723-2015>)

2011

Pierdicca N. , Rocca F., Rommen B., Basili P., Bonafoni S., Carlesimo G., Cimini N., Ciotti P., Ferretti R., Marzano F.S., Mattioli V., Montopoli M., Notarpietro R., Perissin D., Pichelli E., Venuti G., 2011: Synergic use of EO, NWP and ground based data for the characterisation of water vapour field, 5th European Conference on Antennas and Propagation (EUCAP), p. 3247 – 3250, ISBN: 978-1-4577-0250-1. (<http://www.researcherid.com/rid/G-7723-2015>)

Perissin, D., Rocca, F., Pierdicca, M., Pichelli, E., Cimini, D., Venuti, G., Rommen, and B.: Mitigation of Atmospheric Delay In InSAR: The ESA METAWAVE Project, *Proc. of IGARSS*, 24–29 July 2011, 2558–2561, doi:10.1109/IGARSS.2011.6049734, 2011. (WOS:000297496302145)

N. Pierdicca, F. Rocca, P. Basili, S. Bonafoni, G. Carlesimo, D. Cimini, P. Ciotti, R. Ferretti, F.S. Marzano, V. Mattioli, M. Montopoli, R. Notarpietro, D. Perissin, E. Pichelli, B. Rommen, G. Venuti, "Synergic use of EO, NWP and ground based measurements for the mitigation of vapour artefacts in SAR interferometry", Proc. of IEEE/IGARSS 2011, Vancouver, British Columbia, Canada, pp. 2566-2569, 24-29 July 2011. (WOS:000297496302147)

Pierdicca N., Rocca F., Perissin D., Ferretti R., Pichelli E., Rommen B., Cimini N., 2011: Numerical weather prediction models and SAR interferometry: synergic use for meteorological and INSAR applications, SPIE (Intern. Society for Optics and Photonics) Remote Sensing Symposium, Proc. SPIE 8179, 817912 (2011); doi:10.1117/12.898756 (WOS:000297790000034)

2010

D. Perissin, E. Pichelli, R. Ferretti, F. Rocca, and N. Pierdicca, 2010: Mitigation of Atmospheric Water-vapour Effects on Spaceborne Interferometric SAR Imaging through the MM5 Numerical Model, Xi'an. Progress in Electromagnetics Research Symposium (PIERS 2010). (WOS:000305504900003)

Mario Montopoli, F.S. Marzano, E. Pichelli, D. Cimini, R. Ferretti, S. Bonafoni, D. Perissin, F. Rocca, N. Pierdicca: Water vapor integration methods to improve the quality of Synthetic Aperture Radar observations, ERAD 2010 - THE SIXTH EUROPEAN CONFERENCE ON RADAR IN METEOROLOGY AND HYDROLOGY, Sibiu, Romania, 6-10 September 2010. (<http://www.researcherid.com/rid/G-7723-2015>)

Pichelli E., R. Ferretti, M. Cacciani, V.Ciardini, T. Di Iorio, A.M. Siani, 2010: Study of the planetary boundary layer of the urban area of Rome: High resolution model simulations and ground based observations. 15th International Symposium for the Advancement of Boundary Layer Remote Sensing (ISARS). (<http://www.researcherid.com/rid/G-7723-2015>)

2009

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Conferences and seminars

I have presented more than 70 scientific presentations in conferences and workshops around the world, with 4 invited talks

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