

Curriculum vitae

OMISSIS

Rita NOGHEROTTO

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PROFESSIONAL EXPERIENCE

- 12/2020–Today **Assegno di Ricerca Junior - Istituto Nazionale di Oceanografia e Geofisica (HPC-TRES program award number 2020-12).**
- 12/2015–Today **Scientific Consultant - The Abdus Salam International Centre for Theoretical Physiscs (ICTP) (Italy).**
Analysis of Extreme Meteorological Events and release of Flood Risk Maps over the Italian territory (project financed by Allianz S.p.A.). Analysis of Extreme Events over Europe and South America under different future greenhouse gas concentration scenarios within the project financed by Enel S.p.A. "Climate Change and Resilience".
- 09/2015–11/2015 **Laboratoire de l'Atmposphere et des Cyclones (Lacy), Saint Denis de la Reunion (France).**
Short Term Scientific Mission (STSM) **COST ACTION ES1206** "Extreme events, water vapor distribution and GNSS".
- 07/2010–09/2010 **National Center for Atmospheric Research UCAR, Boulder, Colorado (Stati Uniti d'America)**
Collaboration about the study of the Drying Ratio of the Colorado Mountains under Climate Change Conditions.
- 09/2009–02/2011 **Department of Meteorology and Geophysics at the University of Vienna (Austria).**
Assistant in Training at the Faculty of Geosciences, Astronomy and Geophysics.
Teaching Theoretical Meteorology 1,2 and 3.

EDUCATION

09/2006–05/2009

Master Graduation in Physics, Università degli Studi di Trieste

Title of the Thesis: Studio modellistico dell'effetto delle caratteristiche superficiali sul monzone africano. Supervisor: Dr. Filippo Giorgi. Final grade: 109/110.

01/2011–04/2015

Phd: "**Doctorate School in Environmental and Industrial Fluid Mechanics**", Università degli Studi di Trieste.

Title of the thesis: "A numerical framework for multiple phase cloud microphysics in regional and global atmospheric models". Supervisor: Dr. A. M. Tompkins.

SPOKEN LANGUAGES

Mother tongue

Italian

Other languages

English – Excellent level

Spanish – Excellent level

German – Basic level

ORGANIZATIONAL AND MANAGERIAL SKILLS

- **Founder and co-organizer of the international school “(Geo)Science communication school”** (www.sciencecommunicationschool.org) for which I achieved the European Geosciences Union funds for training school in 2016-2017-2018 and 2019.
- Member of the **Working Group 2 of the COST Action ES1206**, Advanced Global Navigation Satellite Systems tropospheric products for monitoring severe weather events and climate (GNSS4SWEC).
- Since 2016 co-organizer of the yearly international school **“Convective and volcanic clouds detection, monitoring and modeling”**
- Member since 2019 of the Work Package 2 of the **European Climate Prediction Project (EUCP)**

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OUTREACH EXPERIENCE

PUBLICATIONS

- February 2020 - Invited speaker for the **Italian Diplomatic Academy (VR)** to teach climate change in the schools within the "**Studenti Ambasciatori alle Nazioni Unite - 2020**" project.
- January 2019 - invited to the "**Nautilus**" R.A.I. TV program.
- November 2018 - lecturer at the **Physics Without Frontiers (PWF)** Roadshow in Zimbabwe.
- Since October 2018 - member of the "**Topi di Laboratorio**" outreach project formed by a small group of young researchers and amateur actors, whose main goal is to promote science engaging the general public.
- September 2018 - invited speaker within the project "**VideoMaker for Climate Change**".
- July 2018 - invited speaker for "**Castelli di Scienza**".
- February 2018 - Invited speaker for the **Italian Diplomatic Academy (VR)** to teach climate change in the schools within the "**Studenti Ambasciatori alle Nazioni Unite - 2018**" project.
- Since 2017- co-organizer of the **Pint of Science** event in Trieste (May 2018)
- **Since 2016 - founder and organizer of the yearly international school "(Geo)Science communication school" (www.sciencecommunicationschool.org)**

PUBLICATIONS:

Nogherotto R, Coppola E, Giorgi F, Mariotti L: "Impact of Congo Basin deforestation on the African monsoon." *Atmospheric Science Letters* DOI: 10.1002/asl.416 (2013).

Nogherotto R: "A numerical framework for multiple phase cloud microphysics in regional and global atmospheric models", *Università degli studi di Trieste*, Italy. (2015).

Nogherotto R et al: "Numerical framework and performance of the new multiple-phase cloud microphysics scheme in RegCM4. 5: precipitation, cloud microphysics, and cloud radiative effects." *Geoscientific Model Development* 9.7, 2533-2547 (2016).

Sitz L, R. Farneti, F. Di Sante, R. Fuentes, U. Turuncoglu, M. Barreiro, G. Sannino, R. Nogherotto et al: "Description and evaluation of the Earth System Regional Climate Model (RegCM-ES)". *Journal of Advances in Modeling Earth Systems* (2017)

Nogherotto R., A. Fantini, F. Raffaele, E. Coppola and F. Giorgi: "An integrated hydrological and hydraulic modelling approach for the flood risk assessment over Po river basin: a case study for the ALLIANZ Insurance Company." Under revision in *Natural Hazards and Earth System Sciences (NHESS)* (2020)

Brunner L., C. McSweeney, C. Befort, C. O'Reilly, E. Coppola, R. Nogherotto et al: "Quantifying uncertainty in projections of future European climate: a multi-model multi-method approach" JCLI-D-19-0953. Submitted to *Journal of Climate* (Dic 2019)

R. Vautard, N. Kadyrov, C. Iles, F. Boberg, E. Buonomo, K. Bülow, E. Coppola, L. Corre, E. van Meijgaard, R. Nogherotto et al "Evaluation of the large EURO-CORDEX regional climate model ensemble "Evaluation of the large EURO-CORDEX regional climate model ensemble." *Journal of Geophysical Research: Atmospheres* 126.17 (2021): e2019JD032344.

E. Coppola, R. Nogherotto et al "Assessment of the European climate projections as simulated by the large EURO-CORDEX regional climate model ensemble". *J. Geophys. Res.-Atmos.*, 126, e2019JD032356, <https://doi.org/10.1029/2019JD032356>, 2021.

Coppola, E, P Stocchi, E Pichelli, JA Torres Alavez, R Glazer, G Giuliani, F Di Sante, R Nogherotto, and F Giorgi: "Non-Hydrostatic RegCM4 (RegCM4-NH): Model description and case studies over multiple domains." *Geoscientific Model Development* 14.12 (2021): 7705-7723.

Filippo Giorgi, E Coppola, D Jacob, C Teichmann, S Abba Omar, M Ashfaq, N Ban, K Bülow, M Bukovsky, L Buntemeyer, T Cavazos, J Ciarlo', R Porfirio Da Rocha, S Das, F di Sante, J P. Evans, X Gao, G Giuliani, R H. Glazer, P Hoffmann, E-S Im, G Langendijk, L Lierhammer, M Llopart, S Mueller, R Luna-Nino, R Nogherotto, E Pichelli, F Raffaele, M Reboita, D Rechid, A Remedio, T Remke, W Sawadogo, K Sieck, JA Torres-Alavez, and T Weber: "The CORDEX-CORE EXP-I initiative: Description and highlight results from the initial analysis." *Bulletin of the American Meteorological Society* (2021): 1-52.

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Nogherotto, R., Fantini, A., Raffaele, F., Di Sante, F., Dottori, F., Coppola, E., & Giorgi, F. (2022). A combined hydrological and hydraulic modelling approach for the flood hazard mapping of the Po river basin. *Journal of Flood Risk Management*, 15(1), e12755.

Nogherotto R, Burgard C and Jones C (2022) What Is Causing Our Climate To Change So Quickly Now?. *Front. Young Minds*. 10:668763. doi: 10.3389/frym.2022.668763.

CONFERENCES AND WORKSHOPS

- **NCAR-NCAS WRF Workshop** and Tutorial, 27 Sep - 03 Oct 2009, Cambridge UK.
- Nogherotto, R., Coppola, E., Giorgi, F., Mariotti, L., 2010: Impact of landuse and albedo change on the Western African Monsoon circulation by means of a deforestation in the Congo Basin. **EGU General Assembly 2010** Vienna;
- Nogherotto, R., Grubišić, V., Rasmussen, R. M., Liu, C., Ikeda, K., Gochis, D., Yates, D., Chen, F., Tewari, M., Barlage, M., Dudhia, J., Yu, W., Miller, K., Arsenault, K., Thompson, G. and Gutmann, E., 2010: Precipitation efficiency of the Colorado mountains under warmed climate. **AMS 14th Conference on Mountain Meteorology**, Lake Tahoe, California;
- Nogherotto, R., Grubišić, V., Rasmussen, R. M. and the Rasmussen Team, 2010: Precipitation efficiency of the Colorado mountains under warmed climate. **EMS Annual Meeting and the European Conference on Applied Climatology**, Zurich, Switzerland ;
- Atmospheric Water Vapour in the Climate System (**WAVACS**) **COST winter school**, Venezia February 2011;
- **Workshop on Aerosol Impact in the Environment: from Air Pollution to Climate Change**, ICTP Trieste August 2011;
- Nogherotto, R., Grubišić, V., and the NCAR Team, 2011. Drying Ratio of the Colorado Mountains under Climate Change Conditions, Poster Presentation, **EGU General Assembly 2011**;
- Nogherotto, R., Tompkins, A.M., Giorgi, F., Coppola, E., The new microphysic cloud scheme implemented in RegCM4, Poster Presentation, **EGU General Assembly 2012**;
- Nogherotto, R., Tompkins, A.M., New cloud microphysics scheme, Sixth ICTP **Workshop on the Theory and Use of Regional Climate Models**, ICTP, May 2012;

- Eidhammer T, Grubisic V, Ikeda K, Nogherotto R, Rasmussen R 2012: Air mass transformation in the Rocky Mountain Region; the present and future climate. **AGU General Assembly 2012**, San Francisco;
- **Workshop on Parameterization of Clouds and Precipitation across Model Resolutions**, November 2012 ECMWF (Reading, UK);
- **EUCLIPSE International Summerschool in Clouds and Climate**, June 2013, Les Houches, France;
- Seventh ICTP **Workshop on the Theory and Use of Regional Climate Models**, May 2014, ICTP Trieste;
- **CFMIP/EUCLIPSE Meeting on Cloud Processes and Climate Feedbacks** Egmond aan Zee, The Netherlands, 2014;
- **GNSS4SWEC Summer school 2014**, Golden Sands, Bulgaria;
- **Joint ES1206 MC and MC meeting 2014**, Golden Sands, Bulgaria;
- **GNSS4SWEC Meeting 2016**, Reykjavik, Iceland;
- **CFMIP/EUCLIPSE Meeting 2016**, Trieste, Italy;
- **GNSS4SWEC Meeting 2016**, Potsdam, Germany;
- **16th EMS Annual Meeting & 11th European Conference on Applied Climatology (ECAC)**, September 2016, Trieste, Italy.
- Nogherotto R. Fantini A., Raffaele F., Coppola E. Giorgi F. : Regional-scale flood risk modelling: an integrated hydrological and hydraulic approach applied over the Po river, **EGU General Assembly 2017** Vienna.
- Nogherotto, R.; Biondi, R.; Leclair de Bellevue, J.; Brenot, H. Characterization of tropical cyclones in the South Indian Ocean by using GNSS observations **EGU General Assembly 2017** Vienna.
- Biondi, R., Nogherotto R. The Geoscience Communication School (GCS): an interactive approach for sharing science **EGU General Assembly 2017** Vienna .
- Nogherotto R. Fantini A., Raffaele F., Coppola E. Giorgi F. Nogherotto R.: Regional climate modeling and flood risk maps: an integrated hydrological and hydraulic approach, **EGU General Assembly 2018** Vienna
- Nogherotto R. Fantini A., Raffaele F., Coppola E. Giorgi F. Nogherotto R.: Future flood hazard and regional climate modeling: an integrated hydrological and hydraulic approach, **EGU General Assembly 2019** Vienna
- "The impact of using bias-corrected precipitation in estimating extreme discharge: A study over the Italian Territory". M García-Valdecasas Ojeda, E Coppola, F Di Sante, F Raffaele, R Nogherotto, F Giorgi **EGU General Assembly 2021** Conference Abstracts, EGU21-13201

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- "Projections of the Fire Weather Index (FWI) using CORDEX-CORE simulations" F Raffaele, R Nogherotto **EGU General Assembly 2021** Conference Abstracts, EGU21-5389

AREAS OF INTEREST

- Since 2014 I teach Italian to the refugees within the no-profit organization ICS – Consorzio Italiano di Solidarieta' in Trieste.
- 2012-2014 Collaborator with Protezione Civile as a volunteer during the Emilia earthquake in 2012 and in the following years.
- 2000-2009 Educator A.G.E.S.C.I.
- I play the transverse.
- Mountains, travels and photography.

Le informazioni contenute nel presente curriculum vitae sono rese sotto la personale responsabilità del sottoscritto ai sensi degli artt. 46 e 47 del DPR 28.12.2000, n. 445, consapevole della responsabilità penale prevista all'art. 76 del medesimo DPR 28.12.2000, n. 445, per le ipotesi di falsità in atti e dichiarazioni mendaci.

Trieste, 10/03/2022

FIRMA

L'originale compilato e sottoscritto è depositato presso gli Uffici dell'Ente