

Prof. Rossella Ferretti

EDUCATION

1987 Ph.D. in Geophysics, School of Geophysical Sciences of the Georgia Institute of Technology (Atlanta GA, USA), Ph.D. Thesis: "Wave disturbances associated with the Red River Valley severe weather outbreak of 10-11 April 1979".

Ph.D. in Physics, Italy.

1980 "Laurea" in Physics, "summa cum laude", University of Rome "La Sapienza". Research Thesis: "Simulation of SO₂ dispersion in the atmosphere of the urban area of Rome using a dispersion model"

PROFESSIONAL RECORD

2017 Coordinator of a new Master's Degree in Atmospheric Science and Technology at University of L'Aquila and University of Rome

2016 DMI representative in the Task Team of Service (improve public weather services across Europe & impact based warnings) in EUMETNET Strategy Implementation Group.

DMI representative at the Hirlam Advisory Committee of the Hirlam-C Consortia.

DMI representative at the Energy Horizon2020 Reference Group in Denmark.

Sep 2015 to Feb 2017 Lead Scientist at the Danish Meteorological Institute for Nowcasting and NWP.

2013-2015 Vice-Director of Center of Excellence CETEMPS.

2013 Qualified as Full Professor for the area 04/A4-Geophysics, Italian National Scientific Qualification Procedure 2012.

(<https://abilitazione.cineca.it/ministero.php/public/esitoAbilitati/settore/04%252FA4/fascia/1>).

2012 Coordinator/Director of the Virtual Operational Italian Meteorological Center (VOC) in L'Aquila during the HyMex campaign (Sep-Nov, 2012).

2011-2010 She is invited at NCAR several times to work on orographic precipitation in complex topography

2006 to now Associate Professor, University of L'Aquila (Italy), Department of Physics.

2005 Coordinator/in-charge of the Italian area of the European Campaign LAUNCH in the framework of the COST 720. Chairman of DATA Assimilation session at EGU Vienna

2004 Co-director of the ISSAOS Summer School on Atmospheric Data Assimilation

2002 Chairman of Orographic Precipitation session at AMS Alpine Meteorology (MAP), Park City

2001-2015 She is Leading the Meteorological Modelling group at Cetemps and in charge of the operational weather forecast at CETEMPS (Center of Excellence for Prediction of Severe Events) at University of L'Aquila (<http://cetemps.aquila.infn.it>).

1996-1998 She spends a year at NCAR working on orographic precipitation in complex topography

1990-2006 Researcher, University of L'Aquila (Italy), Department of Physics

1987-1990 Meteorological Coordinator at the Italian National Agency for Air Traffic Control

EXPERTISES

- She is an expert in Mesoscale modelling; she has a long record of investigation on the role of physical processes and data assimilation of conventional and non-conventional data (satellite data, InSar and radar data). She developed a deep knowledge of the Mesoscale Modelling MM5 and more recently of the new generation Weather Research & Forecasting model (WRF) from NCAR. In the last year she works with the HARMONIE-AROME model both using DMI and ECMWF super-computer. She is participating to the PEEEX and the Cordex projects.
- She is familiar with scripting system for operational forecast. She participates to Mesoscale Alpine Programme campaign (Sep-Nov 1999) by running operational MM5 over the Alpine region. She participates to the APE-GAIA campaign (Sep-Oct 1999) by running operational MM5 on the Tierra del Fuego- Antarctica. She participates to HyMeX campaign (Sep-Nov 2012) by running operational WRF over Italy at 3km.
- In charge of several national and international projects: 1) Regione Abruzzo: high resolution weather forecast; 2) Presidenza del Consiglio dei Ministri Dipartimento della Protezione Civile (DPC): IDRA I and IDRA II, Test and tune high resolution weather forecast; 3) ESA: METAWAVE, to produce high resolution water vapor map for InSar and to improve weather forecast by 3DVAR assimilation of water vapour from InSar. 4) EU: TOUGH project for GPS data assimilation; EU: SCOUT-O3 study of deep convection in the tropical area. 5) Italian Space Agency (ASI): NOWCASTING, for flood forecasting.
- Referee for several international journals: Meteorology and Atmospheric Physics, Atmospheric Research, NHES, Guest Editor of QJRMET for the special issue of the Hymex campaign

- Reviewer for: the Research Council of Norway for a proposal on the Orographic precipitation, and for the Netherlands e-Science Center (NLeSC) ; the Netherlands Organisation for Scientific Research (NWO); the Italian Super Computing Resource Allocation promoted by CINECA.

PROFESSIONAL ACTIVITIES

- As Lead Scientist for Numerical Weather Prediction and Now-casting at DMI she is involved in all the projects NWP related. Some of them are related to renewable energy production, risk and prevention.
- Member of the Executive Committee for Implementation and Science Coordination of the HyMex project.
- Member of several judging committee for PhD thesis, fellowship application and researcher position
- Member of the Working group for the strategy of the Physics Department of University of L'Aquila

TEACHING ACTIVITIES

1998- 2015 She has taught at least three graduate and undergraduate classes every academic year, among them: Dynamic Meteorology, Climatology, Mesoscale modelling and Laboratory for Computational Physics

2017-2018 She has taught: Dynamic Meteorology, Physics of Fluid, Introduction to Computational Physics

2016 She taught 3,5 hours the following class ' Errors source in NWP ' for the MASTER di II livello in "Analisi e Mitigazione del Rischio Idrogeologico" – Dipartimento di Scienze della Terra

PUBBLICATIONS

- Author of 51 papers on international peer refereed journals.