



## Annalina Lombardi

---

**Date of birth:** 05/05/1980 | **Nationality:** Italian | **Phone number:**

(+39) 0862433024 (Work) | **Email address:** [lombardiannalina@libero.it](mailto:lombardiannalina@libero.it) |

**Email address:** [annalina.lombardi@aquila.infn.it](mailto:annalina.lombardi@aquila.infn.it) | **LinkedIn:**

[linkedin.com/in/annalina-lombardi-0152b243](https://www.linkedin.com/in/annalina-lombardi-0152b243) | **ResearchGate:**

<https://www.researchgate.net/profile/Annalina-Lombardi> | **WebOfScience:**

<https://publons.com/researcher/ABZ-6222-2022/> | **Scopus:**

<https://www.scopus.com/authid/detail.uri?authorId=55240083800> | **Orcid:**

<https://orcid.org/0000-0001-9356-059X> |

**Address:** Via Vetoio, 67100, L'Aquila, Italy (Work)

### WORK EXPERIENCE

---

01/10/2022 – CURRENT

**UNIVERSITY RESEARCH (SDS GEO/12)** DEPARTMENT OF PHYSICAL AND CHEMICAL SCIENCES - UNIVERSITY OF L'AQUILA - ITALY

---

Researcher at Department of Physical and Chemical Sciences - University of L'Aquila - Italy. Integrated, regional-scale climate services, contextualized on the needs of stakeholders in the agricultural sector with the aim of providing a robust knowledge base for climate risk reduction, are intended as part of the research activity. The research is focused on the Abruzzo Region chosen as a pilot area, through the use of medium- and long-term climate projections to be assimilated into the CHyM hydrological model for the development of hydroclimate projections. It is planned to develop a hydrological forecasting system for predicting short-term severe events and agro-climatic indices for climate risk characterization.

01/08/2021 – 30/09/2022 L'Aquila, Italy

**RESEARCH FELLOWSHIP (SDS GEO/12)** CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT - UNIVERSITY OF L'AQUILA

---

Research activities within the SMIVIA Project on "Simulations with the CHyM model for the evaluation of the hydrological impact of snow melting calculated by the forced SNOWPACK model by assimilating hybrid data from the WRF-DInSAR chain."

**Business or Sector** Professional, scientific and technical activities |

**Department** Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

24/02/2015 – 31/07/2021 L'Aquila, Italy

**RESEARCH FELLOWSHIP (SDS FIS/06)** CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT - UNIVERSITY OF L'AQUILA

---

Research activity inside CETEMPS - Functional Center (Abruzzo Region) Convention: "Development and management of operational procedures for hydrological forecasts using CHyM model". The scientific collaboration is focused on

1. developing and maintaining hydro-meteorological operative chain for extreme flood events forecast;

2. developing, calibrating and validating of two user-oriented stress indices (CAI and BDD) needed to support Regional Civil Protection Early Warning System;
3. developing of an experimental system for forecasting shallow landslides and debris flows.

**Business or Sector** Professional, scientific and technical activities |

**Department** Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

01/04/2005 – 07/09/2008 Telesse Terme, Italy

**ENGINEERING OFFICE PARTNER S.I.G.O. SRL**

---

1. Secretarial activity
2. Public relations
3. Logistic support

**Business or Sector** Professional, scientific and technical activities | **Department** S.I.G.O. srl |

**Address** Corso Trieste, snc, 82037, Telesse Terme, Italy

01/06/2012 – 30/06/2018 Pescara, Italy

**WEATHER FORECAST IN RADIO AND TELEVISION TRANSMISSION, FREE BENEFIT RAI -  
RADIOTELEVISIONE ITALIANA**

---

Daily meteorological forecasting and announcement on Radio (RadioRai Channel) and TV ("Buongiorno Regione - Abruzzo" show on Rai3 Channel).

**Business or Sector** Information and communication | **Department** Rai – Radiotelevisione Italiana |

**Address** Via De Amicis, 29, 65123, Pescara, Italy

01/11/2013 – 28/02/2015 L'Aquila, Italy

**WEATHER FORECASTER HIMET S.R.L.**

---

Verification of the performance of the Company's weather forecast models for specific periods storms, phenomena and locations. In particular, for applications dedicated to weather forecasts on the network motorway.

**Business or Sector** Information and communication | **Department** HIMET s.r.l. |

**Address** S.S. 17 Ovest, 36, 67100, L'Aquila, Italy

16/06/2013 – 22/02/2015 L'Aquila, Italy

**RESEARCH FELLOWSHIP CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT -  
UNIVERSITY OF L'AQUILA**

---

Research activities within the European project ADRIARadNet (IPA 2007-2013) on "Numerical hydrological modeling in the Middle Adriatic basin mediated by the ACHyM forecast chain."

**Business or Sector** Professional, scientific and technical activities |

**Department** Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

15/06/2011 – 15/06/2013 L'Aquila, Italy

**RESEARCH FELLOWSHIP CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT -  
UNIVERSITY OF L'AQUILA**

---

Research activity inside the FP7/ACQWA (Assessing Climatic change and impacts on the Quantity and quality of Water) European Project on "Idrological effects of the climatic change on the Po and Rhone basins"

**Business or Sector** Professional, scientific and technical activities |

**Department** CETEMPS – Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

17/06/2013 – 23/02/2015 L'Aquila, Italy

**SCHOLARSHIP FOR RESEARCH ACTIVITIES** CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT

---

Research activity within the European project ADRIARadNet (IPA 2007-2013) on "Hydrological modeling numerical in the Middle Adriatic basin through the CHyM forecast chain. "

**Business or Sector** Professional, scientific and technical activities |

**Department** Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

16/06/2011 – 16/06/2013 L'Aquila, Italy

**SCHOLARSHIP FOR RESEARCH ACTIVITIES** CETEMPS – CHEMICAL AND PHYSICS SCIENCE DEPARTMENT

---

Research activities within the European project FP7 / ACQWA (Assessing Climatic change and impacts on the Quantity and quality of Water) for "Hydrological effects of climate change on the Po and del Rhône "

**Business or Sector** Professional, scientific and technical activities |

**Department** CETEMPS – Chemical and Physics Science Department - University of L'Aquila |

**Address** Via Vetoio, s.n.c., 67100, L'Aquila, Italy | **Website** <https://cetemps.aquila.infn.it/>

## ● EDUCATION AND TRAINING

---

18/12/2012 – 09/05/2016 L'Aquila, Italy

**PH.D. IN ENVIRONMENTAL SCIENCE** Life Health and Environmental Sciences Department (MESVA)

---

### Fields of study

1. Earth Sciences: Environmental Sciences

**Thesis:** "Effects of Climate Change on the Hydrological Cycle in Central Italy and Consequences on aquatic ecosystems "

**Address** University of L'Aquila, L'Aquila, 67100, L'Aquila, Italy | **Field of study** Environmental sciences |

**Level in EQF** EQF level 8 |

**Thesis** "Effects of Climatic Changes on hydrological cycle in the Central of Italy and consequences on aquatic ecosystems"

25/03/2011 L'Aquila, Italy

**LAUREA DEGREE (MS LEVEL) IN ENVIRONMENTAL SCIENCE.** Faculty of Science MM.FF.NN.

---

Experience acquired:

1. Study of detection, quantification and environmental effects of pollutants of anthropic origin
2. Advanced knowledge on the analysis of floristic, vegetational, faunal, geological, chemical and physical components
3. Theoretical and operational skills with reference to all the disciplines integrated in environmental sciences (biology, chemistry, physics, geology, ecology, law, economics)
4. Advanced knowledge regarding V.I.A. and V.A.S.
5. Advanced knowledge of bioremediation and clean-up techniques

6. Ability to coordinate the company policy to achieve and maintain the quality control system (ISO 9001) and the environmental management system
7. (ISO 14001, EMAS, ecc.)

**Address** University of L'Aquila, L'Aquila, 67100, L'Aquila, Italy | **Field of study** Environmental sciences |

**Final grade** 110/110 cum laude | **Level in EQF** EQF level 6 |

**Thesis** "Possible meteorological and climatic effects due to land use change on the Abruzzo Region"

15/07/1999 Apricena (FG), Italy

**DIPLOMA DI MATURITÀ CLASSICA** Liceo Classico "Federico II"

---

1. Italian expression
2. Latin
3. Greek
4. Mathematics
5. Science
6. Foreign language (English)

**Final grade** 90/100 | **Level in EQF** EQF level 4

## ● LANGUAGE SKILLS

---

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	B2	B2	B2	B2	B2

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## ● DIGITAL SKILLS

---

Gestione autonoma della posta e-mail | Padronanza del Pacchetto Office (Word Excel PowerPoint ecc) | Social Network | Utilizzo del browser | Windows | Posta elettronica | Android | Google | Programmazione avanzata Fortran, Matlab | Programmazione intermedia Linux/Unix | Software GIS (QGIS, ArcGIS) | Basi di Photoshop e GIMP | Editing audiovideo | LaTeX (good) | Utilizzo siti per il management del sito web dell'azienda (Wordpress, Wix, ...) | Realizzazione siti Web | Uso delle utilities per la manipolazione dei file netCDF (cdo, nco) | Applicativi e Librerie per l'elaborazione di grandi volumi di dati in formato NetCDF (CDO e NCL) | Data formats: GRIB, NetCDF, HDF5, BUFR e librerie GRIB\_API, BUFRDC/ECCODES

## ● ADDITIONAL INFORMATION

---

### PUBLICATIONS

[Mapping of Alternaria and Pleospora concentrations in Central Italy using meteorological forecast and neural network estimator](#)

- 2013

Tomassetti, B., Lombardi, A., Cerasani, E. et al. Mapping of Alternaria and Pleospora concentrations in Central Italy using meteorological forecast and neural network estimator. *Aerobiologia* 29, 55-70, 2013.

---

*Aerobiology*, March 2013, Volume 29, Issue 1, pp 55-70

[Changing hydrological condition on the Po basin under global warming](#) - 2014

Erika Coppola, Marco Verdecchia, Filippo Giorgi, Valentina Colaiuda, Barbara Tomassetti, Annalina Lombardi, Changing hydrological conditions in the Po basin under global warming, *Science of The Total Environment*, Volume 493, Pages 1183-1196, ISSN 0048-9697, 2014.

---

Sci. Total Environ., 2014

## Effects of Climatic Changes on hydrological cycle in the Central of Italy and consequences on aquatic ecosystems

– 2016

---

Ph.D. thesis XXVII ciclo a.a. 2015/2016

### [On the Use of Original and Bias-Corrected Climate Simulations in Regional-Scale Hydrological Scenarios in the Mediterranean Basin](#)

– 2019

Sangelantoni, L.; Tomassetti, B.; Colaiuda, V.; [Lombardi, A.](#); Verdecchia, M.; Ferretti, R.; Redaelli, G. On the Use of Original and Bias-Corrected Climate Simulations in Regional-Scale Hydrological Scenarios in the Mediterranean Basin. *Atmosphere*, 2019.

---

*Atmosphere* 2019, 10, 799

### [Multivariate Prediction of PM10 Concentration by LSTM Neural Networks](#) – 2019

L. Di Antonio, A. Rosato, V. Colaiuda, [A. Lombardi](#), B. Tomassetti and M. Panella, "Multivariate Prediction of PM10 Concentration by LSTM Neural Networks," 2019 Photonics & Electromagnetics Research Symposium - Fall (PIERS - Fall), pp. 423-431, 2019.

---

### [Decision Support System for smart urban management: resilience against natural phenomena and aerial environmental assessment](#)

– 2019

Taraglio, S., Chiesa, S., La Porta, L., Pollino, M., Verdecchia, M., Tomassetti, B., Colaiuda, V., & [Lombardi, A.](#) Decision Support System for smart urban management: resilience against natural phenomena and aerial environmental assessment. *International Journal of Sustainable Energy Planning and Management*, 24, 2019.

---

*IJSEPM*, 2019

### [A meteorological-hydrological regional ensemble forecast for an early-warning system over small Apennine catchments in Central Italy](#)

– 2020

Ferretti, R., [Lombardi, A.](#), Tomassetti, B., Sangelantoni, L., Colaiuda, V., Mazzarella, V., Maiello, I., Verdecchia, M., and Redaelli, G.: A meteorological-hydrological regional ensemble forecast for an early-warning system over small Apennine catchments in Central Italy, *Hydrol. Earth Syst. Sci.*, 24, 3135–3156, 2020.

---

*Hydrol. Earth Syst. Sci.*, 24, 3135–3156, 2020

### [Flood Prediction: Operational Hydrological Forecast with the Cetemps Hydrological Model \(CHyM\)](#) –

2020

Colaiuda V, [Lombardi A](#), Verdecchia M, Mazzarella V, Antonio R, et al. Flood Prediction: Operational Hydrological Forecast with the Cetemps Hydrological Model (CHyM). *Int J Environ Sci Nat Res*. 2020

---

INTERNATIONAL JOURNAL OF ENVIRONMENTAL SCIENCES & NATURAL RESOURCES, vol. 24, p. 201-208, ISSN: 257

### [Evaluating the impact of hydrometeorological conditions on E. coli concentration in farmed mussels and clams: experience in Central Italy](#)

– 2021

Valentina Colaiuda, Federica Di Giacinto, [Annalina Lombardi](#), Carla Ippoliti, Carla Giansante, Mario Latini, Giuseppina Mascilongo, Ludovica Di Renzo, Miriam Berti, Annamaria Conte, Nicola Ferri, Marco Verdecchia, Barbara Tomassetti; Evaluating the impact of hydrometeorological conditions on E. coli concentration in farmed mussels and clams: experience in Central Italy. *J Water Health*; 19 (3): 512–533, 2021.

---

*J Water Health* 1 June 2021; 19 (3): 512–533

### [User-oriented hydrological indices for early warning systems with validation using postevent surveys: flood case studies in the Central Apennine District](#)

– 2021

[Lombardi, A.](#), Colaiuda, V., Verdecchia, M., and Tomassetti, B.: User-oriented hydrological indices for early warning systems with validation using post-event surveys: flood case studies in the Central Apennine District, *Hydrol. Earth Syst. Sci.*, 25, 1969–1992, 2021.

---

### **Biological Early Warning Systems: The Experience in the Gran Sasso-Sirente Aquifer** – 2021

Di Giacinto, F.; Berti, M.; Carbone, L.; Caprioli, R.; Colaiuda, V.; Lombardi, A.; Tomassetti, B.; Tuccella, P.; De Iulii, G.; Pietroleonardo, A.; Latini, M.; Mascilongo, G.; Di Renzo, L.; D'Alterio, N.; Ferri, N. Biological Early Warning Systems: The Experience in the Gran Sasso-Sirente Aquifer. *Water*, 13, 1529, 2021.

---

Water 2021, 13, 1529

### **Evaluating the Response of Hydrological Stress Indices Using the CHyM Model over a Wide Area in Central Italy**

– 2022

Lombardi, A.; Gallicchio, D.; Tomassetti, B.; Raparelli, E.; Tuccella, P.; Lidori, R.; Verdecchia, M.; Colaiuda, V. Evaluating the Response of Hydrological Stress Indices Using the CHyM Model over a Wide Area in Central Italy. *Hydrology*, 9, 139, 2022.

---

### **Coastal water quality: hydrometeorological impact of river overflow and high resolution mapping from Sentinel-2 satellite**

– 2022

Lombardi, A., Manzi, M. P., Giacinto, F. D., Colaiuda, V., Tomassetti, B., Papa, M., Ippoliti, C., Giansante, C., Ferri, N., Marzano, F. S. Coastal Water Quality: Hydrometeorological Impact of River Overflow and Highresolution Mapping from Sentinel-2 Satellite. In: Tsuzuki, M. S. G., Rahman, R. O. O. A., editors. *Engineering Problems - Uncertainties, Constraints and Optimization Techniques*. London: IntechOpen; 2022

---

### **"Hang in There!": Mental Health in a Sample of the Italian Civil Protection Volunteers during the COVID-19 Health Emergency**

– 2021

Roncone R, Giusti L, Mammarella S, Salza A, Bianchini V, Lombardi A, Prosperococco M, Ursini E, Scaletta V, Casacchia M. "Hang in There!": Mental Health in a Sample of the Italian Civil Protection Volunteers during the COVID-19 Health Emergency. *Int J Environ Res Public Health*. 2021 Aug 14;18(16):8587, 2021.

---

### **Snow-Mantle Remote Sensing from Spaceborne Sar Interferometry Using a Model-Based Synergetic Retrieval Approach in Central Apennines**

– 2022

G. Palermo, E. Raparelli, N. Alvan Romero, M.P. Manzi, M.Papa1, M. Biscarini, P. Tuccella, A. Lombardi, V. Colaiuda, B. Tomassetti, D. Cimini, E. Pettinelli, E. Mattei, S. Lauro, B. Cosciotti, E. Picciotti, S. Di Fabio, L. Bernardini, G. Cinque, D.M. Cappelletti, C. Petroselli, M. Pecci, Mt. Pecci, P. D'Aquila, M. Martinelli, T. Caira, T. Di Fiore, P. Boccabella, F.S. Marzano

"Snow-Mantle Remote Sensing from Spaceborne Sar Interferometry Using a Model-Based Synergetic Retrieval Approach in Central Apennines," *IGARSS 2022 - 2022 IEEE International Geoscience and Remote Sensing Symposium*, Kuala Lumpur, Malaysia, 2022, pp. 4514-4517, doi: 10.1109/IGARSS46834.2022.9884911.

---

### **Assessing spatial and temporal changes in diversity of copepod crustaceans: a key step for biodiversity conservation in groundwater-fed springs**

– 2023

Cerasoli F, Fiasca B, Di Lorenzo T, Lombardi A, Tomassetti B, Lorenzi V, Vaccarelli I, Di Cicco M, Petitta M and Galassi DMP (2023), Assessing spatial and temporal changes in diversity of copepod crustaceans: a key step for biodiversity conservation in groundwater-fed springs. *Front. Environ. Sci.* 11:1051295. doi: 10.3389/fenvs.2023.1051295

---

## **NETWORKS AND MEMBERSHIPS**

03/2021 – CURRENT

**Associazione Italiana di Scienze dell'Atmosfera e Meteorologia AISAM** I am a member of AISAM, an association for social promotion, which currently has 329 individual members, 22 collective members the 4 honorary, pertaining to various fields that deal with meteorology, such as: Air Force, Civil Protection, research centers, universities, service centers, companies private, other associations, teachers and enthusiasts of meteorology. The association organizes every year events dedicated to the atmospheric sciences, such as the Meteorology Festival, World Meteorology Day and the national conference. It has created his own international magazine published by Springer, as well as a quarterly newsletter.

**Link** <http://www.aisam.eu/>

CURRENT

**Associazione MeteoNetwork** It is an association of meteorology enthusiasts, with numerous collaborations with research institutions. It takes care of the management of the amateur meteorological

sensor network at an Italian and international level, of scientific dissemination of atmospheric sciences and development of open access weather services.

Link <https://www.meteonetwork.it/>

CURRENT

**Società Idrologica Italiana** The "Italian Hydrological Society" aims to promote the progress, enhancement and dissemination of Hydrological Sciences. In particular, the SII aims to stimulate coordination and collaboration interdisciplinary in research aimed at the qualitative and quantitative description of all components of the hydrological cycle. The forecasts and mitigation of the effects of exceptional hydro-meteorological events and the sustainable planning and management of water resources are also relevant issues in a context of global changes.

Link <http://www.sii-ihs.it/>

CURRENT

**Società Geologica Italiana** Founded in Bologna on 29 September 1881, the Italian Geological Society is the oldest and most representative Italian scientific association in the field of geosciences. The SGI works for the progress, promotion and dissemination of geological knowledge in their theoretical and applicative aspects.

Link <https://www.socgeol.it/>

## CONFERENCES AND SEMINARS

23/04/2023 – 28/04/2023 – Vienna, Austria & Online

**European Geoscience Union General Assembly (EGU) 2023** Oral Presentation:

- Preliminary assessment of the relationships between rainfall, flow discharge and biodiversity changes in a karst spring system in central Italy
  - Auth: [Annalina Lombardi](#), Francesco Cerasoli, Barbara Tomassetti, Paolo Tuccella, Gianluca Redaelli, Mattia Di Cicco, Barbara Fiasca, Antonio Di Sabatino, and Diana Maria Paola Galassi

18/10/2022 – 21/10/2022 – Frascati, Roma - IT

**17th Plinius Conference on Mediterranean Risks**

1. Lombardi A., Colaiuda V., Gallicchio D., Boscaino G., Raparelli E., Tuccella P., Lidori R., Rossi F.L., Liberatore S. e Tomassetti: Atmospheric Precursor of fire hazard: development of a fire-sentinel index for risk management in Abruzzo Region (Central Italy). <https://doi.org/10.5194/egusphereplinius17-57>
2. Lombardi A., Colaiuda V., Gallicchio D., Boscaino G., Raparelli E., Tuccella P., Lidori R., Rossi F.L., Liberatore S e Tomassetti B.: User-oriented indices for rainfall-related hydrogeological hazards prediction at regional scale: validation in Central Italy. <https://doi.org/10.5194/egusphereplinius17-59>
3. Tomassetti B., Colaiuda V., Boscaino G., Tuccella P., Lidori R., Di Antonio L., Rossi F. L., Memmo A., Liberatore S. e Lombardi A.: Hydro-geological risk prediction: the operational activity in Abruzzo Region for the rainfall-induced landslides forecasting. <https://doi.org/10.5194/egusphereplinius17-61>

19/09/2022 – 23/09/2022 – Bruxelles, Belgium

**EUMETSAT Conference 2022** Oral presentation:

1. "The use of EUMETSAT H SAF precipitation products in hydrological operational forecast: testing the pre-operational chain on Po River (Northwest Italy) ".

Auth: A. LOMBARDI, G. Panegrossi, V. Colaiuda, P. Sanò, D. Casella, L.P. D'Addario, L. Ciabatta, L. Brocca, G., S. Scipione, C. Cacciamani e B. Tomassetti.

Link <https://www.eumetsat.int/eumetsat-meteorological-satellite-conference-2022>

21/06/2022 – 22/06/2022 – Bologna, Italia

**Second National Conference on Meteorological and Climatic Forecasts** Oral presentation:

- Development of health / meteo-environmental technological tools to improve efficiency and sustainability of shellfish farming: the experience of the FORESHELL project in Abruzzo.
  - Auth: A. LOMBARDI , B. Tomassetti , V. Colaiuda, F. Conti, G. Mascilongo, A. F. Capoccioni, D. Pulcini, G. Di Francesco, L. Di Renzo, C. Profico, T. Moranduzzo, C. Ippoliti, C. Giansante, N. Ferri , F. Di Giacinto.

Link <https://2a.conferenzameteoclima.it/>

Vienna

**European Geoscience Union General Assembly (EGU) 2022** Oral presentations:

- "FORESHELL Project: development of sanitary/weather-environmental predictive technological tools to enhance the efficiency and sustainability of shellfish farming"
  - Auth: Barbara Tomassetti, Annalina Lombardi, Valentina Colaiuda, Federica Conti, Giuseppina Mascilongo, Fabrizio Capoccioni, Domitilla Pulcini, Gabriella Di Francesco, Ludovica Di Renzo, Chiara Profico, Carla Ippoliti, Carla Giansante, Nicola Ferri, and Federica Di Giacinto.
- Differential SAR interferometry for estimating snow water equivalent in central Apennines complex orography from Sentinel-1 satellite within SMIVIA project.
  - Auth: Gianluca Palermo, Edoardo Raparelli, Nancy Alvan Romero, Mario Papa, Massimo Orlandi, Paolo Tuccella, Annalina Lombardi, Errico Picciotti, Saverio Di Fabio, Elena Pettinelli, Elisabetta Mattei, Sebastian Lauro, Barbara Cosciotti, David Cappelletti, Massimo Pecci, and Frank Marzano
- Snow measurement campaign for snowpack model and satellite retrieval validation in Italian Central Apennines within SMIVIA project
  - Auth: Edoardo Raparelli, Paolo Tuccella, Annalina Lombardi, Gianluca Palermo, Nancy Alvan Romero, Mario Papa, Errico Picciotti, Saverio Di Fabio, Elena Pettinelli, Elisabetta Mattei, Sebastian Lauro, Barbara Cosciotti, Chiara Petroselli, David Cappelletti, Massimo Pecci, and Frank Silvio Marzano

15/02/2022 – 18/02/2022 – Milano, IT

**4th National Congress of the Italian Association for Atmospheric Sciences e Meteorology (CN4 - AISAM)** Oral presentations:

1. Regional climate forcing and response from black carbon and dust river in snow: a preliminary study on Central Italy.  
Auth: P. Tuccella, E. Raparelli, F. Bruschi, D. Cappelletti, V. Colaiuda, A. Lombardi, F. Marzano, L. Menut, M. Pecci, G. Pitari e B. Tomassetti.
1. Indici di stress per la previsione del rischio idraulico e idrogeologico in ambiente montano.  
Auth: B. Tomassetti, V. Colaiuda, S. Ferrarese, A. Golzio, A. Lombardi, M. Luciani, P. Tuccella e M. Verdecchia
1. Previsione integrata del rischio idrogeologico: applicazione su area vasta di un sistema basato su indici di stress per l'evento meteorologico del gennaio 2014.  
Auth: V. Colaiuda, D. Gallicchio, A. Lombardi, E. Raparelli, R. Lidori, P. Tuccella, M. Verdecchia, B. Tomassetti

24/01/2022 – 28/01/2022 – Online

**H SAF 5th User Workshop** Oral presentation:

- "Hydrological evaluation of merged satellite precipitation product rain gauge: testing Cellular Automata-based algorithm rainfall assimilation and downscaling on Italian regions"
  - Auth: LOMBARDI A., Tomassetti B., Colaiuda V., P. Sanò, D. Casella, D'Adderio L.P., Ciabatta L., Brocca L. and Panegrossi G.

20/09/2021 – 24/09/2021 – Online

**EUMETSAT Meteorological Satellite Virtual Conference** Oral presentation:

- "Hydrological evaluation of merged satellite precipitation product rain gauge: testing Cellular Automata-based algorithm rainfall assimilation and downscaling on Italian regions"
  - Auth: LOMBARDI A., Tomassetti B., Colaiuda V., P. Sanò, D. Casella, D'Adderio L.P., Ciabatta L., Brocca L. and Panegrossi G.

23/03/2021 – Roma (Online)

**World Meteorological Day 2021 (GMM 2021) "The ocean, our climate and the weather"** Oral presentation on intervention B. Tomassetti "Oltre il riscaldamento globale: arte e scienza per raccontare i cambiamenti climatici"

Link <http://gmm.aisam.eu/index.html>

09/09/2013 – 12/09/2013 – Reading, UK

**13th EMS Annual Meeting & 11th European Conference on Applied Climatology (ECAC)** Oral presentations:

- "Possible changes in the frequency of flood occurrences in the Po and Rhone valleys"
  - Auth: Lombardi, A., Tomassetti, B., Colaiuda, V. e Verdecchia, M

- "The CETEMPS Hydro-meteorological chain during HyMex"
  - Auth: B. Tomassetti, E. Pichelli, A. LOMBARDI, S. Gentile, E. Cerasani, R. Ferretti, M. Verdecchia

Link <https://meetingorganizer.copernicus.org/EMS2013/EMS2013-277.pdf>

09/02/2021 – 12/02/2021 – L'Aquila (Online)

**3rd National Congress of the Italian Association for Atmospheric Sciences e Meteorology (CN3 - AISAM)** Oral presentations:

- "Assimilation and downscaling of satellite rainfall products: testing cellular automata-based algorithm rainfall spatialization on the Tanaro river basin".
  - Auth: A. LOMBARDI, B. Tomassetti, V. Colaiuda, P. Tuccella, R. Lidori, L. Di Antonio, M. Verdecchia, G. Ravazzani, G. Panegrossi.
- "A regional-scale Landslide Activation Index (LAI) based on hydrological stress index, for shallow landslides and debris flow forecasting"
  - Auth: B. Tomassetti, A. Lombardi, G. Boscaino, M. Verdecchia, V. Colaiuda
- Poster: "Discharge response to rainfall in the Ruzzo springs system in the Gran Sasso d'Italia aquifer: preliminary results by applying cross-correlation analysis"
  - Auth: Colaiuda V., Lombardi A., Tuccella P., Cimini D., De Iulius G, Marzano F.S., Redaelli G., Raparelli E. and Tomassetti B.

Link <https://www.aisam.eu/congresso2021/index.html> <https://www.e-learning.univaq.it/videoconferenze/cetemps/colaiuda-poster.pdf>

17/12/2019 – 20/12/2019 – Xiamen (Cina)

**PIERS 2019** Oral presentation:

- "Multivariate Prediction of PM10 Concentration by LSTM Neural Networks"
  - Auth: Di Antonio, L., Rosato, A., Colaiuda, V., Lombardi, A., Tomassetti, B. e Panella

24/09/2019 – 26/09/2019 – Napoli, IT

**2nd National Congress of the Italian Association for Atmospheric Sciences e Meteorology (CN2 - AISAM)** Oral presentations:

1. "Regional ensemble forecast for early warning system over small Apennine catchments in Central Italy"
  - Auth: R. Ferretti, A. Lombardi, B. Tomassetti, L. Sangelantoni, V. Colaiuda, V. Mazzarella, I. Maiello, M. Verdecchia and G. Redaelli
1. "On the use of original and bias-corrected climate simulations in regional-scale hydrological scenarios".
  - Auth: Sangelantoni, A. Lombardi, V. Colaiuda B. Tomassetti, M. Verdecchia, R. Ferretti and G. Redaelli

16/09/2019 – 18/09/2019 – Bologna, IT

**SII Hydrology Days 2019: "Hydrology at the service of citizens: between emergencies and water resources management "** Oral presentation:

- "Performance analysis of LAI (LandslideActivationIndex) at regional scale for shallow landslides and debris flow forecasting"
  - Auth: B. Tomassetti, V. Colaiuda, A. Lombardi, G. Boscaino and M. Verdecchia

Poster:

- "CETEMPS Operational Chain for Flood Forecasting and Early Warning System. Test and validation using post-event surveys: a Case Study on Abruzzo Region"
  - Auth: B. Tomassetti, V. Colaiuda, A. Lombardi, M. Verdecchia, R. Ferretti, I. Maiello, V. Mazzarella, L. Sangelantoni, R. Lidori, S. Di Fabio, K. De Sanctis, E. Picciotti, A. Iovino, M. C. Beccia, M. A. Cerasoli, A. Cipollone, F. De Santis, F. Molinari, R. Molinari, D. Ronconi, F. L. Rossi and F. S. Marzano

09/09/2019 – 13/09/2019 – Copenhagen, Danimarca

**EMS Annual Meeting: European Conference for Applied Meteorology and Climatology 2019** Oral presentations:

- On the use of original and bias-corrected climate simulations in regional-scale hydrological scenarios"
  - Auth: Sangelantoni, A. LOMBARDI, V. Colaiuda B. Tomassetti, M. Verdecchia, R. Ferretti and G. Redaelli.

- “Regional ensemble forecast for early warning system over small Apennine catchments in Central Italy”
  - Auth: R. Ferretti, A. LOMBARDI, B. Tomassetti, L. Sangelantoni, V. Colaiuda, V. Mazzarella, I. Maiello, M. Verdecchia and G. Redaelli

08/04/2019 – 12/04/2019 – Vienna

**European Geoscience Union - EGU 2019** Poster:

- Developing a landslide activation index based on hydrological stress index, for shallow landslides and debris flow forecasting”
  - Auth: V. Colaiuda, B. Tomassetti, A. Lombardi, and M. Verdecchia

04/03/2019 – 06/03/2019 – Palma di Maiorca, Spain

**7° International Conference on Meteorology and Climatology of the Mediterranean** Oral

presentations:

- “A hydrological early warning system over small Apennine’s catchments through an operational NWP ensemble”
  - Auth: R. Ferretti, A. Lombardi, L. Sangelantoni, B. Tomassetti, I. Maiello, V. Colaiuda and M. Verdecchia
- “On the use of original and bias-corrected climate simulations: impact on the hydrological signal of small Apennines catchments”
  - Auth: Sangelantoni, A. Lombardi, B. Tomassetti, V. Colaiuda, M. Verdecchia, G. Redaelli and R. Ferretti

09/10/2018 – 11/10/2018 – Montpellier, Francia

**16th Plinius Conference on Mediterranean Risks** Oral presentation:

- “Modeling flood occurrences: test and validation of two hydrological stress indices over Italy”
  - Auth: Lombardi, A, Tomassetti, B. Colaiuda, V. and Verdecchia.

**Link** <https://dta.cnr.it/16th-plinius-conference-on-mediterranean-risks-montpellier-france-9-12-october-2018/https://meetingorganizer.copernicus.org/Plinius16/Plinius16-25.pdf?pdf>

10/09/2018 – 13/09/2018 – Bologna, IT

**1st National Congress of the Italian Association for Atmospheric Sciences e Meteorology (CN1 - AISAM)** Oral presentations:

- “Toward an operational NWP-ensemble for a hydrological early warning system over small Apennine’s catchments in Central Italy”
  - Auth: R. Ferretti, I. Maiello, L. Sangelantoni, A. Lombardi, V. Colaiuda, B. Tomassetti and M. Verdecchia
- “Hydrological stress indices for flood and flash flood forecasting: validation over Central Italy basins and operational activity.”
  - Auth: Annalina Lombardi, Barbara Tomassetti, Valentina Colaiuda, Emanuela Pichelli, Ida Maiello, Rossella Ferretti and Marco Verdecchia
- “Evaluating the effect of combined hydrological and meteorological conditions on Escherichia coli concentration in bivalves: case studies in Central Italy”
  - Auth: Barbara Tomassetti, Carla Ippoliti, Annalina Lombardi, Federica Di Giacinto, Valentina Colaiuda, Carla Giansante, Annamaria Conte, Nicola Ferri and Marco Verdecchia

Poster:

- “Effects of global warming on flood occurrences over the upper Po basin”.
  - Auth: Lombardi, A Tomassetti, B. Colaiuda, V. and Verdecchia

03/09/2018 – 07/09/2018 – Budapest

**EMS 2018** Oral presentations:

- “Evaluating hydrological response to climate change projections over small Apennine’s catchments in Central Italy”.
  - Auth: Lorenzo Sangelantoni, Annalina Lombardi, Valentina Colaiuda, Barbara Tomassetti, Marco Verdecchia, Gianluca Radaelli and Rossella Ferretti
- “Toward an operational NWP-ensemble for a hydrological early warning system over small Apennine’s catchments in Central Italy”
  - Auth: R. Ferretti, I. Maiello, L. Sangelantoni, A. Lombardi, V. Colaiuda, B. Tomassetti and M. Verdecchia

20/06/2018 – Roma

**XXI National Congress of Agrometeorology** Oral presentation:

- "Modellistica numerica idro-meteo-climatica per le applicazioni su scala regionale"
  - Auth: Colaiuda V., Ferretti R., Redaelli G., Tomassett B., Sangelantoni L., Lombardi A., Maiello I. and Marzano F.S.

18/06/2018 – 20/06/2018

**Hydrology Days 2018** Oral presentations:

- "Effects of global warming on flood occurrences over the upper Po basin".
  - Auth: Lombardi, A Tomassetti, B. Colaiuda, V. and Verdecchia
- "Validation of two hydrological stress indices for operational activity in Central Italy".
  - Auth: Lombardi, A Tomassetti, B. Colaiuda, V. and Verdecchia

19/05/2018 – 02/06/2018 – Lecce

**HyMeX 2018** Oral presentation:

- "The CETEMPS Hydro-Meteorological forecast chain: performance over the Mediterranean area"
  - Auth: B. Tomassetti, A. Lombardi, V. Colaiuda, I. Maiello, R. Ferretti and M. Verdecchia

10/09/2012 – 14/09/2012 – LODZ, Poland

**12 th EMS Annual Meeting & 9 th European Conference on Applied Climatology (ECAC)** Oral presentation:

- "Calibration of Alarm Indices for Flood Alarm Mapping"
  - Auth: E. Cerasani, A. Lombardi, B. Tomassetti, and M. Verdecchia

**Link** <https://meetingorganizer.copernicus.org/Plinius14/Plinius14-21.pdf>

03/04/2018 – 13/04/2018 – Vienna

**European Geoscience Union - EGU 2018** Oral presentations:

- "Evaluating the impact of flow discharge on Escherichia coli concentration in farmed mussels following rainfall events: a case study in Central Italy".
  - Auth: Barbara Tomassetti, Carla Ippoliti, Annalina Lombardi, Federica Di Giacinto, Valentina Colaiuda, Carla Giansante, Annamaria Conte, Nicola Ferri, and Marco Verdecchia
- "Increasing of severe hydrological events in the Po basin under global warming".
  - Auth: Lombardi, A Tomassetti, B. Colaiuda, V. and Verdecchia, M.
- "Flood alert forecast and mapping: test and validation of two hydrological stress indices over Italy".
  - Auth: Lombardi, A Tomassetti, B. Colaiuda, V. and Verdecchia
- "Set up a neural network for operational PM prediction in Pescara urban area (Central Italy)"
  - Auth: Colaiuda, V. Tomassetti, B. Lombardi, A and Verdecchia, M.

24/10/2016 – 26/10/2016 – Valencia

**World conference on climate change** Oral presentation:

- "Possible changes of the brown trout habitat suitability in the upper Po basin due to global change"
  - Auth: Lombardi A., Verdecchia M. Tomassetti B., Colaiuda V. and Di Sabatino A.

## PROJECTS

01/05/2021 – CURRENT

**SMIVIA (Snow-coverage Modeling, Inversion and Validation using multi-mission multifrequency Interferometric SAR in central Apennine)** Integrated application of SAR measurements, atmospheric, hydrological and snow cover models for simulation of the snow dynamics in the Apennines, for the purposes of forecasting water availability and avalanche phenomena.

**Project Partners:** University of Rome "La Sapienza", Himet Srl, CETEMPS, University of Perugia, Committee Italian Glaciological

21/04/2021 – 25/03/2022

**FORESHELL project** Scientific collaboration for the development of technological tools useful for the prediction of health and weather-environmental conditions in shellfish farming. The pilot study, funded by the Abruzzo Region as part of the P.O. EMFF - Action Plan of the COSTABLU FLAG. The project will focus its pilot study on the catchment areas of the Vibrata and Salinello rivers: the hydrological conditions reproduced by the CHyM hydrological model.

**Project partners:** Experimental Zooprophyllactic Institute of Abruzzo and Molise "G. Corporal" (IZSAM), CREA (Council for Agricultural Research and Analysis of the Agricultural Economy).

19/02/2021 – CURRENT

**CETEMPS - Marche Region Project** Scientific collaboration as part of the agreement between the Marche region and CETEMPS for the implementation of the strategic project STREAM "Strategic Development of flood management" - Interreg Italy-Croatia 2014-2020 program. Activities related to the prediction of extreme hydrological events, using the CHyM hydrological model.

**Project partners:** CIMA FOUNDATION, Marche Region

**Link** <https://www.comune.venezia.it/it/content/stream>

08/06/2020 – 14/11/2021

**Associated Scientist for Activity H\_AS20\_03** PI as part of EUMETSAT SAF activities in support of HSAF: "Precipitation Downscaling of H SAF Product in different hydrological scenario using a cellular automata approach". Implementation of the CHyM hydrological model, for the assimilation of precipitation estimation satellite products.

**Project partners:** CNR-ISAC, CNR-IRPI.

17/10/2019 – CURRENT

**CETEMPS-GeoLab-LARES Italia convention** Scientific collaboration within the CETEMPS-GeoLab-LARES Italy Convention, for which the main activity that is taking place concerns the dissemination of science to the media, local authorities and school of every order and degree, on issues related to climate change and the extreme phenomena that arise from it can spring. The purpose of the collaboration is also that of spreading the culture of civil protection: in this context, the main purpose is to inform citizens about the support that scientific research can provide to civil protection activities: an example is the modeling chain that provides for the use of the CHyM hydrological model for the prediction of flood events. Furthermore, in collaboration, training courses in specific subjects concerning risks and planning of civil protection.

**Project Partners:** LARES-Italia Volunteer Association, Geology, Seismology and Radiation Protection Laboratory, University of L'Aquila.

21/06/2019 – CURRENT

**CETEMPS - Ruzzo Reti SpA Convention** Scientific collaboration within the CETEMPS-Ruzzo Reti SpA Convention: analysis of historical flow data measured at the Ruzzo collection stations on the Teramo side of the Gran Sasso d'Italia massif, in order to estimate the recharge time of the karst reservoir in relation to historical precipitation data. The use of the CHyM hydrological model is envisaged for the seasonal forecast of water availability.

**Project partners:** Ruzzo Reti SpA

30/08/2018 – 31/12/2020

**CETEMPS - MeteoNetwork Convention** Development of a module for real-time acquisition of rainfall and thermometric measurements detected by the network MeteoNetwork, for assimilation within the CHyM hydrological model in operation on the Triveneto.

**Project partners:** MeteoNetwork

01/06/2018 – 20/11/2021

**RAFAEL (system for Risk Analysis and Forecast for critical infrastructure in the ApenninEs dorsal regions)** Funded under the MIUR call "Notice for the presentation of industrial research and development projects experimental in the 12 Specialization Areas identified by the 2015-2020 NRP ". The activities that are taking place realizing they concern the adaptation of the CHyM hydrological model for the prediction of flood events on two pilot sites located in Campania and Puglia, together with the commissioning of an alert system also based on nowcasting products.

**Project partners:** ENEA, INGV, CREO, ANAS SpA, TIM SpA, E-Distribution SpA, GORI SpA, University of Ferrara, Campus Biomedical University of Rome, CUEIM Consortium, MEDIS Consortium, Nuova Srl, Tointech Srl, G&A Engineering Srl, Ylichron Srl, Geo -K Srl, Himet Srl

**Link** <https://www.progetto-rafael.it/>

06/03/2017 – 09/12/2019

**PescARIA Project** Pilot action foreseen in the **CETEMPS-ARTA-Municipality of Pescara Convention**. It is a project pilot in which my technical-scientific involvement was directed to the realization, training and validation of neural networks for the precise prediction of the concentration of the three pollutants PM10, PM2.5 e Tropospheric O3, at the three ARTA survey stations located within the city of Pescara. Currently three networks for PM10 prediction have been trained at the three sites mentioned, and two networks for PM2.5 forecast.

**Project partners:** Chemical Modeling Group of CETEMPS, Municipality of Pescara, Regional Agency for Environmental Protection of the Abruzzo Region.

01/11/2016 – CURRENT

**CETEMPS - Abruzzo Region Functional Center Project** Scientific collaboration within the CETEMPS-CFA Convention, funded with funds from the Abruzzo Region, for the activities envisaged as part of the "Project1 IDRO", which concerned: the creation of the chain of automatic acquisition in real time of rainfall and thermometric data of the stations belonging to the network

of the Hydrographic and Mareographic Institute of Abruzzo and operating chains for the meteo-hydro alert system; there

creation of further two pre-operational hydrological forecasting chains of the CHyM model, coupled to the models

LAM COSMO I7 and ECMWF; the continuous updating of the database of hydro-meteorological measurements acquired by

Dewetra platform; the implementation of a new flow measurement database; the melting module test of the CHyM model, complete with commissioning of the automatic coverage data acquisition system snowy

provided by MODIS; the test of the hydrological forecasting chain; the provision of a modeling course hydrological for the operators of the Functional Center of the Abruzzo Region; collaboration in the

development of a experimental system for forecasting surface landslides and debris flows, through the application of an index of surface runoff stress, based on precipitation. The results obtained are discussed

in the technical reports of the convention and on the occasion of the convocation, by the client, of specific technical tables. There collaboration took place mainly with the Functional Center of the Abruzzo Region,

but for the development of some activities it was necessary to regularly attend the offices of the Hydrographic Institute of Pescara, with a fixed commitment of one day a week, from October 2016 to

February 2017.

**Project partners:** Abruzzo Region Functional Center

**Link** <http://cfa.aquila.infn.it/>

01/01/2018 – 30/09/2019

**AdriaMORE (Adriatic DSS exploitation for MOnitoring and Risk management of coastal Extreme weather and flooding)** Scientific collaboration within the European project AdriaMORE (Adriatic DSS

exploitation for Monitoring and Risk management of coastal Extreme weather and flooding), funded under the INTERREG IT-HR program (<https://www.italy-croatia.eu/web/adriamore>). The main activity was the

development of a module of the CHyM model, which, through a correction of the Manning coefficient calibrated according to the height of the mean sea level, is able to simulate an increase in flow rate deriving

from sea interaction - river mouth in case of storms. The parameterization was tested on the mouths of the Pescara and Neretva rivers. Furthermore, the CHyM model was coupled with a Lagrangian transport model

and with the Delft3D sedimentation model for the study of the estuarial dynamics of the Pescara river in relation to the interventions implemented near the mouth.

**Project partners:** County of Dubrovnik, Croatian Hydrological and Meteorological Service, Service for Territorial Cooperation of the Abruzzo Region, CNR-ISMAR.

**Link** <https://www.italy-croatia.eu/web/adriamore>

01/11/2015 – 17/12/2017

**RAISS (Remote-sensing Atmo-hydrological Integrated Surveillance System)** Technical-scientific activity foreseen in the RAISS project (Remote-sensing Atmo-hydrological Integrated Surveillance System) through

the Technological Innovation Fund within the "FIT 46/82 - CALLING COMPANIES OPERATING IN THE TERRITORY OF THE SISMIC AQUILAN CRATER" (<http://www.himet.it/raiss/sintesi.html>). The project

concerns the construction of an integrated system for monitoring and forecasting the hydrological weather on a new generation local scale. During this period, all the activities planned for the WP OR-5 concerning

the realization of the "Hydro-RAISS" package were completed, in particular the analysis of the consistency of the Tiber river flow rates with the historical series of flow rates available on the Dewetra platform and

the preparation of the domains of two hydrological basins falling within the geographical area under study (central Italy) at two different resolutions (600 and 270 m, respectively), to be forced with precipitation data

estimated by radar surveys. In the final phase of the project the maps of the hydrological stress indices CAI and BDD, previously developed by the hydrological modeling group, were made available in a geo-referable

format (NetCDF). The results have been described in the technical-scientific reports produced for the project.

**Project partners:** Himet Srl, DEWS Center of Excellence - University of L'Aquila.

31/03/2016 – 30/12/2017

**CapRadNet (CAPitalization and exploitation of RADar-based infrastructure and decision support system for environmental hazard management NETWORK in the Adriatic and Ionian region)** Scientific

collaboration at the CETEMPS Center of Excellence (University of L'Aquila), Lead Partner of the European project CapRadNet (CAPitalization and exploitation of RADar-based infrastructure and decision support

system for environmental hazard management NETWORK in the Adriatic and Ionian region), funded as part

of the 2007-2013 IPA-Adriatic Cross-border Cooperation Program. They were also made the scientific activities foreseen by the project, which, in the specific case, involved the realization of one feasibility study for the implementation of a decision support system for risk assessment health in the Adriatic Sea. In particular, the DSS for hydrological risk developed in the previous project AdriaRadNet was applied to the forecast of the extent of organic pollution (E. coli contamination), related to the floods of the Pescara river and falling on the bivalve mollusc farms facing the mouth of the river. For the hydrological forecasting, the CHyM model was used, whose flood waves simulated a starting from the observed data of rainfall and temperature, they were correlated with the concentrations of the bacterium Escherichia coli found inside bivalve molluscs present on farms. The results obtained were presented at dedicated public conferences and reworked in the project reports / deliverables.

**Project partners:** County of Dubrovnik, Abruzzo Region Functional Center, CIMA Albania Foundation, Experimental Zooprophyllactic Institute "G. Caporale" of Teramo.

**Link** <http://cetemps.aquila.infn.it/capradnet/>

01/01/2012 – 31/12/2015

**AdriaRadNet (ADRIatic integrated RADar-based and web-oriented information processing system NETWORK to support hydro-meteorological monitoring and civil protection decision)** Scientific collaboration at the CETEMPS Center of Excellence (University of L'Aquila), Lead Partner of the European project AdriaRadNet (ADRIatic integrated RADar-based and web-oriented information processing system NETWORK to support hydro-meteorological monitoring and civil protection decision) funded within the framework of the 2nd call of the IPA-Adriatic Cross-border Cooperation Program 2007-2013. They were brought to end also all the scientific activities foreseen in the WP dedicated to hydrological modeling and that they have concerned the development of a forecasting chain to support civil protection activities in terms of risk hydrogeological and hydraulic. In particular, the CHyM hydrological model has been adapted to the geographic domains of four target areas involved (Marche and Abruzzo regions, Albania and Croatia). The activities carried out concerned the development of the system for the acquisition of observed data in real time (rain and radar networks) for the spin-up of the CHyM model and the analysis of case studies for the validation of the hydrological forecast on the target areas. Furthermore, the operational chain of the meteo-hydro forecast system. The results obtained were presented at public conferences dedicated and reworked in the project reports / deliverables.

**Project partners:** Dubrovnik County, Abruzzo Region Functional Center, CIMA Albania Foundation, Marche Region Functional Center, Albania Interior Ministry, Albania Institute of Geosciences, Beep Innovation Srl, Slovenia Institute of Geology, Office of the Prime Minister of Herzegovina-Neretva.

**Link** <http://cetemps.aquila.infn.it/adriaradnet>

01/01/2012 – 31/12/2015

**HyMeX (HYdrological cycle in the Mediterranean EXperiment)** Scientific collaboration within the HyMeX project (HYdrological cycle in the Mediterranean EXperiment), where the role of "forecaster support" was held during the second campaign of SOP (Special Observation Period) measurements in the Virtual Operational Center, located at the CETEMPS.

**Project Partners:** Centri Funzionali delle regioni Abruzzo e Umbria, ARPA-Piemonte, ARPA-Emilia Romagna, ARPAVeneto, ARPA-Friuli-Venezia-Giulia, Consorzio LaMMA, CNR-ISAC, CNR IMAA, CNR ISAC, CNR IBIMET, ASI Science Data Center (ASDC), ISPRA.

**Link** <http://www.hymex.org/>

24/06/2011 – 25/10/2013

**ACQWA (Assessing Climate impacts on the quality and Quantity of Water)** Scientific collaboration within the ACQWA project, funded by the European FP7 program. The activities carried out saw, first, the development of the acquisition systems of all the climatic inputs provided by the set of model simulations made available by the other project partners, forced with the IPCC A1B scenario (these are the RegCM and REMO models, low and high resolution, with downscaling and bias correction) on the CHyM domains that reconstructed the Po and Rhone basins. In addition to this, the archive of hydrometeorological measurements, with which the model was validated, was standardized.

The project involved 36 European partners, but the activities foreseen in the WP of hydrological modeling allowed the collaboration with the following institutes: University of Geneva, ICTP, ARPA\_Piemonte, ETH Zurich, MPI, University of Graz.

**Link** <http://www.acqwa.ch/>

## **ORGANISATIONAL SKILLS**

**Management skills** I am able to autonomously organize the work and define its priorities, from the moment it comes to me required to work almost autonomously, respecting deadlines and coordinating with collaborators. I am able to work even in situations of high stress, a skill that I acquired due to my work

adapt to abnormal working conditions following calamitous events that hit my office working. My organizational skills also include the ability to relate to personalities outside the scientific field, thanks to the experience gained in organizing international events such as conferences, schools and seminars. The administrative professional experience gained in the field of the Public Administration allowed me to respond effectively to the procedures bureaucracy now required in every working environment.

## **COMMUNICATION AND INTERPERSONAL SKILLS**

**Social skills and competences** I am able to relate to people of different nationalities and cultures thanks to the experience gained abroad on the occasion of the presentation of scientific papers at international conferences and seminars, as well as the activities I carried out within the European projects ACQWA, ADRIARadNet., CapRadNet and AdriaMORE. I am able to communicate clearly and precisely, responding to specific requests of reference users thanks to relationship activities with other researchers, educational experiences matured in school (as a teacher and as a popularizer on the occasion of the numerous scientific projects carried out with schools of all levels, including alternation activities school-work) and the experience gained in the front office activity.

## **VOLUNTEERING**

2019 – CURRENT

**LARES Italia** LARES is a Civil Protection voluntary association that involves students and graduates in courses university students, directly connected or related to the Civil Protection as well as experts in the sector spread throughout the National territory. It is divided into territorial operational sections, including LARES Abruzzo based at the University of Studies of L'Aquila.

**Link** <https://www.uniprotezionecivile.it/>

2019 – CURRENT L'Aquila

### **P.I.V.E.C.**

- Civil Protection Volunteer
- Operating room operator
- Local Operator of the Universal Civil Service Project

## **PROFESSIONAL UPDATE**

18/01/2021 – 22/01/2021

### **Complete AINEVA Snow Operator Course (4 modules)**

---

**LOCATION:** online and Frontignano d'Ussita (MC)

**ORGANIZER:** AINEVA Interregional association for coordination and documentation for problems related to snow and avalanches

#### **CONTENTS:**

- Alpine snow and meteorology, basic module (module 2a1);
- Alpine snow and meteorology, advanced module (module 2a2);
- Self-rescue and organized rescue techniques in avalanches (module 2a3);
- Observation and survey methods (module 2a4).

**DURATION:** 47.5 h

19/01/2022 – 08/02/2022

### **Course "Elements of communication and website management"**

---

**LOCATION:** L'Aquila

**ORGANIZER:** Improntae Network Srls on behalf of AISAM - Italian Science Association of the Atmosphere and Meteorology

#### **CONTENTS:**

- Website management in Wordpress
- Communication on the web
- SEO elements

**DURATION:** 8h

30/06/2021 – 01/07/2021

### **Environmental monitoring and warning systems**

---

**LOCATION:** San Lazzaro di Savena, BO

**ORGANIZER:** University of Trieste - Ampro - CAE

**CONTENTS:**

- Monitoring and warning systems with focus on the system for forest fires.

**DURATION:** 4 hours with final check.

12/05/2021 – 13/05/2021

**Hydraulic modeling with HEC-RAS (Basic)**

---

**LOCATION:** Online

**ORGANIZER:** TerreLogiche Srl

**CONTENTS:**

- Notions of river hydraulics
- Introduction to HEC – RAS
- The importance of the quality of the input data or indications for a correct topographical survey;
- Creation of one-dimensional geometry •
- Geometry control
- Data completion for the hydraulic simulation of one-dimensional permanent motion
- Calculation of permanent motion
- Display of calculation results
- Organization of simulation plans, superimposition of results for compatibility check
- hydraulic works;
- Overview of the advanced functions of HEC-RAS

**DURATION:** 14 hours

27/08/2018 – 31/08/2018

**International Summer School on Atmospheric and Oceanic Science ISSAOS 2018 on “Climate changes: regional modeling, data analysis and uncertainties”**

---

**LOCATION:** L'Aquila

**ORGANIZER:** CETEMPS - University of L'Aquila

**CONTENTS:**

- Description of the global climate system
- Analysis of the effects of climate change on a global and regional scale
- Uncertainties on climate predictability and problems of communication to the general public
- Climate modeling techniques on a regional scale
- Hydrological impact of climate change
- Statistical techniques for the analysis of climatic data

24/01/2018 – 07/02/2018

**2nd level AIB operator**

---

**LOCATION:** Barisciano

**ORGANIZER:** A.N.A. National Alpine Association - Abruzzi Section of the L'Aquila "Vaccarelli" Group

**CONTENTS:**

- The national and regional civil protection system
- Emergency Psychology
- Local flora and types of fire
- Active fight against fires
- Cartography, GPS and other systems
- First Aid
- A.I.B. safety and use of PPE
- Practical exercise

**DURATION:** 33 hours with final test

22/10/2017

**Occupational health and safety training ANPAS National Column Operator Civil protection**

---

**LOCATION:** Ocre

**ORGANIZER:** National ANPAS

**CONTENTS:**

- Work safety regulations for civil protection volunteers
- Civil protection legislation

**DURATION:** 14 hours with final test

03/07/2017 – 04/07/2017

### **RadMet2017.IT, National Radar-Meteorology Conference**

---

**LOCATION:** Rome

**ORGANIZER:** Department of National Civil Protection

**CONTENTS:**

- The national radar network and the main innovations for the estimation of precipitation from radar signals. The conference provided for a study day, followed by a thematic conference.

06/03/2017 – 24/04/2017

### **Q-GIS basic course**

---

**LOCATION:** Bussi sul Tirino (PE)

**ORGANIZER:** Cooperative "Il Bosso", C.E.A. Environmental Education Center of Interest Regional pursuant to LR 122/99, with resolution of the Regional Council (DGR n ° 906)

**CONTENTS:**

- Introduction to Geographic Information Systems
- Management of reference systems (SR)
- The cartographic basis
- Database and table management
- Data query
- Graphic editing functions
- Georeferencing a cartography
- The print layouts
- Geoprocessing of vector and raster data (hints)

**DURATION:** 21 hours with final test

28/08/2016 – 03/09/2016

### **International Summer School on Atmospheric and Oceanic Sciences ISSASO 2016 on "Advanced Programming Techniques for the Earth System Science"**

---

**LOCATION:** L'Aquila

**ORGANIZER:** CETEMPS - University of L'Aquila

**CONTENTS:**

- Introduction to HPC, Batch systems, management of large amounts of data, programming techniques in parallel, optimization and parallelization with OpenMP, MPI and GPU. ESMF modules. Use of platforms integrated based on GIS for the visualization of climatic and hydro-meteorological data. Practise

06/07/2015 – 07/07/2015

### **RadMet2015.IT, National Radar-Meteorology Conference**

---

**LOCATION:** Rome

**ORGANIZER:** "La Sapienza" University of Rome

**CONTENTS:**

- The national radar network and the main innovations for the estimation of precipitation from radar signals. The conference provided for a study day, followed by a thematic conference

16/09/2013 – 20/09/2013

### **International Summer School on Atmospheric and Oceanic Sciences "Weather forecasting: from the science to the public"**

---

**LOCATION:** L'Aquila

**ORGANIZER:** CETEMPS - University of L'Aquila

**CONTENTS:**

- Meteorology radar and nowcasting
- Ensemble-based forecasting systems
- Medium-term forecasts and seasonal forecasts
- Satellite meteorology and aviation meteorology
- Meteorology for civil protection purposes

03/09/2012 – 07/09/2012

### **International Symposium on Tropospheric Profiling (ISTP9)**

---

**LOCATION:** L'Aquila

**ORGANIZER:** CETEMPS - University of L'Aquila

**CONTENTS:**

- Profiling of the state of the atmosphere and measurement of the main thermodynamic parameters and constituents
- Characterization of tropospheric processes
- Use of experimental data for modeling purposes

05/09/2011 – 16/09/2011

**International Summer School on Climate Impact Modeling for Developing Countries: Water, Agriculture and Health**

---

**LOCATION:** Trieste

**ORGANIZER:** ICTP, Miramare, Trieste, IT

**CONTENTS:**

- Use and uncertainty of the main series of observed data available from remote sensing useful for models
- Use and uncertainty of seasonal forecast products and climate model data from the main ones: numerical weather and climate forecasting centers, including climatic evaluation integrations of the IPCC
- Modeling of impacts in three different sectors:
  - Agriculture (GLAM, Challinor et al. 2005)
  - Water (CHyM)
  - Health, Liverpool Malaria Model (LMM)

30/08/2010 – 03/09/2010

**International Summer School on Atmospheric and Oceanic Sciences on Climatic Change and Impacts on Natural and Protected Areas (ISSAOS 2010)**

---

**LOCATION:** L'Aquila

**ORGANIZER:** CETEMPS - University of L'Aquila

**CONTENTS:**

- Characterization of climate change in mountain protected areas with particular reference to terrestrial and aquatic ecosystems, forests and species protected through numerical modeling techniques of meteorological, hydrological, climatic type and measurements from satellite systems.

20/11/2018 – 22/11/2018

**River Discharge Measurements using the SonTek Acoustic Doppler Current Profiler River Surveyor Mini ADP**

---

**LOCATION:** Aterno with hydraulic housing, Popoli (PE) IT

**ORGANIZER:** SonTek / Xylem Incorporated - Abruzzo Region

**CONTENTS:**

- The use of River Surveyor Mini ADP 3.0MHz to undertake river discharge measurement.

31/05/2010 – 11/06/2010

**Fifth ICTP Workshop on Theory and Use of Regional Climate Models**

---

**LOCATION:** Trieste, IT

**ORGANIZER:** ICTP, Miramare, Trieste, IT

**CONTENTS:**

- Climate models on a regional scale and use of the RegCM4 climate model version.

10/09/2008 – 14/09/2008

**Wildlife census**

---

**LOCATION:** Pettorano sul Gizio, IT

**ORGANIZER:** Monte Genzana Alto Gizio Regional Nature Reserve

**CONTENTS:**

- Cartography and orientation
- ecology and gender recognition
- age and signs of bear, wolf, deer and roe deer
- practical census activity, "minor" fauna and case studies.
- Wildlife and ecological networks;
- Road Ecology: principles and applications
- GIS applied to Ecological Networks

15/04/2021

**CETEMPS Seminar: Reading martian rocks searching for ancient life.**

---

**SPEAKER:** Francesco Salese (CISIC-INTA, IRSPS)

**LOCATION:** Online

**DURATION:** 1 hour

29/04/2021

**CETEMPS Seminar - Fires of a new type: what scenarios?**

---

**SPEAKERS:** G.M. Delogu (University of Sassari) - G.P. Mureddu (Lares Italy)

**LOCATION:** Online

**DURATION:** 1 hour

Link [https://www.youtube.com/watch?v=HDkrg\\_bXpAY](https://www.youtube.com/watch?v=HDkrg_bXpAY)

27/02/2022

**CETEMPS Seminar - ISPRA's Hydro-Meteo-Sea Forecasting System: implementations operating in the environmental field, research applications and development lines**

---

**SPEAKER:** Stefano Mariani (ISPRA)

**LOCATION:** Online

**DURATION:** 1 hour

Link <https://www.youtube.com/watch?v=Ospsh228kh4>

28/01/2021

**CETEMPS Seminar - Weather measurements on the move: requirements, usefulness and integration into Static "weather maps".**

---

**SPEAKERS:** J. Iurato - T. Galia (IoToyon)

**LOCATION:** Online

**DURATION:** 1 hour

Link <https://www.youtube.com/watch?v=sver7DB9bA8>

19/11/2020

**CETEMPS Seminar - It's a bit hot. A brief history of global warming and its protagonists.**

---

**SPEAKERS:** F. Grazzini (Arpae) - S. Rossi

**LOCATION:** Online

**DURATION:** 1 hour

Link [https://www.youtube.com/watch?v=Lewovhzs\\_7I](https://www.youtube.com/watch?v=Lewovhzs_7I)

05/11/2020

**CETEMPS Seminar - Climate change and its impacts. What a future for the next ones generations?**

---

**SPEAKER:** Carlo Cacciamani (Arpae)

**LOCATION:** Online

**DURATION:** 1 hour

Link <https://www.youtube.com/watch?v=4lpM1QrVlJA>

09/07/2020

**CETEMPS Seminar - Climatic effect by radiation-absorbing aerosol in snow.**

---

**SPEAKER:** Paolo Tuccella (UNIVAQ - CETEMPS)

**LOCATION:** Online

**DURATION:** 1 hour

Link <https://www.youtube.com/watch?v=ejigXBqo674>

11/06/2020

**CETEMPS Seminar - Avalanche danger prediction - operational aspects.**

---

**SPEAKER:** Mauro Valt (ARPAV - Arabba Avalanche Center)

**LOCATION:** Online

**DURATION:** 1 hour

Link <https://www.youtube.com/watch?v=gm-c7gBpF4w>

18/06/2020

**CETEMPS Seminar - Breeze circulation systems in mountain areas: classification, mechanisms, phenomena.**

---

**SPEAKER:** Dino Zardi (UniTrento)

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=6rFUOOMu7KU>

21/05/2020

**CETEMPS Seminar - Cyclones with tropical characteristics in the Mediterranean (Medicanes)**

---

**SPEAKER:** M. Marcello Miglietta (ISAC-CNR)

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=wnMKvLv0GLk>

04/06/2020

**CETEMPS Seminar - The Italian radar network in the framework of the national Early Warning System.**

---

**SPEAKER:** Gianfranco Vulpiani (Presidency of the CdM - DPC)

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=qX6pnZWZSuY>

27/05/2020

**CETEMPS seminar - Soil moisture: key variable for flood and landslide prediction.**

---

**SPEAKER:** Luca Brocca

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=d9VRzvZ4vHA>

14/05/2020

**CETEMPS Seminar - Hydrological and hydraulic problems in forecasting phenomena alluvial**

---

**SPEAKER:** Tommaso Moramarco (IRPI-CNR)

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=U2lrUcQyrjk>

25/06/2020

**CETEMPS Seminars - Floods, Droughts, and Human Societies in a Rapidly Changing World**

---

**SPEAKER:** Giuliano Di Baldassarre (Uppsala University, Sweden)

**LOCATION:** Online

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=VZtARMmQgOE>

23/01/2020

**CETEMPS seminars - Satellite-based precipitation estimates: role of the GPM mission and analysis of extreme events in the Mediterranean area.**

---

**SPEAKER:** Giulia Panegrossi (ISAC-CNR)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=MB1V7662D9E>

23/05/2019

**CETEMPS Seminar - The state of health of the Calderone Glacier (A tired heart of ice in the middle of the Mediterranean)**

---

**SPEAKER:** Massimo Pecci (Presidency of the Council of Ministers)

**LOCATION:** University of L'Aquila

**DURATION:** 2 hours

**Link** <https://www.youtube.com/watch?v=pLqzFB74Zpw>

13/06/2019

**CETEMPS Seminar - Pushing ground-based microwave radiometry: from uncertainty to networking**

---

**SPEAKER:** Domenico Cimini (CNR-IMAA)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=YFWljj1Nalk>

30/05/2019

**CETEMPS Seminar - Systematic classification of extreme precipitation events on north-central Italy**

---

**SPEAKER:** Federico Grazzini (LMU-ARPAE)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** [https://www.youtube.com/watch?v=PtpwUvzK\\_fY](https://www.youtube.com/watch?v=PtpwUvzK_fY)

28/02/2019

**CETEMPS Seminar - Transforming climate data into added value for activities productive: the challenge of climate services**

---

**SPEAKERS:** Alessandro Dell'Aquila and Irene Cionni (ENEA)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** [https://www.youtube.com/watch?v=S3ng3zi\\_F7M](https://www.youtube.com/watch?v=S3ng3zi_F7M)

14/02/2019

**CETEMPS Seminar - Estimation of snow parameters using Ground Penetrating Radar**

---

**SPEAKER:** Elena Pettinelli (UniRoma3)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=dFDhe2xhAnE>

31/01/2019

**CETEMPS Seminar - Meteorology between decision support and scientific communication**

---

**SPEAKER:** Daniele Mocio (AM)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** <https://www.youtube.com/watch?v=OMQoRYOodng>

28/06/2018

**CETEMPS Seminar - Neural Networks for Atmospheric Remote Sensing**

---

**SPEAKER:** Fabio Del Frate (Torvergata University)

**LOCATION:** University of L'Aquila

**DURATION:** 1 hour

**Link** <https://cetemps.aquila.infn.it/evento/fabio-del-frate/>

20/10/2017

**CETEMPS Seminar: Elements of technical-scientific communication - Part I**

---

**SPEAKER:** Prof. Frank S. Marzano  
**LOCATION:** L'Aquila, IT  
**DURATION:** 1 hour

20/10/2017

**CETEMPS Seminar: Elements of effective interpersonal communication in groups of work**

---

**SPEAKER:** Dr. Carlo Bosna  
**LOCATION:** L'Aquila, IT  
**DURATION:** 1 hour

## **EDUCATIONAL ASSIGNMENTS**

12/09/2019 – 17/09/2019

**Professional refresher course at the Functional Center of the Abruzzo Region**

---

**LESSON:** "Hydrological Modeling" as part of the training and technical refresher course scientific for the activities of the Civil Protection and the Functional Center of Abruzzo.

**DURATION:** 2 hours.

10/12/2020

**RAFAEL MHS course**

---

**LOCATION:** Master in Homeland Security "Systems, methods and tools for security and crisis management", XIII Edition, Campus Bio-Medico University of Rome in collaboration with the Nitel Consortium (A.A. 2020/2021)

**LESSON:** "Atmospheric impact models: ground effects and air quality"

**DURATION:** 30min.

28/05/2021

**RAFAEL MHS course**

---

**LOCATION:** Master in Homeland Security "Systems, methods and tools for security and crisis management", XIII Edition, Campus Bio-Medico University of Rome in collaboration with the Nitel Consortium (A.A. 2020/2021)

**LESSON:** "Atmospheric impact models: ground effects and air quality"

**DURATION:** 30min.

## **ORGANIZED CONFERENCES, SCHOOLS, SEMINARS AND WORKSHOPS**

20/12/2021 – 21/12/2021

**XV National GIT Conference - Ripatransone (AP)**

---

Convener Session 6 INFORMATION SYSTEMS FOR THE PROCESSING / ORGANIZATION / SHARING OF GEO-ENVIRONMENTAL DATA

09/02/2021 – 12/02/2021

**3rd National Conference of the Italian Association for Atmospheric Sciences e Meteorology (CN3 - AISAM)**

---

Member of the Local Organizing Committee

**Link** <https://www.aisam.eu/congresso2021/comitati-1.html>

25/09/2021

**OltreMet2021 Conference: Beyond Meteorology 2021**

---

Member of the Local Organizing Committee

**Link** [https://www.youtube.com/watch?v=\\_7e4XLHE7NU](https://www.youtube.com/watch?v=_7e4XLHE7NU)

26/08/2020

**OltreMet2020 Conference: Beyond Meteorology 2020**

---

Member of the Local Organizing Committee

**Link** <https://www.youtube.com/watch?v=RkZCvX-g55E>

2019 - CURRENT

## The CETEMPS Thursday seminars

---

Responsible for organizing Seminars / Webinars on behalf of CETEMPS

26/10/2018

### Conference for the Centenary of the National Hydrographic Service - Pescara

---

Member of the Local Organizing Committee

Link <http://cetemps.aquila.infn.it/100idrografico/>

08/2018

### International Summer School on Atmospheric and Oceanic Science ISSAOS 2018 on "Climate changes: regional modeling, data analysis and uncertainties"

---

Member of the Local Organizing Committee

Link <http://cetemps.aquila.infn.it/issaos/>

08/2016

### International Summer School on Atmospheric and Oceanic Sciences ISSAOS 2016 on "Advanced Programming Techniques for the Earth System Science"

---

Member of the Local Organizing Committee

Link <http://cetemps.aquila.infn.it/issaos/index.php/presentation/>

## ACTS OF CONFERENCES

2022

### Differential SAR interferometry for estimating snow water equivalent in central Apennines complex orography from Sentinel-1 satellite within SMIVIA project

---

Palermo, G., Raparelli, E., Alvan Romero, N., Papa, M., Orlandi, M., Tuccella, P., Lombardi, A., Picciotti, E., Di Fabio, S., Pettinelli, E., Mattei, E., Lauro, S., Cosciotti, B., Cappelletti, D., Pecci, M., and Marzano, F.: Differential SAR interferometry for estimating snow water equivalent in central Apennines complex orography from Sentinel-1 satellite within SMIVIA project, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-10149, <https://doi.org/10.5194/egusphere-egu22-10149>, 2022.

2022

### Snow measurement campaign for snowpack model and satellite retrieval validation in Italian Central Apennines within SMIVIA project

---

Raparelli, E., Tuccella, P., Lombardi, A., Palermo, G., Alvan Romero, N., Papa, M., Picciotti, E., Di Fabio, S., Pettinelli, E., Mattei, E., Lauro, S., Cosciotti, B., Petroselli, C., Cappelletti, D., Pecci, M., and Marzano, F. S.: Snow measurement campaign for snowpack model and satellite retrieval validation in Italian Central Apennines within SMIVIA project, EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-12082, <https://doi.org/10.5194/egusphere-egu22-12082>, 2022.

2022

### FORESHELL Project: development of sanitary/weather-environmental predictive technological tools to enhance the efficiency and sustainability of shellfish farming.

---

Tomassetti, B., Lombardi, A., Colaiuda, V., Conti, F., Mascilongo, G., Capoccioni, F., Pulcini, D., Di Francesco, G., Di Renzo, L., Profico, C., Ippoliti, C., Giansante, C., Ferri, N., and Di Giacinto, F.: FORESHELL Project: development of sanitary/weather-environmental predictive technological tools to enhance the efficiency and sustainability of shellfish farming., EGU General Assembly 2022, Vienna, Austria, 23–27 May 2022, EGU22-12798, <https://doi.org/10.5194/egusphere-egu22-12798>, 2022.

2021

### Development of health/weather-environmental predictive technological tools to enhance the efficiency and sustainability of shellfish farming: start of the project FORESHELL

---

Conti F., Mascilongo G., Colaiuda V., Tomassetti B., Lombardi A., Capoccioni F., Pulcini D., Di Francesco G., Di Renzo L., Profico C., Ippoliti C., Giansante C., Ferri N. e Di Giacinto F. Atti Convegno "La molluschicoltura al servizio della salute e dell'ambiente", SIRAM, <http://hdl.handle.net/11575/117295>, 2021

2021

### **Aquatic organism behaviours at multiple trophic levels for water monitoring: the case of Gran Sasso -Sirente aquifer**

---

Di Giacinto, F., Berti, M., Carbone, L., Caprioli, R., Colaiuda, V., Lombardi, A., Tomassetti, B., Tuccella, P., De Iulii, G., Pietroleonardo, A., Mascilongo, G., Di Renzo, L., D'Alterio, N., and Ferri, N.: Aquatic organism behaviours at multiple trophic levels for water monitoring: the case of Gran Sasso - Sirente aquifer, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-15955, <https://doi.org/10.5194/egusphereegu21-15955>, 2021.

2018

### **Use of hydrological data for hydrometeorological applications and forecasts**

---

Tomassetti B., Colaiuda V., Lombardi A. and Marzano F.S.; Uso dei dati idrologici per applicazioni e previsioni idrometeorologiche Conferenza Centenario della fondazione del Servizio Idrografico Nazionale, <https://www.regione.abruzzo.it/content/convegno-100-anni-di-idrografico>, 2018

2013

### **The CETEMPS Hydro-Meteorological chain during HyMex**

---

B. Tomassetti, E. Pichelli, A. Lombardi, S. Gentile, E. Cerasani, R. Ferretti, and M. Verdecchia; The CETEMPS Hydro-Meteorological chain during HyMeX, European Geosciences Union General Assembly 2013, 7-12 April 2013, Vienna, Austria (Geophysical Research Abstracts, ed.), volume 15, 2013. <https://meetingorganizer.copernicus.org/EMS2013/EMS2013-277.pdf>

2020

### **Possible changes of the brown trout habitat suitability in the upper Po basin due to global change**

---

Lombardi, A., Possible changes of the brown trout habitat suitability in the upper Po basin due to global change; Journal of Chemical Technology and Applications Volume 3, Issue 3, <https://www.alliedacademies.org/journal-chemical-technology-applications/archive/aacta-volume-3-issue-3-year-2020.html>; 2020.

## **EDITORIAL ACTIVITY**

### **Guest Editor**

---

Special issue "Hydrometeorological Extreme: Implications on Economy, Society, Civil Protection and Environmental Planning"

- Journal: Hydrology, MDPI
- Lombardi A. and Tomassetti B.
- [https://www.mdpi.com/journal/hydrology/special\\_issues/EW](https://www.mdpi.com/journal/hydrology/special_issues/EW)

### **Guest Editor**

---

Special issue "Atmospheric Rivers from Modeling and Remote Sensing"

- Magazine: remote sensing, MDPI
- Sante Laviola, Francesco Chiaravalloti, Annalina Lombardi, Barbara Tomassetti
- [https://www.mdpi.com/journal/remotesensing/special\\_issues/atmospheric\\_rivers\\_modeling\\_rs](https://www.mdpi.com/journal/remotesensing/special_issues/atmospheric_rivers_modeling_rs)

### **Reviewer**

---

International journals:

- Climate, MDPI
- Hydrology, MDPI
- Sustainability, MDPI
- Atmosphere, MDPI
- HESS, Copernicus

## **DISSEMINATION AND COMMUNICATION ACTIVITIES**

### **European Researchers' Night (SHARPER)**

---

Organization and management of the Pop-up shop of the CETEMPS Center of Excellence

### **UNIVAQ StreetScience**

---

CETEMPS pop-up shop organization

## **Buongiorno Regione Abruzzo**

---

Weather forecast in radio and television broadcasting (RAI3 and RadioUNO), free of charge.