EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

Name

SCOPUS links ORCID links E-mail

GIULIANA BARBATO

https://www.scopus.com/authid/detail.uri?authorId=57216630508 https://orcid.org/0000-0001-5892-1062

giuliana.barbato@cmcc.it

WORK EXPERIENCE

Dates (from - to)
Name ad address of the employer

Type of business or sector

· Occupation or position held

· Main activities and responsibilities

May 2016 - today CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC) REGIONAL MODELS AND GEO-HYDROLOGICAL IMPACTS DIVISION (REMHI) VIALE THOMAS ALVA EDISON S.N.C. 81100 CASERTA

Research

Senior Research Associate

-Climate Services and Dataclime (CSD), Research Unit Leader. Product engineer and technical lead of the Dataclime platform (www.dataclime.com), CMCC's climate service platform delivering tailored climate information to support adaptation planning and decision-making process. Expert in the development of advanced post-processing tools for climate data analysis, ranging from regional climate model outputs to in situ and satellite observations, and the integration of these datasets to support hazard and risk assessment. Good knowledge of satellite data analysis, useful for supporting hazard monitoring and assessment, through the use of software to manage data provided by different platforms and sensors. Co-design and implementation of climate indicators tailored to specific user requirements. Dataset integration to support comprehensive hazard and risk assessment methodologies.

Involved in the drafting of the climate analysis performed for the PNACC (National Adaptation Plan on Climate Change). Involved in many national and international projects and consultancy providing climate analysis also for impact assessment from the local up to the continental scale.

Contribution to pilot project "Climate proofing in investments and spatial planning" supported by and with the scientific contribution of Enel Foundation through climatic hazard assessment for the Belluno Province by considering four economic sectors of interest for the investigated area. As part of the project, developer of climate products for risk assessment within the Dataclime platform.

Contribution to the ALCOTRA - ARTACLIM project for Polytechnic of Torino for the vulnerability study of a pilot area in terms of hazard assessment through the calculation of different climatic indicators of interest. As part of the project, developer of an interactive application (called ARTACLIM_CLIMEAPP) for risk assessment on the study area.

Participation, as developer of climate services, to the European project CLARA-Climate forecast enabled knowledge services (funded by European Commission, Horizon 2020) for the development of the web release of the Dataclime platform with the main goal to provide additional climate analysis in support of different types of end-users.

Contribution to Technical Report ISPRA "Comparison of Energy consumption and Heating Degree Days (HDD)" by carrying out analyzes on possible future variations in heating and cooling demand at NUTS3 level over Italy.

Elaboration of different local climate profile in the framework of the ADAPT - Interreg- maritime project.

Collaboration with the CRISP Research Center of the University of Naples Federico II for the integration of two climatic tools for supporting agriculture sector in the framework of the project

EDUCATION AND TRAINING

 Dates (from - to) Name and type of organisation providing education and training 	2013-2016 University of Sannio, Benevento (Italy)
 Principal subjects/occupational skills covered 	Statistical signal processing. Telecommunications system. Remote sensing system. Electromagnetic field. Microwave and antennas. Electromagnetic propagation. Electronics. FPGA circuits. Optoelectronics. Functional analysis. Control of dynamic systems.
 Title of qualification awarded 	Master's Degree in in Electronic Engineering for Automation and Telecommunication
Dates (from - to)	2008-2012
 Name and type of organisation providing education and training 	University of Sannio, Benevento (Italy)
Principal subjects/occupational skills covered	Mathematics. Physics. Programming. Signal theory. Numerical transmission. Telecommunications networks. Radio mobile systems. Electromagnetic field. Electronics
 Title of qualification awarded 	Bachelor's Degree in Telecommunications Engineering

PERSONAL SKILLS AND COMPETENCES		
MOTHER TONGUE	ITALIAN	
OTHER LANGUAGES	English, French	
SCIENTIFIC SKILLS AND COMPETENCES	 Research interests (5 Key words): climate change, climate services, hazard assessment, high-resolution climate projections. Excellent ability to organize work and problem solving. Ability to achieve the objectives proposed. Ability to work in a team respecting individual needs. 	
RELEVANT ROLES AND COMPETENCES	 Responsible for Research Unit "Climate services" (CS) in REMHI Division (2021-today). Good knowledge of Matlab / Simulink environments, R software, Python, ArcGIS software, CDO software for managing files in NetCDF format. Good Knowledge of C #, Java and JavaScript programming language, .NET Framework, SQL language for the management of data in relational databases and the HTML language. 	

RELEVANT PUBLICATIONS In the last 10 years.

- De Vivo C., Ellena M., Barbato G., Pugliese A., Marinucci F., Barilli T.; Mercogliano P. (2024). A co-design matrix-based approach to evaluate the climate risks for airports: A case study of Bologna airport. Climate Services, Volume 37 - 100536, doi: 10.1016/j.cliser.2024.100536
- Giupponi C., Barbato G., Leoni V., Mercogliano P., Papa C., Valtorta G.;,Zen M.;,Zulberti C., (2024). Spatial risk assessment for climate proofing of economic activities: The case of Belluno Province (North-East Italy). Climate Risk Management, doi: 10.1016/j.crm.2024.100656
- Bonfante, A. Monaco, E., Vitale, A., Barbato, G., Villani, V., Mercogliano, P., Rianna, G. Mileti, F. A. Manna, P., Terribile, F. (2024). A Geospatial Decision Support System to support policy implementation on climate change in EU. Land Degration & Development. https://doi.org/10.1002/ldr.5042
- De Vivo C., Barbato G., Ellena M., Capozzi V., Budillon G., Mercogliano P., Application of climate risk assessment framework for selected Italian airports: A focus on extreme temperature events, Climate Services, Volume 30, 2023, 100390, ISSN 2405-8807,https://doi.org/10.1016/j.cliser.2023.100390.
- Jewson, S., Messori, G., Barbato, G., Mercogliano, P., Mysiak, J., & Sassi, M. (2023). Developing representative impact scenarios from climate projection ensembles, with application to UKCP18 and EURO-CORDEX precipitation. Journal of Advances in Modeling Earth Systems, 15, e2022MS003038.https://doi.org/10.1029/2022MS003038
- Ricciardi, G., Ellena, M., Barbato, G., Giugliano, G., Schiano, P., Leporati, S., ... & Mercogliano, P. (2022). Climate change adaptation cycle for pilot projects development in small municipalities: the northwestern Italian regions case study. City and Environment Interactions, 100097. <u>https://doi.org/10.1016/j.cacint.2022.100097</u>
- Jewson, S., Barbato, G., Mercogliano, P., Mysiak, J., and Sassi, M.: Improving the potential accuracy and usability of EURO-CORDEX estimates of future rainfall climate using frequentist model averaging, Nonlin. Processes Geophys., 28, 329–346, https://doi.org/10.5194/npg-28-329-2021, 2021.
- 8. Cutini M., Marzialetti F., Barbato G., Rianna G., Theurillat J.-P..Bioclimatic pattern in a Mediterranean mountain area: assessment from a classification approach on a regional scale. Int J Biometeorol (2021). https://doi.org/10.1007/s00484-021-02089-x
- Ellena M., Ballester, J., Mercogliano P., Ferracin E., Barbato G., Costa C., Ingole V. (2020), "Social inequalities in heat-attributable mortality in the city of Turin, northwest of Italy: a time series analysis from 1982 to 2018". Environ Health 19, 116. https://doi.org/10.1186/s12940-020-00667-x.
- Ellena M., Ricciardi G., Barbato G., Buffa A., Villani V., Mercogliano P (2020)," Past and future hydrogeological risk assessment under climate change conditions over urban settlements and infrastructure systems: the case of a sub-regional area of Piedmont, Italy". Nat Hazards 102, 275–305 (2020). https://doi.org/10.1007/s11069-020-03925-w.