



Veronica Villani

Nationality: Italian | **Gender:** Female | veronica.villani@cmcc.it

● WORK EXPERIENCE

01/04/2014 – CURRENT

MATHEMATICIAN – CENTRO EURO-MEDITERRANEO SUI CAMBIAMENTI CLIMATICI (CMCC)

- Contribution to the development of the web platform for climate data management for impact studies within the H2020-CLARA project (funded by EC).
- Contribution to the development of the CLIME software, in a GIS environment, with the main objective of processing climate data, creating a link between climate models and impact studies and supporting a wide range of users.
- Elaboration of the climate framework expected for the 21st century from the national to the local scale in terms of historical trends and projections of climatic variables and indicators of extreme events in the frame of several projects (eg ALCOTRA-ARTACLIM, H2020-RESIN, Planetary Health, PROLINE-CE, ChakeOu, LIFE + PRIMES, FP7-INTACT).
- Researcher in several European projects, such as GEMINA, and ORIENTGATE, for which simulations were carried out with the COSMO-CLM regional climatological model on different areas of the world studying both the capabilities of the model to reproduce the past climate and the expected climate changes, in terms of average and extreme values, with particular attention to the impacts on the soil induced by these climate changes.

Regional Models and geo- Hydrological Impacts Division (REMHI) | Professional, scientific and technical activities |

www.cmcc.it | Italy

● EDUCATION AND TRAINING

11/2011 – 03/2014 – Via Vivaldi, 43, Caserta, Italy

MASTER OF SCIENCE IN MATHEMATICS ACHIEVED WITH 110/110 CUM LAUDE – Second University of Naples - Department of Mathematics and Physics

Degree thesis in Numerical Analysis:

Stochastic models for the disaggregation of precipitation time series on sub-daily scale: identification of parameters by global optimization.

www.matfis.unina2.it

11/2008 – 10/2011 – Via Vivaldi, 43, Caserta, Italy

BACHELOR DEGREE IN MATHEMATICS AND COMPUTER SCIENCE ACHIEVED WITH 110/110 CUM LAUDE – Second University of Naples - Facoltà di Scienze MM.FF.NN.

Degree thesis in Data Bases and Information Systems:

Modeling and Metamodelling of social networks.

www.unina2.it

● DIGITAL SKILLS

Matlab/R | ArcGIS (Geographic Information System) Mapping Application | NCO - CDO tools for Netcdf | Latex Software | Fortran90 | C, C++, C# | R language | SQL/MYSQL | Geospatial Databases: PostgreSQL / PostGIS | Basic Python | Basic HTML | Windows, Linux, Unix | Windows Office

● LANGUAGE SKILLS

Mother tongue(s): ITALIAN

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B1	B1	B1	B1

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

● PUBLICATIONS

Publications

- Villani V., Rianna G., Mercogliano P., Zollo A.L., Schiano P. (2015). **Statistical approaches versus weather generator to downscale RCM outputs to point scale for stability assessment: a comparison of performances.** *Journal of Urban and Environmental Engineering*, v.8, n.2, p.142-154. ISSN 1982-3932. doi: 10.4090/juee.2014.v8n2.142154.
- 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, It.** *Natural Hazards* volume 102, pages275–305(2020) - doi: 10.1007/s11069-020-03925-w.

● RESEARCH PAPER

Research Paper

- Villani V., Di Serafino D., Rianna G. and Mercogliano P. (2015) – RP0256 - **Stochastic models for the disaggregation of precipitation time series on subdaily scale: identification of parameters by global optimization** – CMCC Research Paper.
- Cattaneo L., Rillo V., Manzi M.P., Villani V. and Mercogliano P. (2015) – RP0257 - **Clime: climate data processing in GIS environment** – CMCC Research Paper.
- Villani V., Cattaneo L., Zollo A. L. and Mercogliano P. (2015) –RP0262 - **Climate data processing with GIS support: description of Bias Correction and Temporal Downscaling tools implemented in Clime software** – CMCC Research Paper.
- Mercogliano P., Rianna G., Vezzoli R., Villani V. and Coppola V. (2015) – RP0263 - **Evaluation of downscaling and bias correction techniques to link climate and geohydrological impacts models** – CMCC Research Paper.

● CONFERENCE PAPER

Conference Paper

- de' Donato F., Scortichini M., Villani V., Mercogliano P., De Sario M., Davoli M., Michelozzi P. (2019) - **Future attributable deaths of heatwaves in Italian cities using high resolution climate change scenarios.** Environmental Epidemiology: October 2019 - Volume 3 - Issue - p 357-358 - DOI 10.1097/01.EE9.0000609956.43849.45. Abstracts of the 2019 Annual Conference of the International Society for Environmental Epidemiology, August 25-28 2019, Utrecht, the Netherlands.
- Villani V., Barbato G., Romano E., Mercogliano P. (2019) - ISBN 9788891915108 - **A models selection criterion for evaluation of heat wave hazard: a case study of the city of Prato.** SIS2019 Conference - Smart Statistics for Smart Applications, Book of Short Papers SIS2019 published by Pearson (www.pearson.com).
- P. Mercogliano, E. Bucchignani, F. Ciervo, M. Montesarchio, A.L. Zollo, V. Villani, G. Barbato, R. Vendemia, R. Polato, J. Baez, M. Pasten. **A climate analysis using CORDEX simulations in a cooperation framework: the case of Paraguay**, 19th EGU General Assembly, EGU2017, proceedings from the conference held 23-28 April, 2017 in Vienna, Austria, p.14169.
- Rianna G., Reder A., Villani V. and Mercogliano P. (2017) – DOI 10.1007/978-3-319-53485-5_27 - **Variations in Landslide Frequency Due to Climate Changes Through High Resolution Euro-CORDEX Ensemble.** Conference: IV World Landslide Forum Advancing Culture of Living with Landslides, At Lubjana, Volume: 4 Diversity of Landslide Forms.
- Rianna G., Villani V., Mercogliano P. and Vezzoli R. (2015) - **A procedure for assessing future trends of subdaily precipitation values on point scale.** Presented as a poster at the EGU General Assembly 2015. Vienna 12-17 April 2015.
- Vezzoli R., Rianna G., Zollo A.L., Mercogliano P., Villani V., Zenoni E., Pecora S - **Un approccio stocastico per la stima degli effetti dei cambiamenti climatici sulla distribuzione dei colmi di piena.** XXXIV Convegno nazionale di Idraulica e Costruzioni Idrauliche, Bari, 8-10 September 2014.

● PRESENTATIONS

Presentations

- Presentation of the work entitled: **"A models selection criterion for evaluation of heat wave hazard: a case study of the city of Prato"** at the SIS2019 conference - Smart Statistics for Smart Applications held at the Università Cattolica del Sacro Cuore - Milan, from 18/06/2019 to 21/06/2019.
- Presentation of the work carried out within the ADAPT project (funded by the Interreg Italy-France Maritime 2014-2020 Program), entitled: **"Analisi climatica locale per il comune di Porto Torres"** at the workshop 'Adattamento ai cambiamenti climatici: azioni per un territorio resiliente' held in Porto Torres on 10/05/2019.
- Presentation of the work carried out within the ADAPT project (funded by the Interreg Italy-France Maritime 2014-2020 Program), entitled: **"Il profilo climatico locale per il comune di Alghero"** at the workshop 'Presentazione del piano di adattamento al rischio alluvioni' held in Alghero on 9/05/2019.
- Presentation of the work carried out within the CLIMAERA-ALCOTRA 2014-2020 project (funded by the Interreg Italy-France Maritime 2014-2020 Program), entitled: **"Regional climate projections over CLIMAERA Alcotra area"** at the workshop held in Marseille on 4/04/2019.
- Presentation of the poster entitled: **"Bias Correction approaches to assess future variations in IDF curves for the city of Naples"** at the 2nd Workshop on Bias Correction in Climate Studies held in Santander from 05/14/2018 to 16/05/2018.
- Presentation of the poster entitled: **"Climate projections of extreme event indicators over three Italian regions"** at the CLM Community Assembly 2016 held in Lüneburg from 09/20/2016 to 09/23/2016.

● COURSES

Courses

COSMO/CLM/ART Training Course

Das Bildungs- und Tagungszentrum (BTZ) DWD in Langen (Germania).

Theoretical and practical course on the COSMO model for research activities in NWP (Numerical Weather Prediction) and RCM (Regional Climate Model) held in Langen from 02/15/2016 to 02/23/2016.