MARCO POSSEGA
CURRICULUM VITAE

Date of birth / **30/08/1995** Age / **28**
Place of birth / **CORREGGIO (RE)**
Nationality/ citizenship / **Italy**
Via G. Di Vittorio 7, 41012 CARPI (MO)
Driving licence / **B** / **Car available**
ID / **3421530** updated on **07/02/24**

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FOREIGN LANGUAGE SKILLS *europass*

MOTHER TONGUE(S): Italian

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ENGLISH **EXCELLENT**	C1	C1	C1	C1	C1
SPANISH **LIMITED**	A2	A2	A2	A2	A2

DIGITAL COMPETENCES

Self-assessment grid *europass*
Information processing **Independent user**
Communication **Independent user**
Content creation **Independent user**
Safety **Independent user**
Problem solving **Independent user**

EXPECTATIONS AND FEATURES OF THE DESIRED JOB

ECONOMIC SECTOR: **1.** education, training, research and development / **2.** aeronautics, aerospace, shipbuilding / **3.** consultancy (management, legal, accounting, ...)

CAREER FIELD: **1.** R&D and patents / **2.** Quality and security / **3.** Engineering and design

PREFERRED DISTRICT TO WORK IN: **1. MODENA** / **2. BOLOGNA**

AVAILABILITY FOR BUSINESS TRAVELS: **Yes, even frequently**

WORK EXPERIENCES

Post-doctoral researcher
ISAC - CNR
Education, training, research and development (BO)
02/2024 - TODAY

Main activities and responsibilities: Post-doc research grant 'Study and modeling of land-atmosphere interactions with particular focus on the feedbacks between drought extremes/transitions and the large-scale circulation' - OPTIMESM project
Protocollo num. 0308722 del 17/10/2023
| Company sector: R&D and patents

Post-doctoral researcher
ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA
Education, training, research and development (BO)
02/2023 - 01/2024

Main activities and responsibilities: Post-doc research grant 'Interaction between heat waves and urban heat island through weather prediction modelling' - TRIGGER project
Protocollo num. 2521 Rep. 370 Fascicolo 7943560 del 23/11/2022
Acquired skills and achieved objectives: The purpose is to study of urban climate in presente and future conditions of extremely hot weather through numerical simulations, formally within TRIGGER (SoluTions foR mItiGatinG climate-induced hEalth tReaths) project, but mainly involved in I-CHANGE (Individual Change of HAbits Needed for Green European transition) project. The methodology involves employing the WRF model with diverse parameterizations and boundary conditions, emphasizing local-scale analysis.
| Company sector: R&D and patents

Undergraduate Internship
UNIMORE
MODENA (MO)
07/2017 - 09/2017

Main activities and responsibilities: Implementation of numerical codes in Fortran90 for the study of the dynamics of quantum particles
Employed as: intern/trainee - undergraduate internship

ACADEMIC STUDIES

PH.D.
2019 - 2023

Alma Mater Studiorum - Università di Bologna
PhD Programme Future Earth, Climate change and societal challenges
PhD cycle: 35

Dissertation/thesis title: Analysis of heat-related phenomena and their interactions at different spatio-temporal scales | Dissertation/thesis subject: Hydro-meteorological extreme events | Thesis supervisor: Silvana Di Sabatino | Dissertation/thesis keywords: urban heat island, heat wave, drought propagation, extreme events

Age at graduation: 27 | Official duration: 3 years
Graduation date: 21/06/2023

MASTER'S DEGREE
2017 - 2019
CERTIFIED TITLE

Alma Mater Studiorum - Università di Bologna
Scuola di Scienze
Master's Degree in Earth System Physics
LM-17 - 2nd level degree in Physics

Dissertation/thesis title: Wavelet analysis of downslope flows in MATERHORN 2012 experiment | Dissertation/thesis subject: Dynamic meteorology | Thesis supervisor: DI SABATINO SILVANA | Dissertation/thesis keywords: wavelet transform, downslope flows, MATERHORN 2012

Age at graduation: 24 | Official duration: 2 years
Final degree mark: **110/110**
Graduation date: 24/10/2019

BACHELOR'S DEGREE

Università degli Studi di MODENA e REGGIO EMILIA

2014 – 2017

Dipartimento di Scienze Fisiche, Informatiche e Matematiche
Bachelor's degree in Physics
L-30 - 1st level degree in Physics

Dissertation/thesis title: Analysis of the propagation of indirect excitons diffused by time-dependent potentials | Dissertation/thesis subject: Solid-state physics | Thesis supervisor: GOLDONI GUIDO | Dissertation/thesis keywords: excitons, split-step, time-dependent, semiconductors, quantum-probability

Age at graduation: 22 | Official duration: 3 years
Final degree mark: **110/110 cum laude**
Graduation date: 28/09/2017

CLASSICAL CERTIFICATE
CORREGGIO
2014

Classical High School
'RINALDO CORSO' SEZZ. CL. E SC. , CORREGGIO (RE)
School-leaving examination mark: **100/100**
Kind of secondary school diploma: Italian secondary school diploma

OTHER POSTGRADUATE STUDIES

2023

MOOC Machine Learning in Weather & Climate
ECMWF
(United Kingdom)
In this Massive Open Online Course (MOOC) I explored the application of Machine Learning – a branch of Artificial Intelligence (AI) – across the main stages of numerical weather and climate predictions. These range from the acquisition and handling of input observations to their assimilation into models, and finally to forecasting and post-processing.
Duration in months: 3 months

2022

3BMeteo School
3BMeteo
Training week in operational meteorology at the headquarters of the main Italian private meteorological centre. Theoretical lessons and exercises on methods of forecasting, nowcasting and communication of weather forecasts through the media.

2020

Attestato di formazione di base di Meteorologo
Alma Mater Studiorum - Università di Bologna
Certificate of basic training of Meteorologist according to the World Meteorological Organization (WMO-WMO)

FOREIGN LANGUAGE SKILLS

English IELTS, British Council, 03 May 2018 , **Europass level C1**

NOTES

IELTS Certificate - C1

INFORMATION TECHNOLOGY SKILLS

OFFICE AUTOMATION

Presentation Software: (Advanced) | **Spreadsheets:** (Intermediate) | **Web Browser:** (Advanced) | **Word Processors:** (Advanced)

APPLICATION SOFTWARE

Weather Research & Forecasting (WRF) model (Advanced)

COMPUTER PROGRAMMING

Programming languages: Fortran (Intermediate) , MATLAB (Advanced) , Python (Intermediate)

STUDIES AND EXPERIENCES ABROAD

SPAIN
2022

Other experience acknowledged by the course of study (Periodo di ricerca all'estero previsto dal Dottorato)
At: Universidad de Granada
Place: **Granada (Spain)** | Language: English | Duration: 3 (months)
Visiting PhD student at the University of Granada. In particular, study of drought phenomena on the Iberian Peninsula through indices calculated from numerical simulations and reanalysis data. Supervisor: Prof. S. Gàmiz-Fortis, Dr. M. García-Valdecasas Ojeda

GERMANY
2019

Other experience acknowledged by the course of study (Preparazione della tesi magistrale all'estero)
At: RWTH
Place: **Aachen (Germany)** | Language: English | Duration: 3 (months)
Preparation of the master's thesis in Earth System Physics at the ITV institute of the RWTH University of Aachen. In particular, wavelet transform analysis of the downslope flows related to the MATERHORN 2012 experiment. Supervisor: Dr. T. Grenga, Dr. L. Leo

PROFESSIONAL ACCOLADES AND AWARDS

AWARD / SCOLARSHIP
2021

Borsa di studio Marco Polo per periodi di ricerca all'estero
Marco Polo scholarship for research periods abroad provided by University of Bologna to PhD students and researchers

AWARD / SCOLARSHIP
21/03/2019

Borsa di studio per la preparazione della tesi all'estero
Scholarship for the preparation of the master's thesis abroad provided by University of Bologna
Grading in list: Primo
bandi.unibo.it/s/aform9/bando-di-concorso-per-b…

PRIZE
22/05/2018

Premio di Studio
Study award provided by the Cassa di Risparmio di Carpi Foundation for the achievement of the first level degree with honors

PRIZE
19/05/2015

Premio di Studio
Study award provided by the Cassa di Risparmio di Carpi Foundation for obtaining the high school diploma with honors

CONFERENCES AND SEMINARS

CONFERENCES
06/02/2024

5° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia , AISAM, Università del Salento , Lecce
'Unraveling the Three-dimensional Dynamics of Urban Heat Islands under Heat Wave Conditions Through Numerical Simulations: A Case Study for Bologna', Marco Possega, Erika Brattich, Carlo Cintolesi, Paolo Ruggieri and Silvana Di Sabatino
Character: Poster author

CONFERENCES
04/09/2023

EMS Annual Meeting 2023 , Bratislava
'Characterization of agricultural drought propagation on the Iberian Peninsula through non-parametric indices', Marco Possega, Matilde García-Valdecasas Ojeda, Sonia Raquel Gámiz-Fortis, and Silvana Di Sabatino
Character: Poster author
doi.org/10.5194/ems2023-77

CONFERENCES
04/09/2022

EMS Annual Meeting 2022 , Bonn
"Drought characteristic projections over the Iberian Peninsula: the effect of using nonparametric multivariate standardized drought indices", Matilde García-Valdecasas Ojeda, Marco Possega, Emilio Romero-Jiménez, Juan José Rosa-Cánovas, Patricio Yeste, Yolanda Castro-Díez, María Jesús Esteban-Parra, Silvana Di

Sabatino, and Sonia Raquel Gámiz-Fortis
Character: Poster co-author
[doi.org/10.5194/ems2022-417](doi.org/10.5194/ems2022-417)

CONFERENCES
19/02/2022

4° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia , AISAM, Università Statale di Milano , Milano
"Urban heat island and heat waves characteristics and interactions: a review of the state-of-the-art", Silvana Di Sabatino, Leonardo Aragão, Francesco Barbano, Erika Brattich, Laura Leo, Marco Possega, Paolo Ruggieri, Marco Santo
Character: Co-author of oral presentation

CONFERENCES
19/02/2022

Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia , AISAM, Università Statale di Milano , Milano
'Evidence of intensified Urban Heat Island during Heatwaves in European cities through observational data', Marco Possega, Leonardo Aragão, Paolo Ruggieri, Marco A. Santo and Silvana Di Sabatino
Character: Speaker

CONFERENCES
27/04/2021

EGU General Assembly 2021 , Online
'Observational evidence of urban heat island intensification during heatwaves in European cities', Marco Possega, Leonardo Aragão, Paolo Ruggieri, Marco Antonio Santo, and Silvana Di Sabatino
Character: Speaker
doi.org/10.5194/egusphere-egu21-12369

CONFERENCES
09/02/2021

3° Congresso Nazionale dell'Associazione Italiana di Scienze dell'Atmosfera e Meteorologia , AISAM , L'Aquila
'Observational evidence of intensified urban heat island during heatwaves in European cities', Marco Possega, Leonardo Aragão, Paolo Ruggieri, Marco Antonio Santo, and Silvana Di Sabatino
Character: Poster author

PUBLICATIONS

JOURNAL ARTICLES
2023

Marco Possega, Matilde García-Valdecasas Ojeda and Sonia Raquel Gámiz-Fortis, Multi-Scale Analysis of Agricultural Drought Propagation on the Iberian Peninsula Using Non-Parametric Indices
Review: Water
Publisher: MDPI
[doi.org/10.3390/w15112032](doi.org/10.3390/w15112032)

JOURNAL ARTICLES
2022

Marco Possega, Leonardo Aragão, Paolo Ruggieri, Marco Antonio Santo, Silvana Di Sabatino, Observational evidence of intensified nocturnal urban heat island during heatwaves in European cities
Review: Environmental Research Letters
Publisher: IOP
iopscience.iop.org/article/10.1088/1748-9326/aca…

TEACHING ACTIVITIES

LESSONS/LECTURES
2023

Università di Bologna , Bologna
WRF Model Laboratory
Tutoring for WRF Model Laboratory of the course "Dynamical Meteorology" held by Prof. Barbano and included in the Earth System Physics Master's Degree of University of Bologna
Character: Tutor

LESSONS/LECTURES
2022

Università di Bologna , Bologna
WRF Model Laboratory
Tutoring for WRF Model Laboratory of the course "Dynamical Meteorology" held by Prof. Di Sabatino and included in the Earth System Physics Master's Degree of University of Bologna

Character: Tutor

LESSONS/LECTURES
2021

Università di Bologna , Bologna
Laboratory of atmospheric physics
Tutoring for the course "Laboratory of atmospheric physics", held
by Prof. Porcù and included in the Earth System Physics Master's
Degree of University of Bologna
Character: Tutor