

## PERSONAL INFORMATION



## Giovanni Maria Poggi

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| Nationality Italian

## WORK EXPERIENCE

01/11/2023 - Present

**Research fellow**

Alma Mater Studiorum - University of Bologna

My research grant aims to identify the main molecular, biochemical and morpho-physiological mechanisms supporting the adaptation of wheat and apple tree to abiotic stresses related to climate change (thermal and drought stress), contributing to the maintenance of qualitative-quantitative production traits

15/04/2019 – 31/10/2023

**Collaborator to the weekly publication of the Agro-phenological bulletin**

Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL)

Available at: <https://distal.unibo.it/it/terza-missione/societa/bollettino-agrofenologico>

Academic year 2020-2021  
2021-2022

**Teaching activities as Lab.Tutor in the Bachelor Degree course 8012 – Biological Sciences - BiGeA UNIBO**

Alma Mater Studiorum - University of Bologna, Department of Biological, Geological and Environmental Sciences (BiGeA)

Tutor for laboratory activities, relating to the course of study BIOLOGY AND VEGETABLE DIVERSITY [cod. 66989] (SSD BIO / 01)

December 2022

**Teaching activities in “Update seminar on agrometeorology for technical operators”**

As part of the updating seminar cycle on agrometeorology, organized by AIAM (Italian Association of AgroMeteorology) for the technicians of ARPA (Regional Environmental Protection Agency) Sardinia, I carried out teaching activities on the following topics:

- Radiation and energy balance within the canopy
- Definition of meteorological variables and their effects on plant physiology and productivity: radiation, temperature, precipitation, wind
- Statistical processing of agrometeorological data
- Evapotranspiration measurement and estimation methods
- Crops phenological development and Growing Degree Days calculation

Academic year      2020-2021  
                             2021-2022  
                             2022-2023  
                             2023-2024

**Teaching activity in Agriculture Meteorology and Ecology (SSD AGR/02) - DISTAL UNIBO**

Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL)

In the course unit Agriculture Meteorology and Ecology, held by Prof. Francesca Ventura at DISTAL UNIBO for Bachelor Degree in Agricultural Technologies (code 8524) and Land and agro-forestry Sciences (code 8525), I gave students lessons related to the exercises useful for the preparation of the final exam and a lesson on statistical analysis procedures of agrometeorological data. On the occasion of the didactic outing at the Experimental Didactic Center of Cadriano, I illustrated to the course students the operation, management and utilities of the Agrophenological station located there.

15/04/2019 – 31/08/2020

### POSitive project collaborator

- The POSitive Project (Scalable Operational Protocols for Precision Agriculture) aims to increase precision irrigation and fertigation in the Emilia - Romagna region, providing a service that makes available weekly maps of vegetation indices, derived from Sentinel-2 satellite data. As part of the project, I worked on the validation of satellite vegetation indices through field surveys.

15/04/2019 – 31/10/2020

### Research fellow

Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL)

- My research grant concerns LIFE 2017 European project CCA / IT / 000067 RESILIENCE AGRICULTURE (GREAT LIFE). The project aims to address the effects of Climate Change on agriculture, through an integrated approach, based on the introduction of crops resilient to Climate Change in the Po Valley as well as on the development of resilient agronomic techniques.
- Specifically, during the research grant I covered with my activity the professional figure of agronomist expert in environmental and field monitoring, with particular reference to millet and sorghum crops and their comparison with corn in parcel tests as regards:
  - Definition of crop phenology based on the Phenagri experimental protocol
  - Elaboration of crop water balance on the basis of agrometeorological data collected in the field and specific instruments installed
  - Processing of the main physiological and agronomic-performance parameters of the crops (yield, phytosanitary status, biometric measurements, water use efficiency) through surveys carried out during the crop cycle and data elaboration

## EDUCATION AND TRAINING

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01/11/2020 – 31/10/2023

### PhD student

Alma Mater Studiorum - Department of Biological, Geological, and Environmental Sciences (BiGeA) co-assigned with Department of Agricultural and Food Sciences (DISTAL)

Thesis title: *Multiproxy characterization of a durum wheat germplasm collection: retracing the past to predict the future*

09/2016 - 20/12/2018

**Master's Degree in Agricultural Sciences and Technologies (110 cum Laude, with Special Mention of Merit)**

Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL)

- Thesis title: *Studio del controllo genetico del numero di radici seminali in una collezione di germoplasma di orzo*

*(Study of the genetic control of the number of seminal roots in a collection of barley germplasm)*

09/2012 - 17/02/2016

**Bachelor's Degree in Agricultural Sciences and Technologies (110 cum Laude)**

University of Milan, Department of Agricultural and Food Sciences

- Thesis title: *Dinamica di colonizzazione rizosferica ed endofitica dello streptomicete ZEA171 in Lactuca sativa*

*Dynamics of rhizospheric and endophytic colonization of streptomycete ZEA171 in Lactuca sativa*

2007 - 2012

**High school Diploma in Classical Education (vote 99/100)**

Classical High School Ugo Foscolo, Pavia

**PERSONAL SKILLS**

Mother tongue(s)

Italian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	C1	C1
Certification: English IELTS ACADEMIC livello avanzato, British council, Cambridge english, 16/06/2016, Europass Level C1				

Communication skills

- ability to work in a team, adapting to different environments and knowing how to communicate effectively with other team members, gained through my experience as research fellow

Organisational / managerial skills

- I know how to organize my work when I take part in a project, and I know how to be versatile, adapting to the needs that the project presents in the different stages of implementation. I quickly learn new skills and tasks, and I can pass them on to others who work with me.

Job-related skills

- Cereals root traits phenotyping
- Knowledge and exact definition of crop phenology
- Use of instruments for the assessment of the physiological and biometric state of crops (ceptometer, SPAD, Licor, Fluorometer)
- Use of sensors and data elaboration skills for the calculation of crops water balance
- Analysis of the physiological and productive responses of plants to changed climatic conditions and development of agronomic techniques for the optimization of the use of resources in herbaceous systems.
- Analysis of genotype-environment relationships in plants of agricultural interest
- Drought – osmotic stress condition tests, and evaluation of stress resistance parameters
- Experimental surveys in controlled environment (growth chamber, greenhouse) and open field conditions.
- Data analysis and elaboration in R statistical environment

## Computer skills

- Microsoft Office
- R statistical environment
- ImageJ image processing software

## Other skills

- I have a solid and eclectic cultural background, characterized by a variety of suggestions, humanistic as well as technical-scientific. The training provided by Classical High School allowed me to add to a technique culture, also a humanistic one, which I consider fundamental because it gives you precious tools for critical thinking. In particular, I believe that the study of ancient Greek provides diagnostic ability, the ability to face a problem from multiple points of observation and perspectives, always remaining ready and willing to go back on one's steps, accepting and drawing greater awareness of one's mistakes.

## Driving licence

- B

## SCIENTIFIC PRODUCTION

## Publications in scientific journals

- Ventura, F., Vignudelli, M., **Poggi, G. M.**, Negri, L., & Dinelli, G. (2020). Phenological stages of Proso millet (*Panicum miliaceum* L.) encoded in BBCH scale. *International Journal of Biometeorology*, 64, 1167-1181.  
DOI: 10.1007/s00484-020-01891-3 Link: <https://doi.org/10.1007/s00484-020-01891-3>
- Ventura, F., **Poggi, G. M.**, Vignudelli, M., Bosi, S., Negri, L., Fakaros, A., & Dinelli, G. (2022). An Assessment of Proso Millet as an Alternative Summer Cereal Crop in the Mediterranean Basin. *Agronomy*, 12(3), 609.  
DOI: 10.3390/agronomy12030609 <https://doi.org/10.3390/agronomy12030609>
- **Poggi, G. M.**, Aloisi, I., Corneti, S., Esposito, E., Naldi, M., Fiori, J., ... & Ventura, F. (2022). Climate change effects on bread wheat phenology and grain quality: A case study in the north of Italy. *Frontiers in Plant Science*, 2778.  
DOI:10.3389/fpls.2022.936991. <https://doi.org/10.3389/fpls.2022.936991>
- **Poggi, G. M.**, Corneti, S., Aloisi, I., & Ventura, F. (2022). Environment-oriented selection criteria to overcome controversies in breeding for drought resistance in wheat. *Journal of Plant Physiology*, 153895.  
DOI: 10.1016/j.jplph.2022.153895. <https://doi.org/10.1016/j.jplph.2022.153895>

## Conferences

- National conference paper  
Ventura F., Vignudelli M., **Poggi G. M.**, Letterio T., Anconelli S. " POSITIVE: A SMART IRRIGATION PROJECT FOR AGRICULTURE 4.0". (poster presentation) at XXIII national agrometeorology convention AIAM: " Agricoltura 4.0 e cambiamento climatico: il ruolo dell'Agrometeorologia".
- National Conference paper  
Iris Aloisi, **Giovanni Maria Poggi**, Simona Corneti, Stefano Del Duca, Francesca Ventura. "Differences in gluten protein composition in a historical wheat seed collection: the extent of protein changes in the climate change scenario" (poster presentation) at 117° Congresso della Società Botanica Italiana (Bologna, 7-10 September 2022)
- National conference paper  
Mariacaterina Lianza, Riccardo Gasparini, Lorenzo Marincich, **Giovanni Maria Poggi**, Simona Corneti, Iris Aloisi, Fabiana Antognoni. "From primitive to modern crops: bioactive compound characterization of fifty durum wheat germplasms from Global Durum wheat Panel (GDP)" (poster presentation) at 117° Congresso della Società Botanica Italiana (Bologna, 7-10 September 2022)
- National conference paper  
**Poggi G. M.**, Aloisi I., Vignudelli M., Ventura F. "Climate change effects on wheat phenology in Italy: a case study" (oral presentation) at the XXIV national agrometeorology convention AIAM: "L'Agrometeorologia a supporto dei sistemi colturali e zootecnici "

- International conference paper  
**Giovanni Maria Poggi**, Mara Mandrioli, Simona Corneti, Giampiero Cai, Iris Aloisi, Tullia Gallina Toschi. "Variability of lipid composition in a *Triticum turgidum* L. collection" at International Conference From Seed To Pasta IV (poster presentation) (Bologna, 26-29 ottobre, 2022).

#### organizational committees

- Conference proceedings of the XXII national agrometeorology convention AIAM: "Ricerca ed innovazione per la gestione del rischio meteo-climatico in agricoltura". (11-12-13 June 2019, Portici). Available at the link [http://amsacta.unibo.it/6175/1/Atti\\_XXII\\_AIAM\\_2019.pdf](http://amsacta.unibo.it/6175/1/Atti_XXII_AIAM_2019.pdf)
- Conference proceedings of the XXIII national agrometeorology convention AIAM: "Agricoltura 4.0 e cambiamento climatico: il ruolo dell'Agrometeorologia". (30 June, 2 July 2021, online). Available at the link [http://amsacta.unibo.it/6713/1/Atti\\_AIAM\\_2021.pdf](http://amsacta.unibo.it/6713/1/Atti_AIAM_2021.pdf)
- Conference proceedings of the XXIV national agrometeorology convention AIAM: "L'Agrometeorologia a supporto dei sistemi colturali e zootecnici". (15-17 June 2022, Cagliari). Available at the [http://amsacta.unibo.it/6936/1/Atti\\_XXIV\\_convegno\\_AIAM.pdf](http://amsacta.unibo.it/6936/1/Atti_XXIV_convegno_AIAM.pdf)

#### Courses and certifications

- Participation at the AIAM course "Analisi di dati agrometeorologici ed elementi di programmazione in R" (21-23 May 2019, Bologna)
- Participation at the SIA course "Metodologia statistica per le Scienze Agrarie. I modelli lineari generali e generalizzati". (20-24 January 2020, Bologna)
- Participation at University of Bologna course "Scientific writing and communication". (8-25 March 2020, Bologna)
- Participation to Aiam International Advanced School In Agricultural Meteorology - Agricultural Meteorology For A Climate Smart Agriculture, 08/03/2021 – 19/03/2021 (online)
- English IELTS ACADEMIC advanced level certification, British council, Cambridge english, 16/06/2016, Europass Level C1
- Participation at the course "Scientific writing and communication", University of Bologna, Guest Professor Gabor L Lovei (Aarhus University, Denmark), 8-25 marzo 2022

#### Seminars

- Participation in the seminar "L'irrigazione a goccia delle colture agrarie" organized as part of the Master's Degree in Agricultural Sciences and Technologies (24-25-26 January 2018, Bologna)
- Participation in the seminar "Sicurezza alimentare nelle aree tropicali: linee guida per una produzione agraria sostenibile" organized as part of the Master's Degree in Agricultural Sciences and Technologies (17-18-19 January 2018, Bologna)
- Participation in the online seminar "Climate change, agriculture and forest ecosystems: forcings, feedbacks and solutions for adaptation and mitigation - section II", held by Prof. Francesca Ventura e Prof. Brunella Morandi for DISTAL PhD students (13 November 2020)
- Participation in the online seminar "Healthy plants for a healthy life and sustainable agriculture", organized by the GTI (Informal Thematic Group) "Plant Health" of DISTAL (18 November 2020)
- Participation in the online seminar "Agrivoltaico: un sistema per coniugare produzione di cibo e di energia" (18/02/2022)

#### Honours and awards

- Appointment as subject expert by the Department of Agro-Food Sciences and Technologies (DISTAL) of the Alma Mater Studiorum UNIBO, for SSD AGR / 02 (15/03/2021)
- Mention of merit for brilliant university career by the Coordinator of the Master's Degree in Agricultural Sciences and Technologies, Department of Agro-Food Sciences and Technologies (DISTAL), Alma Mater Studiorum- UNIBO
- Winner of the Marco Polo tender (2022) to encourage the mobility of teachers and researchers abroad
- Departmental award (BiGeA Dep.) for the publication of an article as first author in a top ranking scientific journal

#### Projects

- PRIN: PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2022. Titolo: "WHEAT-IN: INside health-related properties of tetraploid WHEATs under drought stress" (submitted)
- PRIN: PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2022 PNRR. Titolo: "NANO 2-BEES: exposure and toxicity of 2D-nanomaterials in the plant-pollinator system" (submitted)
- PRIN: PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2020. Titolo: "2D-NANO MAD PLANTS: Effects of 2D-nanomaterials on seed plants reproduction" (financed)
- LIFE 2017 CCA/IT/000067 RESILIENCE AGRICOLTURE (GREAT LIFE) (financed)

## Thesis co-supervisor

- Co-supervisor of Bachelor's Degree Thesis in Agricultural Technology "The phenological development of bread wheat: past and present" (Thesis in 27304 – Agricultural Meteorology and Ecology), Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL) (2020)
- Co-supervisor of Bachelor's Degree Thesis in Biological Sciences "Valutazione della resistenza a stress idrico di una collezione di accessioni di frumento duro in fase di germinazione" (Alma Mater Studiorum - University of Bologna, Department of Biological, Geological and Environmental Sciences) (2021)
- Co-supervisor of Bachelor's Degree Thesis in land and agro-Forestry Technologies "Valutazione della resistenza allo stress idrico in tre cultivar di *Triticum turgidum* L. subsp. durum." - Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL) (2022)
- Co-supervisor of Bachelor's Degree Thesis in land and agro-Forestry Technologies "Impatto del cambiamento climatico sul processo di riempimento della cariosside in frumento tenero (*Triticum aestivum* L.) nella zona dell'areale bolognese: un caso studio." - Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL) (2022)
- Co-supervisor of Master's Degree Thesis in Agricultural Sciences and Technologies "Caratterizzazione di tre landrace di *Triticum turgidum* L. subsp. durum. sulla base della loro resistenza allo stress idrico" - Alma Mater Studiorum - University of Bologna, Department of Agricultural and Food Sciences (DISTAL) (2023)

ANNEXES

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- Copies of participation certificates in conferences, courses and seminars