TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO **ID CODE 5903**

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Scienze Agrarie e Ambientali - Produzione, Territorio, Agroenergia dell'Università degli Studi di Milano**

Scientist- in – charge: **Prof. Gandolfi Claudio**

[Dorra Bellil]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	BELLIL
Name	DORRA

PRESENT OCCUPATION

Appointment	Structure
PhD student	Università degli studi di Bari Aldo Moro & Politecnico di Bari

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
PhD	PhD in Sustainable Land Management	Università degli studi di Bari Aldo Moro and Politecnico di Bari	2020-2023
PhD Visiting researcher	The Use of Machine learning to forecast soil hydraulic properties.	The University of Sydney	09/2022-02/2023
Master of Science	The degree of Master of Science in Land and Water resources management	Mediterranean Agronomic Institute of Bari CIHEAM-BARI	2018-2020
Master	Professional Masters (M2): Irrigation and drainage	National Agronomic Institute of Tunisia (INAT)	2017-2018
Engineering Diploma	National Agronomic Engineering Diploma: Genie rural	National Institute of Agronomic Sciences of chatt mariem	2014-2017
Degree	National diploma of the national competition for the entry to engineering schools	Higher Institute of Preparatory Studies in Biology Geology La Soukra	2011-2014

Internship	Internship for the professional master diploma	STUDI international	2017-2018
Internship	Internship for engineering studies	Water Research and Technology Center, Borj Cedria CERT	2016
Internship	Internship for engineering studies	Institut de l'Oliver	2016
Training	The challenges of sustainable management of water resources under climatic constraints: roles of NGOs, as part of "the youth for water" (La jeunesse pour l'eau) project and the "be water" project.	Global Water Partnership Mediterranean (GWP-Med) & INGREF	2015
Study trip	Situation and evolution of Moroccan agriculture within the framework of the Green Morocco Plan strategy.	National School of Agriculture of Meknes	2015
Internship	Internship for engineering studies	National Research Institute for Rural Engineering, Water and Forests INERGREF	2015
Training	Assembling and operating salinity monitoring system.	CT international & Monitoring-MENA	2015

REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
2014-2016	JUNIOR ENTREPRISE	Tunisia
2017	Ordre des ingenieurs de Tunis	Tunisia
2023	IADF	Italy

FOREIGN LANGUAGES

Languages	level of knowledge
Arabic	Mother tongue
French	Bilingual
English	Fluent
Italian	Fluent
Turkish	Basic

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2018	Full scholarship for the Master of science in Land and water resources management in CIHEAM Bari
2020	Full scholarship for the PhD in Sustainable Land management between 2 universities Università degli studi di Bari Aldo Moro & Politecnico di Bari

TRAINING OR RESEARCH ACTIVITY

The research aims to enhance irrigation efficiency by considering soil hydrological behavior in irrigation management, which is often overlooked in favor of engineering aspects. The study is conducted in District 10 of the Capitanata Consortium, characterizing soils in 19 sectors. The methodology involves TDR measurements and 2D modeling to efficiently estimate hydraulic properties across multiple sites simultaneously. These properties are validated by comparing them to measurements obtained using a tension infiltrometer in the same sites irrigated with a multi-dripper system. This efficient method is essential for optimizing irrigation times and volumes, as it considers vital parameters often overlooked in irrigation strategies.

The research's objective is to validate the TDR-2Dmod method for characterizing soil hydraulic properties. TDR-2Dmod combines Time Domain Reflectometry (TDR) measurements with 2D modeling to estimate water content distribution and dynamics under irrigation drippers using Richards' equation. The accuracy of these estimations is assessed by comparing them to measurements obtained through the classical Tension Infiltrometer Method (TIM). The evaluation includes statistical and sensitivity analyses. These results are further validated through numerical simulations of functional properties, using parameters from both the proposed methodology and the TIM method.

PROJECT ACTIVITY

Year	Project
2022-2023	The use of machine learning and deep learning to forecast soil moisture content
2019-2020	Soil water content mapping using an EMI sensor to assess the performance of an agro-hydrological model.
2018	Design of an irrigation and drainage sysem in the Ndurumu march Burandi to avoid the mineralization of the soil.
2017	Organic and metallic assessment of the quality of soil and surface water in watershed of Hamdoun, Monastir, Tunisia.
2016	Sizing of the water distribution network in the region of Soudane –Gombar GDA to better supply neighboring regions with their demand for water.
2016	Study of Evapotranspiration and Water Requirements of Intensively Managed Table Olive Trees
2015	Situation and evolution of Moroccan agriculture within the framework of the Green Morocco Plan strategy.
2015	Study of the soil properties in the Sbikha, Kairaouen region and the study of the impact of the reuse of gray wastewater in the Soukra region.

PATENTS

Patent
Driving license B

CONGRESSES AND SEMINARS

Date	Title	Place
19/10/2021-21/10/2021	Sustainable management of Mediterranean watersheds faced with the impacts of societal and climate changes GID- CIHEAM	CIHEAM Bari
14/02/2022 25/02/2022	Winter School on Sustainable land management and Earth Critical Zone (ECZ): a journey from ECZ characterization, modelling, and Geospatial Decision Support Systems	University of Napoli

16/06/2022-20/06/2022	ISRIC Spring School Hands-on Digital Soil Mapping	ISRIC: World Soil Information
13/09/2023-15/09/2023	Summer school: IEEE Geoscience and Remote Sensing Society Second IADF School on Computer Vision for Earth Observation	The University of Sannio, IEEE GRSS and IADF

PUBLICATIONS

Books
[title, place, publishing house, year …]
[title, place, publishing house, year …]
[title, place, publishing house, year …]

Articles in reviews
[title of the article, review, place, publishing house, year …]
[title of the article, review, place, publishing house, year …]
[title of the article, review, place, publishing house, year …]

Congress proceedings
[title, structure, place, year]
[title, structure, place, year]
[title, structure, place, year]

OTHER INFORMATION

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

Please DO NOT SIGN this form.

Place and date: Bari - Italy, 18/10/2023