

PERSONAL INFORMATION **Francesca Sanna**

WORK EXPERIENCE

<p>May 2020 – today Employer</p> <p>Main activities and responsibilities</p>	<p>Project Manager</p> <p>Researcher fellow (post-doc) (DiSAFA) Grugliasco (TO), Università degli Studi di Torino:</p> <ul style="list-style-type: none"> - Erasmus+ FIELDS: addressing the current and Future skill needs for sustainability, digitalization, and the bio-Economy in agriculture: European skills agenda and Strategy - Erasmus+ I-RESTART - Inclusive REskilling and upSkilling Toward competitive Agri-food and veterinary sector: European agenda Strategy <p>- Coordination, planning, organization of field research activities, data processing, reporting, disseminating and managing administration.</p>
<p>March 2018 – September 2019 Employer</p> <p>Main activities and responsibilities</p>	<p>Researcher fellow (post-doc)</p> <p>IMAMOTER-CNR (Institute for Agricultural and Earthmoving Machine – National Research Council) UOS of Turin.</p> <ul style="list-style-type: none"> - Metrologists and Plant biologist researcher in the framework of “Metrology for environmental parameters in agricultural field” in collaboration with INRiM – Thermodynamics Division. - Improvement of meteorological observations in field through the dissemination of techniques and calibration methods; - Evaluation of the components of uncertainty in meteorological measurements. - Microclimate observations in protected environment for horticulture
<p>October 2016 – February 2017 Employer</p> <p>Main activities and responsibilities</p>	<p>Visiting researcher</p> <p>Maynooth University, Co. Kildare, Ireland (Eire).</p> <ul style="list-style-type: none"> - Studies concerned the meteorological parameters as influence of the Potato Light Bligh disease and the evaluation of forecasting models; - Extensive evaluation of methods and approaches to calculate potential evapotranspiration (PE) in Ireland, based on available station level data; - Digitising Potato Late Blight historical, documentary, records held by the national meteorological service.
<p>February 2015 – December 2017 Employer</p> <p>Main activities and responsibilities</p>	<p>Associated researcher</p> <p>IMAMOTER-CNR (Institute for Agricultural and Earthmoving Machine – National Research Council) UOS of Turin.</p> <ul style="list-style-type: none"> - Researcher in the framework of “EMRP Organisation Research Excellence Grant REG4. ENV07 – MeteoMet – Metrology for meteorology in agricultural field” in collaboration with INRiM.
<p>February 2013 – January 2015 Employer</p> <p>Main activities and responsibilities</p>	<p>Researcher fellow</p> <p>IMAMOTER-CNR (Institute for Agricultural and Earthmoving Machine – National Research Council) UOS of Turin in collaboration with INRiM (Istituto Nazionale di Ricerca Metrologica) – Metrology for Quality of Life division.</p> <ul style="list-style-type: none"> - Researcher in the framework of “EMRP Organisation Research Excellence Grant REG4. ENV07 – MeteoMet – Metrology for meteorology in agricultural field” in collaboration with INRiM – Thermodynamics Division. - Improvement of meteorological observations in field through the dissemination of techniques and calibration methods; - Evaluation of the components of uncertainty in meteorological measurements;

- Improvement of epidemiological forecasting models for grapevine infection.

November 2011 – October 2012

Laboratory Technician

Employer

NSA (Nuova Servizi Ambientali) S.r.l.

Main activities and responsibilities

- Analysis of airborne asbestos with phase contrast microscopy, in polarized light, in scanning electron microscope (SEM), Fourier transform infrared spectrometer (FT-IR) and diffractometer X-ray.
- Analysis of unknown samples by SEM and FT-IR; Detection of crystalline silica (SiO₂) and water analysis for the detection oil or hydrocarbon, through FT-IR technology;
- Analysis of airborne particles (PM10, PM2.5, total suspended particulate matter).
- New testing protocols for the quantitative and semi-quantitative determination of asbestos in serpentine soils, in samples with interference for FT-IR and XRD techniques, in collaboration with Politecnico di Torino.

EDUCATION AND TRAINING

2014 – 2018

PhD in Agricultural, Forest and Food Sciences at the Doctoral School of Sciences and Innovative Technologies (SNTI);

Organisation providing education

Department of Agricultural, Forest and Food Sciences (DiSAFA) Grugliasco (TO), Università degli Studi di Torino Italy in co-tutorship with Istituto Nazionale di Ricerca Metrologica (INRiM), Torino, Italy.

Thesis title

"Metrology applied to agrometeorology and forecasting models for agro-food sciences technologies". Metrology approach applied to agricultural studies.

2009 - 2011

Master's degree in Plant Biotechnologies (LM6 – Classe delle lauree Magistrali in Biologia – D.M. 270/2004)

Organisation providing education

Università degli Studi di Torino – Interfacoltà Agraria/Scienze Matematiche Fisiche Naturali (

Graduation mark

110 (out of 110).

Thesis title

"Chemistry and molecular discrimination of two endemic species of Sardinia: *Salvia desoleana* Atzei et Picci and *Salvia sclarea* L." Experimental. Chemical characterization by GC-MS analysis of the essential oil and the investigation of biomolecular NTS-genomic sequences of the gene 5S-rRNA with DNA bar-coding techniques, supplemented by statistical analysis.

2003 - 2009

Bachelor's degree in Herbal Science and Technology

Organisation providing education

Università degli Studi di Cagliari – Facoltà di Farmacia

Graduation mark

110 (out of 110) cum laude.

Thesis title

"Antifungal activity of coumarin derivatives extracted from *Magydaris pastinacea* against *Candida albicans*". Experimental. Extraction and characterization of secondary metabolites, and microbiological screening of ascomycete fungi for the evaluation of the antifungal activity.

17 September 2014

Training course "Traceability of Meteorological Measurements"

Organisation providing education

EURAMET – Task Group Environment and MeteoMet project

Graduation mark

Certificate of attendance.

9-11 February 2014

Training course "Statistical methodology for Agricultural Science. Statistical models and error handling".

Organisation providing education

SIA – Società Italiana di Agronomia

Graduation mark

Certificate of attendance.

20 March 2013

Training course "Metrology for meteorology operators"

Organisation providing education

INRiM (Istituto Nazionale Ricerca Metrologica)

Graduation mark

Certificate of attendance.

2006-2007

Professional Training course "Technician for the transformation of Medicinal Plants"

Organisation providing education

ITIS Giua – University of Cagliari

Graduation mark

Professional Qualification and certificate of attendance. 840 hours of frontal lesson and 360 hours of stage in specialized companies.

RESEARCH ACTIVITIES AND
PRODUCTS
PUBLICATIONS

From 2013 till today I have been involved in research projects at national and international level, in charge of writing, planning, organizing field research activities, data processing, reporting, financial and administration managing and dissemination, in particular:

Projects participation

May 2020 – Today:

- Erasmus+ I-RESTART - Inclusive REskilling and upSkilling Toward competitive Agri-food and veterinary sector: European agenda StraTegy
- Horizon ValPro Path - new VALue landscapes for plant PROtein Pathways
- Erasmus+ FIELDS – Addressing the current and Future skill needs for sustainability, digitalization, and the bio-Economy in agriculture: European skills agenda and Strategy
- Erasmus+ PLANET - Plan for Agriculture reNewable Energy Training
- Horizon Bacchus – Mobile robotic platforms for active inspection and harvesting in agricultural areas
- P.A.R.agri - Percorso di Accompagnamento e Regularizzazione in agricoltura, "Fondo Asilo Migrazione e Integrazione 2014-2020" finanziario dell'Unione Europea;
- EIT Food Optimization of bakery processes by a computational tool together with consumer feedback to minimize ecological footprint and food waste – PrO4bake
- FoodRide - la filiera per l'innovazione agrifood di nicchia - diversificazione agricola, logistica, commercio di prossimità.

Mar 2018 – Sept.2019: Progetto premiale (Articolo 5 DM n. 949/RIC del 19 dicembre 2012), "Metrologia per parametri ambientali (CNR-INRIM collaboration)

Oct. 2014- Sept. 2017: ENV58 "MeteoMet2 - Metrology for essential climate variables (INRIM)

Feb 2013- Jan. 2015: EMRP Research Excellence Grant REG4. ENV07 (CNR-INRIM)

Feb 2013- Sept. 2014: EMRP - ENV07 "MeteoMet - Metrology for pressure, temperature, humidity and air speed in the atmosphere" (CNR-INRIM)

Publications

Ribeiro A. R., Goodburn B., Mayor L., Lindner L. F., Knöbl C. F., Trienekens J., Rossi D., Sanna F., Berruto R., Busato P. 2023 *Skill needs for sustainable agri-food and forestry sectors (II): insights of a European Survey*. In Sustainability, 15(5), 4115; <https://doi.org/10.3390/su15054115>

Mayor, L; Lindner, LF; Knobl, CF; Ramalho, A; Berruto, R; Sanna, F; Rossi, D; Tomao, C; Goodburn, B; Avila, C; Leijdens, M; Stollewerk, K; Bregler, M; Koidis, C; Morin, A; Milicic, V; Fadini, G; Lazaro-Mojica, J; Busato, P. 2022. *Skill Needs for Sustainable Agri-Food and Forestry Sectors (I): Assessment through European and National Focus Groups*. In Sustainability vol. 14 (15). <https://dx.doi.org/10.3390/su14159607>

Trienekens J., Sanna F., Busato P., Berruto R. *A European skills strategy for the agri-food and forestry sectors – Key challenges and prerequisites*. Proceedings in Food System Dynamics 2022 vol. 16. DOI: 10.18461/pfsd.2022.2208.

Musacchio, C., Coppa, G., Begeš, G., Hofstätter-Mohler, C., Massano, L., Nigrelli, G., Sanna, F., and Merlone, 2021 A.: *Effect of snow-covered ground albedo on the accuracy of air temperature measurements*, In Atmospheric Measurement Techniques vol. 14 (9) DOI: 10.5194/amt-14-6195-2021.

Sanna F., Berruto R., Botta G., Rossi D., Mayor L., Lindner L., Knöbl C., Busato P., 2021. *Erasmus+ EU FIELDS project: Bioeconomy, Digitalisation and Sustainability skill needs designed with a multidisciplinary approach*. Proceedings in System Dynamics and Innovation in Food Networks. 233-239. doi: <https://doi.org/10.18461/pfsd.2021.2125>

Merlone, A, Sanna, F, Coppa, G, Massano, L, Musacchio, C. 2020. *Transportable system for on-site calibration of permafrost temperature sensors*. Permafrost and Periglacial Process. 2020; 1– 11. <https://doi.org/10.1002/ppp.2063>

Pavlašek P., Merlone A., Sanna F., G. Coppa, C. G. Izquierdo, J. Palencar, S. Duris. 2019. *Determination of automatic weather station self-heating originating from accompanying electronics*. Meteorological Applications. doi: 10.1002/met.1844

Sanna F., R. Deboli, A. Calvo, A. Merlone. 2019. *Influence of sensor calibration on forecasting models for vineyard disease detection*. IOP Conf. Series: Earth and Environmental Science 275 (2019) 012020. doi:10.1088/1755-1315/275/1/012020

Pavlašek P., Palencar R., Duris S., Palencar J., Merlone A., Sanna F., Coppa G. 2018 *Determination of overall self-heating of automatic weather stations*. Journal of Physics: Conf. Series 1065 192002. doi:10.1088/1742-6596/1065/19/192002

Sanna F., Deboli R., Calvo A. 2018. *Variability of tomato in protected environment in response to meteorological parameters*. Plant, Soil and Environment 64(6): 247-254. doi.org/10.17221/772/2017-PSE

Sanna F., Calvo A., Deboli R., Merlone A. 2018. *Vineyard diseases detection: a case study on the influence of weather instruments calibration and positioning*. Meteorological Applications 25(2): 228-235. doi:10.1002/met.1685.

Merlone A., Sanna F., Bell S., Beges G., et al., 2018. *The MeteoMet2 Project– Highlights and Results*. Measurement Science and Technologies 29 025802 pp. 17pp. DOI: 10.1088/1361-6501/aa99fc

Merlone A., Musacchio C., Sanna F. 2015. *The Metrology for Meteorology Conference: MMC-2014*. Foreword on Meteorological Applications, 22 (S1): 817-819. DOI: 10.1002/met.1548

Merlone A., Lopardo G., Sanna F., Bell S., Benyon R., et al., 2015. *The MeteoMet project – Metrology for Meteorology: challenges and results*. Meteorological Applications, 22 (S1): 820-829. DOI: 10.1002/met.1528

Sanna F., Cossu Q. A., Bellagarda S., Roggero G., Merlone A., 2014. *Evaluation of EPI forecasting model with inclusion of uncertainty in input value and traceable calibration*. Italian Journal of Agrometeorology. 3; 33-44

Sanna F., Roggero G., Deboli R., Merlone A. 2013 *Metrology for Meteorology in Agricultural Sites*. Italian Journal of Agrometeorology. 4; 31-32.

Sanna F., Leonti M. 2011 “*Antifungal activity of coumarin derivatives extracted from *Magydaris pastinacea* against *Candida albicans*” - FEI – PhytoJournal. 12: 22-27;*

Leonti M., Casu L., Sanna F., Bonsignore L., 2009 “*A comparison of medicinal plant use in Sardinia and Sicily - De Materia Medica revisited?*” Journal of Ethnopharmacology; 121(2): 255-67. doi: 10.1016/j.jep.2008.10.027

Books

Francesca Sanna; Marco Leonti, 2019. *Cumarine di *Magydaris pastinacea*, potenziali composti antifungini* Analisi antifungina di composti cumarinici estratti da *Magydaris pastinacea* nei confronti della *Candida albicans*. pp.1-76 - ISBN:9786202087360 vol. 1.

Francesca Sanna, 2018. *Soil moisture measurements and calibration methods*. Soil moisture sensors for agricultural practices. pp.1-72 - ISBN:978-3-659-84337-2.

Conference Committee

4th International workshop on Metrology for Meteorology and Climate MMC-2023. Torino, Italy 25-30 September 2023, International Program, Scientific and Organizing Committees

3rd International workshop on Metrology for Meteorology and Climate MMC-2019. In conjunction with TEMPMEKO 2019 and TEMBEIJING 2019 Chengdu, China 10-14 June 2019, International Program Committees

2nd International workshop on Metrology for Meteorology and Climate MMC-2016. In conjunction with World Meteorological Organization “TECO” conference and the Meteorological Technology World EXPO 2016. Madrid, Spain, 26-29 September 2016, Scientific and Organizing Committees.

1st International workshop on Metrology for Meteorology and Climate MMC-2014. Brdo, Slovenia, 15-18 September 2014, Scientific and Organizing Committees.

Editor in conference proceedings

Merlone A, Musacchio C, Sanna F., 2016 - Metrology for Meteorology and Climate - Special Issue. Meteorological Applications, 22, Issue Supplement S1, 817–885

Begeš G, Hudoklin D, Merlone A, Sanna F., 2016. Book of Abstracts of the 2nd International workshop on Metrology for Meteorology and Climate MMC-2016. Madrid, Spain, 26-29 September 2016, pp. 72.

Merlone A, Hudoklin D, Sanna F., Musacchio C, Bojkovski J, Begeš G, Pušnik I, Geršak G, Drnovšek J, 2014. Book of Abstracts of 1st International workshop on Metrology for Meteorology and Climate MMC-2014. Brdo, Slovenia, 15-18 September 2014, pp. 64.

Congress presentations

Since 2009, I attended at more than forty congresses both at national and international level as a first- author or as a co-author, with an oral or poster presentation, among which:

Sanna F., R. Berruto, P. Busato, D. Rossi, L. Mayor, J. Trienekens (2022) Sustainability, bioeconomy and digitalisation skill needs in Agribusiness education with a multidisciplinary approach: Erasmus+ FIELDS project. International Food and Agribusiness Management Association. San José, Costa Rica, 18-23/06/2022

Sanna F., R. Berruto, B. Giulia, P. Busato, Erasmus+ EU FIELDS project: bioeconomy, digitalisation and sustainability skill needs designed with a multidisciplinary approach. 15th International European Forum (Iglis-Forum) System Dynamics and Innovation in Food Networks” online University of Bonn, 22-26/02/2021

Sanna F., L. Paro, L. Massano, G. Coppa, C. Musacchio, A. Merlone (2019). Traceability and on-site calibration for permafrost temperature sensors. XIV International TEMPMEKO & TEMPBEIJING 2019 and MMC 2019, Chengdu (China), 10-14/06/2019

Sanna F., Deboli R., Calvo A., Merlone A. 2018. Influence of sensor calibration on forecasting models for vineyard disease detection. 1st workshop on Metrology for Agricultural and Forestry – MetroAgriFor. Ancona, 01-02 October 2018.

Sanna F., Deboli R, Coppa G, Calvo A, 2017. Experimental site for the meteorological parameter’s measurements in protected cultivation of a tomato cultivar. 2nd Conference on Agricultural and Climate Change. “Climate ready resource use-efficient crops to sustain food and nutrition security”. Sitges (Spain) 26-28 March, 2017.

Sanna F., Miao P, 2016. Soil moisture measurement and calibration methods in agriculture field and survey results. Workshop on Soil moisture measurement challenges in calibration and metrological traceability. International Conference MMC-2016 satellite event, Madrid – (Spain) 26-29 September 2016

Sanna F., Caffi T, Bellagarda S, Roggero G, Merlone A, 2014. Evaluation of forecasting models for grapevine infection: a metrological approach. International workshop on Metrology for Meteorology and Climate – MMC2014 -. Brdo, Slovenia, 15-18 September

Sanna F., Roggero G, Roberto D, Merlone A. Metrology for Meteorology in Agricultural Sites. XVI National Congress AIAM 2013 “Agrometeorology for environmental ad food security”- 4-6 June 2013 Firenze: Proceedings: Italian Journal of Agrometeorology. 2013:

PERSONAL SKILLS

Mother tongue(s)	Italian				
	UNDERSTANDING		SPEAKING		WRITING
Other language(s)	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	American and British Academy Certificate				
French and Spanish	A2	A2	A2	A2	A2
	School level				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

**ORGANISATIONAL SKILLS AND
COMPETENCES**

Good learning skills and working in team.

I have been involved in research projects at national and international level, and in charge of planning, organization of field research activities, data processing, reporting, disseminating and managing administration.

I have been involved in the organization of national and international congresses and in the scientific review and editing of the related proceedings.

I have organized and actively participated to several dissemination events.

TECHNOLOGY SKILLS

Excellent skills in operating systems and internet

Good command of office suite (word processor, spread sheet, presentation software - ECDL)

Good command in statistical software (R and SPSS)

**Processing of personal data and
protection of privacy**

The Undersigned hereby authorizes the recipient of this document to utilize and store the personal sensitive data contained in the attached Curriculum Vitae for the purposes of bilateral Joint research projects and within the framework of the Data protection Act No. 196, dates 30 June 2003 as promulgated by the Italian Government and the EU regulation 2016/679 (GDPR),

Data: 02 December 2023

