PERSONAL INFORMATION

Alessandro Matese

Via di Rubbiana, 78 San Polo in Chianti – Comune di Greve in Chianti, Firenze, Italia

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alessandro.matese@gmail.com

alessandromatese@pec.it

Sex M | Date of birth 03/03/1974 | Nationality Italian

POSITION AREA OF EXPERTISE

Researcher
(CNR - IBE) Consiglio Nazionale delle Ricerche - Istituto per la Bioeconomia
National Research Council – Institute of BioEconomy

Precision agriculture, Spatial variability, Remote Sensing, Wireless Sensors Network, Agrometeorology, Biogeochemical cycles, Viticulture, UAV, Precision Forestry.

WORK EXPERIENCE

(01/01/2021 - present)

Senior Researcher – Permanent position

Consiglio Nazionale delle Ricerche - Istituto per la Bioeconomia (**CNR-IBE**), Firenze, Italy.

(01/06/2019 – 01/01/2021)

Researcher – Permanent position

Consiglio Nazionale delle Ricerche - Istituto per la Bioeconomia (**CNR-IBE**), Firenze, Italy.

(30/12/2016 - 01/06/2019)

Researcher – Permanent position

Consiglio Nazionale delle Ricerche - Istituto di Biometeorologia (**CNR-IBIMET**), Firenze, Italy.

(23/01/2012 - 29/12/2016)

Researcher

Consiglio Nazionale delle Ricerche - Istituto di Biometeorologia (**CNR-IBIMET**), Firenze, Italy.

(01/05/2013 – 31/08/2013)

Visiting scientist

Joined research team (UMR-ITAP) **Montpellier SupAgro** / IRSTEA di Montpellier (Francia).

Spatial data analysis applied to viticulture to provide agronomic information at high spatial resolution

(15/04/2004 – 31/12/2009)

Research Fellow

Consiglio Nazionale delle Ricerche - Istituto di Biometeorologia (**CNR-IBIMET**), Via G. Caproni, 8, 50145 FIRENZE 9 prot. CNR-IBIMET n.909 del 17/04/2009

EDUCATION AND TRAINING

17/06/2014

PhD   QEQ 8

PhD Degree - Ph.D. Program in Agriculture, Forest and Food Science, Doctoral School of Sciences and Innovative Technologies

University of Turin (Italy)

▪ Monitoring systems of micrometeorological parameters in precision viticulture.

08/07/2003

Master Degree in Natural Sciences   QEQ 7

University of Florence - Department of Earth Sciences

▪ Soil erosion in the Chianti Classico vineyards

| 1993 | Bachelor Information and Communications Technology | QEQ 5 |

Technical Institute "Alessandro Volta" Bagno a Ripoli - Florence

PERSONAL SKILLS

Mother tongue Italian

Other language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1
Spanish	A1	A1	A1	A1	A1
French	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills Good communication skill gained through my experience into national and international research groups. Author of congress communications, abstracts and proceedings of international scientific journals, including oral presentations at international conferences, lectures and seminars on invitation

Organisational / managerial skills Good organization skill gained through experimental campaigns with national and international research groups. Coordination of research activities. Organizer of national and international seminars, workshops and events

Job-related skills Design, development and installation of technical platforms and scientific equipment for field research. Study of the interactions between the biosphere and atmosphere at local and regional scale, agro-forestry monitoring, interactions between ecosystems and air quality.
Hardware and software Implementation of carbon dioxide fluxes monitoring station (Eddy Covariance). Agricultural zoning and micro-meteorological parameters monitoring for the characterization of the spatial and temporal variability of Mediterranean cropping systems (cereal production, horticulture and viticulture). Improved processing techniques from aerial remote sensing and Unmanned Aerial Vehicle (UAV) for the vegetation indices estimation, study of eco-physiological data and development of decision support tools. Use of modelling and computer science applied to agriculture, through specific and geographic information systems software

Computer skills

Image analysis	Communication	Programming	Security	Problem solving
High	High	High	v	High

Programming language: Basic, Visual Fortran, C, C#, Visual Studio .NET, Tiny OS
Numerical computing environment and programming language: Matlab
Statistical Software: R, SPSS, Systat
Other Software: Arduino, TinyOS, Surfer, Grapher, Photoshop,Corel, AutoCAD, Agisoft
▪ Software GIS: ArcView, ArcGis, ENVI, Quantum GIS.

Other skills Music, Sommelier AIS

Driving licence	A; B; C - Pilot certification UAV (SAPR) – 23/02/2015 – CLUB ULM Ali di Classe (RA)

BIBLIOMETRIC INDICES

Publons: h-index:18; Pubblication:42. https://publons.com/researcher/1094610/alessandro-matese/
Scopus ID: 24528769900; h-index: 20; #:59; http://orcid.org/0000-0001-8244-2985
Google Scholar: h-index: 24

ORGANIZATION, COMMITTEES, PANEL MEMBER AND PROJECT PARTECIPATION

2021 - Project Coordinator (PI) - EU PRIMA/H2020 – Project DATI - Digital Agriculture Technologies for Irrigation efficiency - PRIMA-MED Section 2 Multitopic 2020 - Topic 2.1.1 (RIA1) Low-cost, lean solutions for enhancing irrigation efficiency of smallholder farmers.

2020 - Principal investigator Progetto DIGIVIT – Viticoltura Digitale in Toscana
Psr Feasr 2014-2020 sottomisure 16.2, 1.1, 1.2 e 1.3. PEI - AGRI

2020 - Partner Project ORTI BLU - Piano Strategico per lo sviluppo di soluzioni innovative la gestione sostenibile delle risorse idriche per l'orticoltura periurbana Fiorentina
Psr Feasr 2014-2020 sottomisure 16.2, 1.1, 1.2 e 1.3. PEI - AGRI

2019 - Partners CLIMATE KIC – PhenoPiCam - A low cost autonomous IoT system based upon Rapsberry Pi computer board and camera module - 4.3.3 CSAb Flagship – Agtech
Lead Partner: P361 Fondazione Edmund Mach; Scientific Partner: P124 CNR Ibimet, Firenze. Subcontractor: YetiPi

Reviewer project (international peer-review process**) Estonian Research Council (ETAg) (May 06, 2019 – Application EMP507)** and **The Israel Science Foundation (March 05, 2019 - Application No. 984/19)**

2018 - Collaboration Precision Agriculture Work Group DM n. 8604 dell'1/09/2015). Ministero delle Politiche Agricole Alimentari e Forestali. https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/12069. LINEE GUIDA PER LO SVILUPPO DELL'AGRICOLTURA DI PRECISIONE IN ITALIA

2016 - Organizzator CONAVI 2016: Convegno Nazionale di Viticoltura - Gruppo di Lavoro "Viticoltura" della Società di Ortoflorofrutticoltura Italiana (SOI), Dipartimento di Scienze Agrarie, Alimentari e Agro-ambientali, dell'Università degli Studi di Pisa, 4-7 luglio 2016.

2015 - Coordinator CNRxEXPO 2015 Event: Agricoltura di precision e uso sostenibile delle risorse. 22 Luglio, 2015; Padiglione Italia – Milano; Workshop; CNR Dipartimento bio-agroalimentare.

2015 - Partner in the framework of VITICS project (Ref-IIM14244.RI1) with Universidad Pùblica de Navarra (ESPANA).

2014 - Partner Agenzia Lucana dello Sviluppo e dell'Innovazione in Agricoltura (ALSIA) for the #Drone_ICT project in the framework of DITRIA project.

2014 - Collaboration UMR ITAP (Montpellier SupAgro /Irstea) per il progetto «SenSag: Educational Resources on Sensors and wireless sensor networks for environment and agriculture» "Open Science – Training and Higher Education"

2015 - Responsible Task 1.1.4 "Network-enabled sensors" ENVRI+. A Horizon 2020 project aiming to create a more coherent, interdisciplinary and interoperable cluster of Environmental RIs across Europe.

2014 - Responsible Work Package 5 – AQUA (Progetto Premiale AQUA to CNR). CNR Departments involved: Biology, Agriculture and Food Sciences. 2015.

2014 - Partner CRA-VIT (Conegliano Veneto) in the project VITECLIMA 2014 (D.M. n.557 18/03/2013) supported by the Italian Ministry of Agriculture: Remote sensing with UAV and Satellite in the Prosecco Area.

2011 - Coordinator CISIA MIUR Project (2011): "Integrate knowledge for Sustainability and Innovation of Made in Italy Agro-Food (CISIA) - Development of new remote sensing technologies by UAVs (Unmanned Aerial Vehicle) within precision viticulture aimed at enhancing the grapevine for quality production" financed by MIUR.

2011 - Partner CRA-VIT (Conegliano Veneto) in the project "VINSALUT", OIGA project D.M. n° 18829 (2011) supported by the Italian Ministry of Agriculture: Development of a Wireless Sensor Network system for vineyard monitoring.

2009 - Partecipant SWIFF - IT (2009-2011): "Wireless system for the control of main greenhouse practices in floricultural field", supported by the Italian Ministry of Agriculture.

2005 - Partecipant / responsible SINPREF – SINSIAF Barilla (2004-2006) : Research activities in the fields of mathematical modeling applied to the processes of crop-growth, managing experimental data acquisition campaigns, validation and calibration in modeling. Forecast system of quality and productivity of crops of durum wheat. Modelling of an integrated system for managing food safety in the chain of durum wheat.

2005 - Partecipant / responsible Agena - Barilla (2006-2008): Weather Forecast, Wheat Production Forecast using weather station data and satellite data as input for Delphi Model and other Crop models.

2006 - Partecipant Carboltaly MIUR Project (2006-2008): Aircraft and Tower observations of CO_2 fluxes.

2006 - Partecipant CarboEurope UE (2006-2008): Aircraft observations of CO_2 fluxes.

2007 - Responsible Consorzio Tuscania (2007-2010): Development of an WSN in the Tuscany vineyards and Aircraft remote sensing (multispectral and thermal sensor).

TRAINING	

2013 High level course - Montpellier SupAgro, France
Tools and methods for spatial data acquisition and analysis
Master's degree Information technology applied to Agriculture and environment (AgroTIC).

2015 High level course CREA – SCA Bari
Introduction to Spatial Data Processing

MAIN INTERNATIONAL COLLABORATIONS		
Gonzaga Santesteban – UPNA - Spain	gonzaga.santesteban@unavarra.es
José Martínez Casasnovas – UNI Leida Spain	j.martinez@macs.udl.cat
Alexandre Escola – Udl CAT - Spain	aescola@eagrof.udl.cat
James Taylor – IRSTEA - France	james.taylor@irstea.fr
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Robin Gebbers – ATB Potsdam - Germany	rgebbers@atb-potsdam.de
Kamal Aberkani – FPN Nador - Morocco	kamalaberkani@gmail.com
Luca Brillante – CSU - USA	lucabrillante@csufresno.edu

TEACHING	

2017-2021 Master Universitario di I livello – University of Teramo
MASTERAP - AGRICOLTURA DI PRECISIONE
Innovazione in agricoltura di precisione: lo sviluppo di droni e robotica

Monitoraggio agrometeorologico in agricoltura di precisione

2017 Formazione per DIPLOMAzia2 project – CNR-IBIMET Firenze
Precision Agriculture Tools
Training multi-sectoral program generated by an agreement between the National Research Council of Italy and the Ministry of Foreign Affairs and International Cooperation (MAECI)

2017 CREA Genomics Research Centre, Fiorenzuola d'Arda
Drone-based platforms for field phenotyping: theory and practical applications
WHEALBI FP7 project training workshop - Field phenotyping: how to phenotype for the most relevant agronomic traits.

2017 Università degli Studi di Pisa,
Viticoltura di precisione
Docenza all'interno del corso di Laurea in Viticoltura ed Enologia su invito del Prof. Claudio D'Onofrio Università degli Studi di Pisa

2016 Docenza presso FCS – Fondazione Clima e Sostenibilità, Firenze
Viticoltura di precisione
Docenza all'interno del corso di agricoltura di precisione su invito del Prof. Simone Orlandini Università degli Studi di Firenze.

2015 Docenza presso Università degli Studi di Teramo
Viticoltura di precisione
Lezione tenuta all'Università degli Studi di Teramo su invito del Prof. Michele Pisante su Viticoltura di precisione

2013 Séminaire AgroTIC, Montpellier SupAgro, France
Arduino et ses applications en agriculture
Docenza all'interno dell'opzione AgroTIC (Specializzazione universitaria per Ingegnere agronomo) AgroTIC - Technologies de l'information et de la communication.

2006 MTP – Mediterranean Training Programme for harmonization of Early Warning System and Operational instrument for monitoring Climate Change and Desertification. CNR-Ibimet - UNCCD-EUMETSAT
Modelling cropping system for drought impact assessment: the case of durum wheat in Italy
Docente del seminario "Modelling cropping system for drought impact assessment: the case of durum wheat in Italy" nell'ambito del corso di formazione "MTP – Mediterranean Training Programme for harmonization of Early Warning System and Operational instrument for monitoring Climate Change and Desertification.

PUBBLICATIONS

Peer reviewed journals JCR WOS

2021   Matese, A., Di Gennaro, S.F. Beyond the traditional NDVI index as a key factor to mainstream the use of UAV in precision viticulture (2021) Scientific Reports, 11 (1), art. no. 2721.

Squeri, C., Poni, S., Di Gennaro, S.F., Matese, A., Gatti, M. Comparison and ground truthing of different remote and proximal sensing platforms to characterize variability in a hedgerow-trained vineyard (2021) Remote Sensing, 13 (11), art. no. 2056

Dainelli, R., Toscano, P., Di Gennaro, S.F., Matese, A. Recent advances in unmanned aerial vehicles forest remote sensing—a systematic review. Part ii: Research applications (2021) Forests, 12 (4), art. no. 397

Magno, R., Rocchi, L., Dainelli, R., Matese, A., Gennaro, S.F.D., Chen, C.-F., Son, N.-T., Toscano, P. Agroshadow: A new sentinel-2 cloud shadow detection tool for precision agriculture (2021) Remote

Sensing, 13 (6), art. no. 1219

Dainelli, R., Toscano, P., Gennaro, S.F.D., Matese, A. Recent advances in unmanned aerial vehicle forest remote sensing—a systematic review. Part i: A general framework (2021) Forests, 12 (3), art. no. 327

2020

Pastonchi, L., Di Gennaro, S.F., Toscano, P., Matese, A. Comparison between satellite and ground data with UAV-based information to analyse vineyard spatio-temporal variability (2020) Oeno One, 54 (4), pp. 919-934.

Di Gennaro, Salvatore Filippo; Matese, Alessandro. Evaluation of novel precision viticulture tool for canopy biomass estimation and missing plant detection based on 2.5D and 3D approaches using RGB images acquired by UAV platform. 2020. Plant Methods. Volume 16 Issue 1.

Mariapaola Ambrosone, Alessandro Matese, Salvatore Filippo Di Gennaro Beniamino Gioli, Marin Tudoroiu, Lorenzo Genesio, Franco Miglietta, Silvia Baronti, Anita Maienza, Fabrizio Ungaro and Piero Toscano. Retrieving soil moisture in rainfed and irrigated fields using Sentinel-2 observations and a modified OPTRAM approach. 2020. International Journal Of Applied Earth Observation And Geoinformation. Volume 89.

Di Gennaro, Salvatore Filippo; Nati, Carla; Dainelli, Riccardo; Pastonchi, Laura; Berton, Andrea; Toscano, Piero; Matese, Alessandro. An Automatic UAV Based Segmentation Approach for Pruning Biomass Estimation in Irregularly Spaced Chestnut Orchard. 2020. Forests. Volume 11 Issue 3.

2019

Di Gennaro, S.F., Dainelli, R., Palliotti, A., Toscano, P., Matese, A. Sentinel-2 validation for spatial variability assessment in overhead trellis system viticulture versus UAV and agronomic data. 2019. Remote Sensing 11(21), 2573.

Matese, A., Di Gennaro, S.F., Santesteban, L.G. Methods to compare the spatial variability of UAV-based spectral and geometric information with ground autocorrelated data. A case of study for precision viticulture. 2019. Computers and Electronics in Agriculture. 162, pp. 931-940.

Toscano, P., Castrignanò, A., Di Gennaro, S.F., Vonella., V, Ventrella, D., Matese, A. A precision agriculture approach for durum wheat yield assessment using remote sensing data and yield mapping. 2019. Agronomy 9(8), 437.

Di Gennaro, S.F., Toscano, P., Cinat, P., Berton, A., Matese, A. A low-cost and unsupervised image recognition methodology for yield estimation in a vineyard. 2019. Frontiers in Plant Science 10,559.

Avola, G., Di Gennaro, S.F., Cantini, C., Riggi, E., Muratore, F., Tornambè, C., Matese, A. Remotely sensed vegetation indices to discriminate field-grown olive cultivars. 2019. Remote Sensing 11(10), 1242.

Cinat, P., Di Gennaro, S.F., Berton, A., Matese, A. Comparison of unsupervised algorithms for Vineyard Canopy segmentation from UAV multispectral images. 2019.Remote Sensing, 11(9),1023

2018

Matese, A. and Di Gennaro, S.F. 2018. Practical applications of a multisensor UAV platform based on multispectral, thermal and RGB high resolution images in precision viticulture. Agriculture (Switzerland), 8(7), 116.

Cavaliere, A., Carotenuto, F., Di Gennaro, F., Gioli, B., Gualtieri, G., Martelli, F., Matese, A., Toscano, P. Vagnoli, C., Zaldei, A. 2018. Development of low-cost air quality stations for next generation monitoring networks: Calibration and validation of PM2.5 and PM10 sensors. Sensors (Switzerland), Volume 18, Issue 9, September 2018, Article number 2843.

Di Gennaro, S.F., Rizza, F., Badeck, F.W., Berton, A., Delbono, S., Gioli, B., Toscano, P., Zaldei, A. Matese, A. UAV-based high-throughput phenotyping to discriminate barley vigour with visible and near-infrared vegetation indices. 2017. International Journal of Remote Sensing, 24 November 2017, Pages 1-15

Matese, A., Baraldi, R., Berton, A., Cesaraccio, C., Di Gennaro, S.F., Duce, P., Facini, O., Mameli, M.G.

Piga, A., Zaldei, A. Estimation of Water Stress in grapevines using proximal and remote sensing methods. 2018. Remote Sensing, Volume 10, Issue 1, 1 January 2018.

2017

Y. Romboli, S.F..Di Gennaro, S. Mangani, G. Buscioni, A. Matese, L. Genesio and M. Vincenzini. Vine vigour modulates bunch microclimate and affects the composition of grape and wine flavonoids: an unmanned aerial vehicle approach in a Sangiovese vineyard in Tuscany. 2017. Australian Journal of Grape and Wine Research, 23(3), pp. 368-377

Di Gennaro, S.F., Matese, A., Gioli, B., Toscano, P., Zaldei, A., Palliotti, A., Genesio, L. 2017. Multisensor approach to assess vineyard thermal dynamics combining high-resolution unmanned aerial vehicle (UAV) remote sensing and wireless sensor network (WSN) proximal sensing. Scientia Horticulturae, 221, 83-87.

Zaldei, A., Camilli, F., De Filippis, T., Di Gennaro, F., Di Lonardo, S., Dini, F., Gioli, B., Gualtieri, G., Matese, A., Nunziati, W., Rocchi, L., Toscano, P., Vagnoli, C., 2017. An integrated low-cost road traffic and air pollution monitoring platform for next citizen observatories. Transportation Research Procedia, 24C: 531–538.

2016

Torresan, C., Berton, A., Carotenuto, F., Di Gennaro, S.F., Gioli, B., Matese, A., Miglietta, F., Vagnoli, C., Zaldei, A., Wallace, L. Forestry applications of UAVs in Europe: a review. International Journal of Remote Sensing, 2016, 38(8-10), 2427-2447.

Matese, A., Di Gennaro, S.F., Berton, A. Assessment of a canopy height model (CHM) in a vineyard using UAV-based multispectral imaging. International Journal of Remote Sensing, 2016, 38(8-10), 2150-2160.

Santesteban, L.G., Di Gennaro, S.F., Herrero-Langreo, A., Miranda, C., Royo, J.B. and Matese, A. High-resolution UAV-based thermal imaging to estimate the instantaneous and seasonal variability of plant water status within a vineyard. Agricultural Water Management, 2016, 183, 49-59.

E. Carrillo, A. Matese, J. Rousseau, B. Tisseyre. Use of multi-spectral airborne imagery to improve yield sampling in viticulture. Precision Agriculture, 2016, 17:74-92; doi 10.1007/s11119-015-9407-8

Di Gennaro S.F., Battiston E., Di Marco S., Facini O., Matese A., Nocentini M., Palliotti A. and Mugnai L., 2016. Unmanned Aerial Vehicle (UAV)-based remote sensing to monitor grapevine leaf stripe disease within esca complex in vineyard. Phytopathologia Mediterranea, 55(2), 262-275.

2015

Alessandro Matese, Salvatore Filippo Di Gennaro, Alessandro Zaldei. Agrometeorological monitoring: Low-Cost and Open-Source – is it possible?. Italian Journal of Agrometeorology. Volume: 20   Issue: 3 Pages: 81-88   Published: DEC 2015

Alessandro Matese, Piero Toscano, Salvatore Filippo Di Gennaro, Lorenzo Genesio, Francesco Primo Vaccari, Jacopo Primicerio, Claudio Belli, Alessandro Zaldei, Roberto Bianconi and Beniamino Gioli. Intercomparison of UAV, Aircraft and Satellite Remote Sensing Platforms for Precision Viticulture. Remote Sensing 2015, 7(3), 2971-2990; doi:10.3390/rs70302971.

2014

Salvatore Filippo Di Gennaro, Alessandro Matese, Mirko Mancin, Jacopo Primicerio and Alberto Palliotti. 2014. An Open-Source and Low-Cost Monitoring System for Precision Enology. Sensors 2014, 14(12), 23388-23397.

Matese, A., Crisci, A., Di Gennaro, S.F., Primicerio, J., Tomasi, D., Marcuzzo, P. and Guidoni, S. 2014. Spatial variability of meteorological conditions at different scales in viticulture. Agricultural and Forest Meteorology, Volumes 189–190, 1 June 2014, Pages 159-167.

2013

Matese, A., Vaccari, F.P., Tomasi, D., Di Gennaro, S.F., Primicerio, J., Sabatini, F. and Guidoni, S., 2013. Crossvit: Enhancing canopy monitoring management practices in viticulture. Sensors (Switzerland), 13(6), pp. 7652-7667.

2012

Di Gennaro, S.F., Matese, A., Primicerio, J., Genesio, L., Sabatini, F., Di Blasi, S. and Vaccari, F.P. 2012. Wireless real-time monitoring of malolactic fermentation in wine barrels: the Wireless Sensor Bung system. Australian Journal of Grape and Wine Research, 19 (1) , pp. 20-24. DOI: 10.1111/ajgw.12006

Alessandro Matese, Alfonso Crisci; Filippo Di Gennaro et al. 2012. Influence of Canopy Management Practices on Vineyard Microclimate: Definition of New Microclimatic Indices. American Journal Of Enology And Viticulture, Volume 63, Issue 3, pages: 424-430, DOI: 10.5344/ajev.2012.11117.

Toscano, P.; Ranieri, R.; Matese, A. 2012. Durum wheat modeling: The Delphi system, 11 years of observations in Italy. European Journal Of Agronomy. Volume 43, pages 108-118, DOI: 10.1016/j.eja.2012.06.003.

Jacopo Primicerio, Salvatore Filippo Di Gennaro, Edoardo Fiorillo, Lorenzo Genesio, Emanuele Lugato, Alessandro Matese and Francesco Primo Vaccari. 2012. A flexible unmanned aerial vehicle for precision agriculture. Precision Agriculture, Volume 13, Issue 4, pp 517-523. DOI: 10.1007/s11119-012-9257-6.

E. Fiorillo, A. Crisci, T. De Filippis, S.F. Di Gennaro, S. Di Blasi, A. Matese, J. Primicerio, F.P. Vaccari, L. Genesio. 2012. Airborne high-resolution images for grape classification: changes in correlation between technological and late maturity in a Sangiovese vineyard in Central Italy. Australian Journal of Grape and Wine Research, Volume 18, Issue 1, pages 80–90.

B. Gioli, P. Toscano, E. Lugato, A. Matese, F. Miglietta, A. Zaldei, F.P. Vaccari. 2012. Methane and carbon dioxide fluxes and source partitioning in urban areas: The case study of Florence, Italy. Environmental Pollution, Volume 164, Pages 125–131.

F.P. Vaccari, E. Lugato, B. Gioli, L. D'Acqui, L. Genesio, P. Toscano, A. Matese, F. Miglietta. 2012. Land use change and soil organic carbon dynamics in Mediterranean agro-ecosystems: The case study of Pianosa Island. Geoderma, Volumes 175–176, Pages 29–36

2011

Toscano, P., Gioli, B., Dugheri, S., Salvini, A., Matese, A., Bonacchi, A., Zaldei A., Cupelli, V., Miglietta, F. 2011. Locating industrial VOC sources with aircraft observations. Environmental Pollution 159 (5), 1174-1182.

2009

Matese, A., Gioli, B., Vaccari, F.P., Zaldei, A., Miglietta, F., 2009. Carbon Dioxide Emission of the City Center of Firenze, Italy: Measurement, Evaluation, and Source Partitioning. Journal of Applied Meteorology and Climatology 48 (9), 1940–1947.

Matese, A., Di Gennaro, S.F., Zaldei, A., Genesio, L., Vaccari, F.P., 2009. A Wireless sensor network for precision viticulture: The NAV system. Computers and Electronics in Agriculture 69, 51-58.

Taddei, S., Toscano, P., Gioli, B., Matese, A., Miglietta, F., Vaccari, F.P., Zaldei, A., Custer, T., Williams, J., 2009. Carbon Dioxide and Acetone Air-Sea Fluxes over the Southern Atlantic. Environmental Science and Technology 43 (14), 5218-5222.

Miglietta, F., Gioli, B., Brunet, Y., Hutjes, R.W.A., Matese, A., Sarrat, C., Zaldei, A., 2009. Sensible and latent heat flux from radiometric surface temperatures at the regional scale: methodology and evaluation. Biogeosciences 6, 1975-1986Sss

2008

Matese, A., Alberti, G., Gioli, B., Toscano, P., Vaccari, F.P., Zaldei, A., 2008. Compact_Eddy: A compact, low consumption remotely controller eddy covariance logging system. Computers and Electronics in Agriculture 64, 343-346.

Peer reviewed journal

Matese, A., Di Gennaro, S.F. 2015. Technology in precision viticulture: A state of the art review. International Journal of Wine Research, Volume 7, Issue 1, 2015, Pages 69-81

EDITORIAL BOARD AND GUEST EDITOR SPECIAL ISSUE

Editorial Board **FRONTIERS IN PLANT SCIENCE** section: Technical Advances in Plant Science (https://www.frontiersin.org/journals/plant-science/sections/technical-advances-in-plant-science#editorial-board

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Editorial Board **SMART AGRICULTURAL TECHNOLOGY** (https://www.journals.elsevier.com/smart-agricultural-technology/editorial-board)

2019 - Special Issue "Forestry Applications of Unmanned Aerial Vehicles (UAVs)" MDPI FOREST

2019 - Special Issue "Remote Sensing for Agroforestry" MDPI REMOTE SENSING

2019 - Special Issue "Remote Sensing for Viticulture" MDPI REMOTE SENSING

2020 - Special Issue "Digital Agriculture" MDPI REMOTE SENSING

INVITED LECTURES FOR CONFERENCES, SEMINARS, WORKSHOPS, RESEARCH SCHOOLS AND CONFERENCE PROCEEDINGS	

Keynote speaker

Viticoltura di precisione: successi, limiti e potenzialità dopo 10 anni di esperienze. CONAVI 2018 – Convegno Nazionale di Viticoltura. Piacenza 2018

Technologies in precision viticulture. INFOWINE Portugal. Maggio 2018. Vila Real (Portugal)

Invited Speaker

PrecAgri Workshop SMARTICT'19 - The First International Conference On Smart Information & Communication Technologies, 26-28 SEPTEMBER, 2019 - Be Live Collection Hotel, Saïdia, Morocco

Terre di Gaiole: "Cambiamenti Climatici e conseguenti risvolti nella Viticoltura Chiantigiana. Il caso 2017" 19/10/2019. Gaiole in Chianti

High-throughput field phenotyping using UAV-based remote sensing and imaging techniques. 2018 TRAINING COURSE ON HIGH-THROUGHPUT WHEAT PHENOTYPING. WHEAT INITIATIVE. September 2018

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