

## Curriculum Vitae

### Personal information

First name / Surname	<b>Domenico Vitale</b>
Date of birth	
Place of Birth	
Citizenship	
Permanent Address	
Mobile Phone Number	
E-mail	
Spoken Languages	

### Education and training

Dates	13 September 2013
Title of qualification awarded	Teaching qualification in Maths (A026)
Principal subjects	Maths for High-School
Organisation providing education	University of Bari, Italy
Dates	05 July 2011
Title of qualification awarded	PhD in Statistics - SECS-S/01
Principal subjects	Environmental Statistics, Time Series Analysis, Climate Change
Organisation providing education	University of Bari, Italy
Dates	01 October 2007
Title of qualification awarded	Master in Gestione d'Impresa
Principal subjects	Business Administration and Management
Organisation providing education	Istituto Adriano Olivetti (ISTAO), Ancona, Italy
Dates	17 October 2005
Title of qualification awarded	Master Degree in Statistics and Economics (110/110 cum laude)
Principal subjects	Time Series Analysis, Environmental Statistics, Groundwater Dynamics
Organisation providing education	University of Bari, Italy

## Work/Teaching experience

Dates	June 1, 2019 - onwards
Occupation or position held	Teacher of Maths
Name and address of employer	Liceo Scientifico Sandro Pertini di Ladispoli (RM)
Dates	September 1, 2019 - onwards
Occupation or position held	Researcher Collaborator / Independent Consultant
Main activities and responsibilities	Methods and software development for the analysis of ecological data in the context of the Integrated Carbon Observation System Research Infrastructure (ICOS-RI) – Ecosystem Thematic Centre (ETC)
Name and address of employer	Centro euro-Mediterraneo sui Cambiamenti Climatici (CMCC), IAFES Division, 01100, Viterbo, Italy
Dates	June 1, 2013 – May 31, 2019
Occupation or position held	Assegno di Ricerca ai sensi dell'art. 22 della Legge 240/2010
Main activities and responsibilities	Methods and software development for the analysis of ecological time series collected through the eddy covariance micrometeorological technique: missing data, uncertainty, quality control, data mining
Name and address of employer	Department for Innovation in Biological, Agro-Food and Forest Systems (DIBAF), University of Tuscia, via S. Camillo de Lellis, 01100, Viterbo, Italy
Dates	July 1, 2011 – Jul 31, 2012, Sep 1, 2012 – Jan 31, 2013
Occupation or position held	Researcher Collaborator / Independent Consultant
Main activities and responsibilities	Analysis of environmental and ecological time series. Software development.
Name and address of employer	Consiglio per la Ricerca in Agricoltura (unità di Bari), via C. Ulpiani, 5, 70125, Bari, Italy
Dates	Jan 1, 2008 – Dec 31, 2010
Occupation or position held	Phd Student in Statistics – SECS-S/01
Main activities and responsibilities	Time series analysis: econometric theory and application on climatic variables Statistica Economica – Didactic Course (12 hours) Metodi Statistici per la Finanza e le Assicurazioni - Didactic Course (12 hours)
Name and address of employer	Università degli Studi di Bari, Facoltà di Economia
Dates	Dec 1, 2006 – Dec 31, 2007
Occupation or position held	Researcher Collaborator / Independent Consultant
Main activities and responsibilities	Analysis of environmental and ecological time series.
Name and address of employer	Consiglio per la Ricerca in Agricoltura (unità di Bari), via C. Ulpiani, 5, 70125, Bari, Italy

## **Affiliation to academies of recognized prestige**

Member of the Società Italiana di Statistica from 20-07-2020 to date.

Member of GRASPA - Gruppo di Ricerca per le Applicazioni della Statistica ai Problemi Ambientali from 20/07/2020 to date.

Member of The International Environmetrics Society (ISI) from 22/01/2022 to date.

## **Participation in editorial committees**

Reviewer for the Journal of Atmospheric and Oceanic Technology (ISSN 0739-0572), Agricultural and Forest Meteorology (ISSN 0168-1923), Atmospheric Measurement Techniques (1867-8548). Topic Board Editors of Land (ISSN 2073-445X).

Expert Reviewer for the First Order Draft (FOD) of the Working Group III (WGIII) Contribution to the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6).

Member of the Program Committee of the ITISE 2021 conference - Time Series and Forecasting, Gran Canaria, Spain, 19-21 July 2021.

## **Participation in scientific conferences**

Convegno Intermedio SIS2009, Statistical Methods for the Analysis of Large Data-Sets, pp 547-550, Pescara, 23-25 September, Italy. Submitted work title: Unit Roots, Granger Causality and Global Warming: Bridging the Gap between Econometric Theory and Climatology.

2nd International Workshop on Interoperable infrastructures for interdisciplinary big data sciences (IT4RIs 16) in the context of IEEE Real-time System Symposium (RTSS). Porto, Portugal, 29 Nov - 2 December, 2016. Submitted work title: Near Real Time Data Processing in ICOS RI, <http://doi.org/10.5281/zenodo.204817>

European Geosciences Union (EGU) GA. Vienna, Austria, 23-28 April 2017. Submitted work title: Towards an integrated quality control procedure for eddy-covariance data, <https://ui.adsabs.harvard.edu/abs/2017EGUGA..1916089V/abstract>

American Geophysical Union (AGU) Fall Meeting. Washington, D.C., USA, 10-14 Dec 2018. Submitted work title: Cleaning Eddy-Covariance flux data: development and performance evaluation of new quality control tests, <http://adsabs.harvard.edu/abs/2018AGUFM.B33I2784V>

American Geophysical Union (AGU) Fall Meeting. Washington, D.C., USA, 10-14 December 2018. Submitted work title: Improving the Quality of Eddy Covariance Measurements from Data Collection to Data Processing, <http://adsabs.harvard.edu/abs/2018AGUFM.B22C..07S>

American Geophysical Union (AGU) Fall Meeting. Washington, D.C., USA, 10-14 Dec 2018. Submitted work title: Eddy Covariance flux errors due to synchronization errors during data acquisition, <https://ui.adsabs.harvard.edu/abs/2018AGUFM.B33I2786F/abstract>

American Geophysical Union (AGU) Fall Meeting. Washington, D.C., USA, 10-14 Dec 2018. Submitted work title: Impact of CO2 Storage Flux Sampling Uncertainty on Net Ecosystem Exchange Measured by Eddy Covariance, <http://adsabs.harvard.edu/abs/2018AGUFM.B33I2783N>

European Geosciences Union (EGU) GA. Vienna, Austria, 7-12 Apr 2019. Submitted work title: Characterization of Eddy Covariance flux errors due to data synchronization issues during data acquisition, <https://ui.adsabs.harvard.edu/abs/2019EGUGA..21..5444F/abstract>

10th EMS Annual Meeting, 10th European Conference on Applications of Meteorology (ECAM) Abstracts, held Sept. 13-17, 2010 in Zürich, Switzerland. Submitted work title: Impact of climate change estimated through statistical downscaling on crop productivity and soil water balance in Southern Italy, <https://meetingorganizer.copernicus.org/EMS2010/EMS2010-227.pdf>

10th Congress of the European Society for Agronomy 15-19 September 2008, Bologna, Italy Submitted work title: Climate Change and Irrigation Water Consumption: a Case Study of the Olive and Tomato in Apulia

XI Convegno nazionale di Agrometeorologia, S. Michele all'Adige (TN), 10-12 June 2008. Submitted work title: Analisi comparata di metodi di stima dell'evapotraspirazione della barbabietola da zucchero e del pomodoro in ambiente semi-arido, <http://www.agrometeorologia.it/convegno-aiam-2008/>

XI Convegno nazionale di Agrometeorologia, S. Michele all'Adige (TN), 10-12 June 2008. Submitted work title: Variabilità climatica e consumi irrigui. Il caso-studio dell'olivo e del pomodoro nel Tavoliere di Puglia, <http://www.agrometeorologia.it/convegno-aiam-2008/>

## Participation in activities of research projects/groups characterized by national or international collaborations

Participation in the activities of the research project AQUATER funded by MiPAAF (n. 209/7303/05) from 01-12-2006 to 31-12-2007. Published paper: Vitale D, Rana G, Soldo P (2010) Trends and Extremes Analysis of Daily Weather Data from a site in the Capitanata Plain (Southern Italy), Italian Journal of Agronomy, 5(2): 133-143, ISSN 1125-4718. DOI: <https://doi.org/10.4081/ija.2010.133>.

Participation in the activities of the research project BIOSEA 'Optimization of existing bioenergy chains for economic and environmental sustainability' from 01-07-2011 to 30-04-2012. Funding: Ministry of Agriculture, Food and Forestry Policies (MiPAAF), Italy (D.M. 16916/7303/10, 23 July 2010) Published paper: Rana G, Ferrara RM, Vitale D, D'Andrea L, Palumbo AD (2016) Carbon Assimilation and Water Use Efficiency of a Perennial Bioenergy Crop (*Cynara Cardunculus* L.) in Mediterranean Environment, Agricultural and Forest Meteorology, 217: 137-150, DOI: <https://doi.org/10.1016/j.agrformet.2015.11.025>.

Participation in the activities of the research project BIODATI funded by MiPAAF (D.M. 15421 4/07/2011) from 02-04-2012 to 31-01-2013, Published paper: Palatella L, Rana G, Vitale D (2014) Towards a Flux-Partitioning Procedure Based on The Direct Use of High-Frequency Eddy-Covariance Data, Boundary-Layer Meteorology, DOI: <https://doi.org/10.1007/s10546-014-9947-x>.

Participation in the activities of the European research project Horizon 2020 - ICOS-INWIRE (FP7 / 2007- 2013) (Grant Agreement 313169) dal 01-06-2013 al 31-12-2015. Published papers: Palatella L, Rana G, Vitale D (2014) Towards a Flux-Partitioning Procedure Based on The Direct Use of High-Frequency Eddy-Covariance Data, Boundary-Layer Meteorology, DOI: <https://doi.org/10.1007/s10546-014-9947-x>. Vitale D, Bilancia M, Papale D (2019) Modelling Random Uncertainty of Eddy Covariance Flux Measurements, Stochastic Environmental Research and Risk Assessment, 33(3): 725-746, DOI: <https://doi.org/10.1007/s00477-019-01664-4>. Vitale D, Bilancia M, Papale D (2018) A Multiple Imputation Strategy for Eddy Covariance Data, Journal of Environmental Informatics, DOI: <https://doi.org/10.3808/jei.201800391>.

Participation in the activities of the European research project H2020 ENVRIPPLUS (Grant Agreement 654182) dal 01-06-2017 al 31-05-2019. Published papers: Candela L, Stocker M, Haggstrom I, Enell C-F, Vitale D, Papale D, Grenier B, Chen Y, Obst M (2020) Case study: ENVRI science demonstrators with D4Science in Towards Interoperable Research Infrastructures for Environmental and Earth Sciences, Zhao Z, Hellstrom M (Eds), Springer International Publishing, ISBN 978-3-030-52829-4, DOI: <https://doi.org/10.1007/978-3-030-52829-4>. Vitale D, Fratini G, Bilancia M, Nicolini G, Sabbatini S, Papale D (2020) A robust data cleaning procedure for eddy covariance flux measurements, Biogeosciences, 17: 1367-1391, DOI: <https://doi.org/10.5194/bg-17-1367-2020>. Ariza-Carricondo C, Di Mauro F, Op de Beeck M, Roland M, Gielen B, Vitale D, Ceulemans R, Papale D (2019). A comparison of different methods for assessing leaf area index in four canopy types, Central European Forestry Journal, 65: 67-80, DOI: <https://doi.org/10.2478/forj-2019-0011>.

Participation in the activities of the European research projects H2020 RINGO (Grant Agreement 730944) and ENVRIFAIR (Grant Agreement 824068) from 01/09/2019 to date. Published papers: Vitale D (2021) A performance evaluation of despiking algorithms for eddy-covariance data, Scientific Reports, 11, 11628, <https://doi.org/10.1038/s41598-021-91002-y>.

Participation in the activities of the ICOS-RI (Integrated Carbon Observation System - Research Infrastructure) from 01-06-2013 to date. Published papers: Franz, D, Acosta, M, Altimir, N, Arriga N, Arrouays D, Aubinet M, ..., Vitale D, ..., Vesala T (2018) Towards long-term standardised carbon and greenhouse gas observations for monitoring Europe's terrestrial ecosystems: a review. International Agrophysics, 32(4), 439-455, DOI: <https://doi.org/10.1515/intag-2017-0039>. Sabbatini S, Mammarella I, Arriga N, Fratini G, Graf A, Hörtnagl L, Ibrom A, Longdoz B, Mauder M, Merbold L, Metzger S, Montagnani L, Pitacco A, Rebmann C, Sedlak P, Sigut L, Vitale D, Papale D (2018). Eddy covariance raw data processing for CO<sub>2</sub> and energy fluxes calculation at ICOS ecosystem stations. International Agrophysics, 32(4), 495-515, DOI: <https://doi.org/10.1515/intag-2017-0043>. Irvin J et al (2021) Gap filling Eddy-covariance methane fluxes: comparison of machine learnings model predictions and uncertainties at FLUXNET CH<sub>4</sub> wetlands. Agricultural and Forest Meteorology, 308-309, 108528, DOI: <https://doi.org/10.1016/j.agrformet.2021.108528>.

Participation in the activities of FLUXNET (<https://fluxnet.org>) from 01-06-2013 to date. Published papers: Pastorello G, et al. The FLUXNET2015 Dataset and the ONEFlux Processing Pipeline for Eddy Covariance Data, Scientific Data, 7(1): 225, ISSN: 2052-4463, DOI: <https://doi.org/10.1038/s41597-020-0534-3>. Valentini R, Arriga N, Beilelli L, Dore S, Manca G, Mazzenga F, Pegoraro E, Sabbatini S, Stefani P, Tirone G, Vitale D, Papale D (2000-2008) Fluxnet2015 IT-Ro1 Roccarespampani 1, Dataset. DOI: <https://doi.org/10.18140/FLX/1440174>.

## Publication list<sup>1</sup>

Irvin J, Zhou S, McNicol G, Lu F, Liu V, Fluet-Chouinard E, Ouyang Z, Knox SH, Lucas-Moffat A, Trotta C, Papale D, Vitale D, Mammarella I, Alekseychik P, Aurela M, Avati A, Baldocchi D, Bansal S, Bohrer G, Campbell DI, Chen J, Chu H, Dalmagro HJ, Delwiche KB, Desai AR, Euskirchen E, Feron S, Goeckede M, Heimann M, Helbig M, Helfter C, Hemes KS, Hirano T, Iwata H, Jurasinski G, Kalhori A, Kondrich A, Lai DYF, Lohila A, Malhotra A, Merbold L, Mitra B, Ng A, Nilsson MB, Noormets A, Peichl M, Rey-Sanchez AC, Richardson AD, Runkle BRK, Schäfer KVR, Sonntag O, Stuart-Haëntjens E, Sturtevant C, Ueyama M, Valach AC, Vargas R, Vourlitis GL, Ward EJ, Wong GX, Zona D, Alberto MCR, Billesbach DP, Celis G, Dolman H, Friborg T, Fuchs K, Gogo S, Gondwe MJ, Goodrich JP, Gottschalk P, Hörtnagl L, Jacotot A, Koebsch F, Kasak K, Maier R, Morin TH, Nemitz E, Oechel WC, Oikawa PY, Ono K, Sachs T, Sakabe A, Schuur EA, Shortt R, Sullivan RC, Szutu DJ, Tuittila E-S, Varlagin A, Verfaillie JG, Wille C, Windham-Myers L, Poulter B, Jackson RB (2021) Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH<sub>4</sub> wetlands, *Agricultural and Forest Meteorology* (IF 5.734), 308-309, 108528, DOI: <https://doi.org/10.1016/j.agrformet.2021.108528> (8 citations).

Vitale D (2021) A performance evaluation of despiking algorithms for eddy-covariance data. *Scientific Reports* (IF 4.379), 11, 11628, DOI: <https://doi.org/10.1038/s41598-021-91002-y>.

Leone N, Ancona V, Fragnito D, Vitale D, Bilancia M (2020) Geostatistical analysis of soil reflectance spectra for field-scale digital soil mapping. A case study. In: *Metodi e analisi statistiche*, Toma E, D'Ovidio F (a cura di) Dipartimento di Economia e Finanza, Università degli Studi di Bari Aldo Moro, pp. 95-118. ISBN: 978-88-6629-023-0.

Fragnito D, Leone N, Ancona V, Vitale D, Lucadamo A (2020) Comparison of different multivariate calibrations and ensemble methods for estimating selected soil properties with vis-NIR reflectance spectroscopy. In: *Metodi e analisi statistiche*, Toma E, D'Ovidio F (a cura di), Dipartimento di Economia e Finanza, Università degli Studi di Bari Aldo Moro, pp. 135-162, ISBN: 978-88-6629-023-0.

Pastorello G, et al. (more than 200 co-authors, 2020) The FLUXNET2015 Dataset and the ONEFlux Processing Pipeline for Eddy Covariance Data, *Scientific Data* (IF 6.101), 7:225, DOI: <https://doi.org/10.1038/s41597-020-0534-3> (264 citations).

Candela L, Stocker M, Haggstrom I, Enell C-F, Vitale D, Papale D, Grenier B, Chen Y, Obst M (2020) Case study: ENVRI science demonstrators with D4Science in Towards Interoperable Research Infrastructures for Environmental and Earth Sciences, Zhao Z, Hellstrom M (Eds), Springer International Publishing, ISBN 978-3-030-52829-4, DOI: <https://doi.org/10.1007/978-3-030-52829-4> (1 citation).

Vitale D, Fratini G, Bilancia M, Nicolini G, Sabbatini S, Papale D (2020) A robust data cleaning procedure for eddy covariance flux measurements, *Biogeosciences* (IF 4.295), 17: 1367-1391, DOI: <https://doi.org/10.5194/bg-17-1367-2020> (9 citations).

Perchinunno P, Bilancia M, Vitale D (2019) A Statistical Analysis of Factors Affecting Higher Education Dropouts, *Social Indicators Research* (IF 2.614), DOI: <https://doi.org/10.1007/s11205-019-02249-y> (13 citations).

Bilancia M, Perchinunno P, Vitale D (2019) A Monte Carlo Study on Learning Algorithms for Predicting Student Dropouts in Higher Education, in *Annali del Dipartimento Jonico in Sistemi Giuridici ed Economici del Mediterraneo: società, ambiente, culture*. Università degli Studi di Bari Aldo Moro. ISBN: 9788894281088.

Ariza-Carricondo C, Di Mauro F, Op de Beeck M, Roland M, Gielen B, Vitale D, Ceulemans R, Papale D (2019) A comparison of different methods for assessing leaf area index in four canopy types, *Central European Forestry Journal* (IF 1.682), 65: 67-80, DOI: <https://doi.org/10.2478/forj-2019-0011> (11 citations).

Fratini G, Sabbatini S, Ediger K, Riensche B, Burba G, Nicolini G, Vitale D, Papale D (2019) Characterization of Eddy Covariance flux errors due to data synchronization issues during data acquisition. In *proceedings of the European Geosciences Union - EGU - Geophysical Research Abstracts*, <https://ui.adsabs.harvard.edu/abs/2019EGUGA..21.5444F/abstract>.

Vitale D, Bilancia M, Papale D (2019) Modelling Random Uncertainty of Eddy Covariance Flux Measurements, *Stochastic Environmental Research and Risk Assessment* (IF 3.379), 33(3): 725-746, DOI: <https://doi.org/10.1007/s00477-019-01664-4>.

Vitale D, Bilancia M, Papale D (2018) A Multiple Imputation Strategy for Eddy Covariance Data, *Journal of Environmental Informatics* (IF 5.271), DOI: <https://doi.org/10.3808/jei.201800391> (16 citations).

Franz, D, Acosta, M, Altimir, N, Arriga N, Arrouays D, Aubinet M, ..., Vitale D, ..., Vesala T (2018) Towards long-term standardised carbon and greenhouse gas observations for monitoring Europe's terrestrial ecosystems: a review. *International Agrophysics* (IF 2.317), 32(4), 439-455, DOI: <https://doi.org/10.1515/intag-2017-0039> (48 citations).

Sabbatini S, Mammarella I, Arriga N, Fratini G, Graf A, Hörtnagl L, Ibrom A, Longdoz B, Mauder M, Merbold L, Metzger S, Montagnani L, Pitacco A, Rebmann C, Sedlak P, Sigut L, Vitale D, Papale D (2018). Eddy covariance raw data processing for CO<sub>2</sub> and energy fluxes calculation at ICOS ecosystem stations. *International Agrophysics* (IF 2.317), 32(4), 495-515, DOI: <https://doi.org/10.1515/intag-2017-0043> (43 citations).

<sup>1</sup> IF: 2021-2022 SCI Impact Factor. The number of citations reported for each publication is retrieved from Google Scholar.

- Fratini G, Sabbatini S, Ediger K, Riensche B, Burba G, Nicolini G, Vitale D, Papale D (2018). Eddy covariance flux errors due to random and systematic timing errors during data acquisition. *Biogeosciences* (IF 4.295), 15(17), 5473-5487, DOI: <https://doi.org/10.5194/bg-15-5473-2018> (3 citations).
- Vitale D, Fratini G, Nicolini G, Sabbatini S, Papale D (2018) Cleaning Eddy-Covariance flux data: development and performance evaluation of new quality control tests. In proceedings of the American Geophysical Union - AGU Fall Meeting 2018, 10-14 December 2018, Washington DC, USA, <http://adsabs.harvard.edu/abs/2018AGUFM.B33I2784V>.
- Fratini G, Sabbatini S, Ediger K, Riensche B, Burba G, Nicolini G, Vitale D, Papale D (2018) Eddy Covariance flux errors due to synchronization errors during data acquisition. In proceedings of the American Geophysical Union - AGU Fall Meeting 2018, 10-14 December 2018, Washington DC, USA, <https://ui.adsabs.harvard.edu/abs/2018AGUFM.B33I2786F/abstract>.
- Nicolini G, Fratini G, Mariotti A, Sabbatini S, Vitale D, Papale D (2018) Impact of CO2 Storage Flux Sampling Uncertainty on Net Ecosystem Exchange Measured by Eddy Covariance. In proceedings of the American Geophysical Union - AGU Fall Meeting 2018, 10-14 December 2018, Washington DC, USA, <http://adsabs.harvard.edu/abs/2018AGUFM.B33I2783N>.
- Sabbatini S, Fratini G, Nicolini G, Vitale D, Papale D (2018) Improving the Quality of Eddy Covariance Measurements from Data Collection to Data Processing. In proceedings of the American Geophysical Union - AGU Fall Meeting 2018, 10-14 December 2018, Washington DC, USA, <http://adsabs.harvard.edu/abs/2018AGUFM.B22C..07S>.
- Vitale D, Papale D (2017) Towards an integrated quality control procedure for eddy-covariance data. In proceedings of the European Geosciences Union - EGU - Geophysical Research Abstracts, Vol 19. ISSN:1607-7962, Wien, Austria, 23-28 April 2017, <https://ui.adsabs.harvard.edu/abs/2017EGUGA..1916089V/abstract> (1 citation).
- Hellstrom M, Vemeulen A, Mirzov O, Sabbatini S, Vitale D, Papale D, Tarniewicz J, Hazan L, Rivier L, Jones SD, Pfeil B, Johannessen T (2016) Near Real Time Data Processing in ICOS RI, in: Proceedings of 2nd International Workshop on Interoperable Infrastructures for Interdisciplinary Big Data Sciences (IT4RIs 16) in the context of IEEE Real-Time System Symposium (RTSS). Porto, December 2106, DOI: <https://doi.org/10.5281/zenodo.204817> (4 citations).
- Rana G, Ferrara RM, Vitale D, D'Andrea L, Palumbo AD (2016) Carbon Assimilation and Water Use Efficiency of a Perennial Bioenergy Crop (*Cynara Cardunculus* L.) in Mediterranean Environment, *Agricult Forest Meteorol* (IF 5.734), 217: 137-150, DOI: <https://doi.org/10.1016/j.agrformet.2015.11.025> (19 citations).
- Palatella L, Rana G, Vitale D (2014) Towards a Flux-Partitioning Procedure Based on The Direct Use of High-Frequency Eddy-Covariance Data, *Boundary-Layer Meteorology* (IF 2.949), DOI: <https://doi.org/10.1007/s10546-014-9947-x> (24 citations).
- Vitale D, Bilancia M (2013) Role of the Natural and Anthropogenic Radiative Forcings on Global Warnings: Evidence from Cointegration-VECM analysis, *Environmental and Ecological Statistics* (IF 1.119), 20(3): 413-444, DOI: <https://doi.org/10.1007/s10651-012-0226-z> (5 citations).
- Palatella L, Vitale D, Ventrella D, Rana G (2012) The Water Deficit and Aridity Indexes in the Capitanata Plain Calculated by Statistical Downscaling. *Italian Journal of Agronomy* (IF 2.3), 7(1): 13-18, eISSN 2039-6805. DOI: <https://doi.org/10.4081/ija.2012.e3>.
- Bilancia M and Vitale D (2012) Anthropogenic CO2 Emissions and Global Warming: Evidence from Granger Causality Analysis, in *Advanced Statistical Methods for the analysis of large data-sets, series Studies in Theoretical and Applied Statistics*, A Di Ciaccio, M Coli, JM Angulo eds, Springer, Berlin. ISBN 978-3-642-21036-5 (5 citations).
- Palumbo AD, Vitale D, Campi P, Mastrorilli M (2011) Time Trend in Reference Evapotranspiration: Analysis of a Long Series of Agrometeorological Measurements in Southern Italy, *Irrigation and Drainage Systems*, DOI: <https://doi.org/10.1007/s10795-012-9132-7> (27 citations).
- Mastrorilli M, Campi P, Palumbo AD, Vitale D (2011) Variabilità climatica e consumi irrigui nel Tavoliere di Puglia. In: *Le modificazioni climatiche e i rischi naturali*. Polemio M. (Ed), ISBN 9788890508806, CNR IRPI, Bari, 2011, pp 133-136.
- Vitale D, Rana G, Soldo P (2010) Trends and Extremes Analysis of Daily Weather Data from a site in the Capitanata Plain (Southern Italy), *Italian Journal of Agronomy* (IF 2.3), 5(2): 133-143, ISSN 1125-4718. DOI: [10.4081/ija.2010.133](https://doi.org/10.4081/ija.2010.133).
- Ventrella D, Giglio L, Charfeddine M, Palatella L, Pizzigalli C, Vitale D, Paradisi P, Miglietta M, Rana G (2010) Impact of climate change estimated through statistical downscaling on crop productivity and soil water balance in Southern Italy In 10th EMS Annual Meeting, 10th European Conference on Applications of Meteorology (ECAM) Abstracts, held Sept. 13-17, 2010 in Zürich, Switzerland. <https://meetingorganizer.copernicus.org/EMS2010/EMS2010-227.pdf>.
- Vitale D and Bilancia M (2009) Unit Roots, Granger Causality and Global Warming: Bridging the Gap between Econometric Theory and Climatology. In *Atti del Convegno Intermedio SIS2009, Statistical Methods for the Analysis of Large Data-Sets*, pp 547-550, Pescara, 23-25 September, Italy. ISBN: 978-88-6129-425-7.
- Bilancia M and Vitale D (2008) Granger Causality Analysis of Bivariate Climatic Time Series: a Note on the Role of CO2 Emissions in Global Climate Warming, in *Annals 2008 of the Department of Statistical Sciences "C. Cecchi"*, University of Bari, pp. 196-216. ISBN: 978-88-6129-335.

Palumbo AD, Vitale D, Campi P, Mastrorilli M (2008) Climate Change and Irrigation Water Consumption: a Case Study of the Olive and Tomato in Apulia, Italian Journal of Agronomy (IF 2.3), Vol. 3, No. 3 Supplement, July – September 2008, 10th Congress of the European Society for Agronomy 15-19 September 2008, Bologna, Italy, pp 693-694. ISSN 1125-4718.

Palumbo AD, Vitale D, Campi P, Mastrorilli M (2008) Variabilità climatica e consumi irrigui. Il caso-studio dell'olivo e del pomodoro nel Tavoliere di Puglia, It J Agrometeorology (IF 1.0), 11° Convegno nazionale di Agrometeorologia, San Michele all'Adige (TN), 10-12 Giugno 2008, pp 100-101. ISSN 1824-8705.

Ferrara M, Introna M, Martinelli N, Vitale D, Rana G (2008) Analisi comparata di metodi di stima dell'evapotraspirazione della barbabietola da zucchero e del pomodoro in ambiente semi-arido, It. J. Agrometeorology (IF 1.0), 11° Convegno nazionale di Agrometeorologia, S. Michele all'Adige (TN), 10-12 June 2008, pp 102-103. ISSN 1824-8705.

## Software development

Vitale D, Papale D, and ICOS-ETC Teams (2019) RFlux: An R Package for Processing and Cleaning Eddy Covariance Flux Measurements, <https://github.com/icos-etc/RFlux>

## Summary of Scientific Achievements

Total citations: Google Scholar: 534; Scopus: 424; WoS Publons: 348.

Hirsch (H) index: Google Scholar 10; Scopus: 8; WoS Publons: 7.

Bracciano, 21 Maggio 2022

Firma