

PERSONAL INFORMATION

Roberto Zorer

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Sex: Male Nationality: Italian



CURRENT POSITION

Senior Researcher

ADDITIONAL RELEVANT POSITIONS

National Scientific Qualification (ASN) 07/B2 - Arboriculture and Forest Systems
ASN 2016-2018 n. 102383, Associated Professor

RESEARCH FIELD (MAX 1000 characters space included)

My research interests focus on Landscape classification for viticulture and climate change scenarios, smart monitoring of phenology stages by means of low cost devices, eco-physiology, i.e. light microclimate and berry temperature as affected by row orientation in the vineyard, precision viticulture, Internet of Things, smart agriculture, plant physiology, Geographic Information Systems (GIS). Since January 2022 I'm working with the Digital Agriculture unit and I'm involved in prototyping activities related to automated monitoring of plant development (phenology) and to the assessment of new tools for early detection of plant water stress by using infrared temperature sensors, low cost dataloggers, and Long Range Wide Area Network (LoRaWAN) technologies for the data transmission.

WORK EXPERIENCE

2004 on

Full-time Researcher of the Autonomous Province of Trento

Affiliated with Fondazione Edmund Mach - Research and Innovation Centre Via E. Mach 1 - 38098 San Michele all'Adige (TN) Italy www.fmach.it

- Research activities and project management in precision viticulture, Internet of Things, smart agriculture, plant physiology, Geographic Information Systems (GIS), landscape classification for agriculture, prototyping

1998 - 2003

Contract Researcher

Centro di Ecologia Alpina, Viote del Monte Bondone (TN), Italy

- Research activities in ecophysiology and plant physiology

PERSONAL SKILLS

Mother tongue

Italian

Other languages

German (B2), English (B1)

ADDITIONAL INFORMATION

Publications and main indexes

Total number of publications in peer-review journals: 24
H-Index: 12
Scopus: <https://www.scopus.com/authid/detail.uri?authorId=25224281900>
ORCID: <http://orcid.org/0000-0003-3832-6033>

Relevant publications for the call (max 10)

- Hunter, J.J., Volschenk, C.G., Mania, E., Castro, A.V., Booyse, M., Guidoni, S., Pisciotta, A., Lorenzo, R.D., Novello, V., Zorer, R. (2021) Grapevine row orientation mediated temporal and cumulative microclimatic effects on grape berry temperature and composition. *Agricultural and Forest Meteorology*, 310, art. no. 108660. DOI: 10.1016/j.agrformet.2021.108660
- Kobus Hunter, J.J., Tarricone, L., Volschenk, C., Giacalone, C., Melo, M.S., Zorer, R. (2020) Grapevine physiological response to row orientation-induced spatial radiation and microclimate changes. *Oeno One*, 54 (2), pp. 411-433. DOI: 10.20870/OENO-ONE.2020.54.2.3100
- Zorer, R., Volschenk, C.G., Hunter, J.J. (2017) Integrating Geographic Information Systems and hemispherical photography in the assessment of canopy light profiles in a vineyard. *Agricultural and Forest Meteorology*, 232, pp. 672-681. DOI: 10.1016/j.agrformet.2016.09.011
- Hunter, J.J., Volschenk, C.G., Zorer, R. (2016) Vineyard row orientation of *Vitis vinifera* L. cv. Shiraz/101-14 Mgt: Climatic profiles and vine physiological status. *Agricultural and Forest Meteorology*, 228-229, pp. 104-119. DOI: 10.1016/j.agrformet.2016.06.013
- Eccel, E., Zollo, A.L., Mercogliano, P., Zorer, R. (2016) Simulations of quantitative shift in bio-climatic indices in the viticultural areas of Trentino (Italian Alps) by an open source R package. *Computers and Electronics in Agriculture*, 127, pp. 92-100. DOI: 10.1016/j.compag.2016.05.019
- Rocchini, D., Andreo, V., Förster, M., Garzon-Lopez, C.X., Gutierrez, A.P., Gillespie, T.W., Hauße, H.C., He, K.S., Kleinschmit, B., Mairota, P., Marcantonio, M., Metz, M., Nagendra, H., Pareeth, S., Ponti, L., Ricotta, C., Rizzoli, A., Schaab, G., Zebisch, M., Zorer, R., Neteler, M. (2015) Potential of remote sensing to predict species invasions: A modelling perspective. *Progress in Physical Geography*, 39 (3), pp. 283-309. DOI: 10.1177/0309133315574659
- Zorer, R., Rocchini, D., Metz, M., Delucchi, L., Zottele, F., Meggio, F., Neteler, M. (2013) Daily MODIS land surface temperature data for the analysis of the heat requirements of grapevine varieties. *IEEE Transactions on Geoscience and Remote Sensing*, 51 (4), art. no. 6392260, pp. 2128-2135. DOI: 10.1109/TGRS.2012.2226465
- Baluja, J., Diago, M.P., Balda, P., Zorer, R., Meggio, F., Morales, F., Tardaguila, J. (2012) Assessment of vineyard water status variability by thermal and multispectral imagery using an unmanned aerial vehicle (UAV). *Irrigation Science*, 30 (6), pp. 511-522. DOI: 10.1007/s00271-012-0382-9
- Marcolla, B., Cescatti, A., Manca, G., Zorer, R., Cavagna, M., Fiora, A., Gianelle, D., Rodeghiero, M., Sottocornola, M., Zampedri, R. (2011) Climatic controls and ecosystem responses drive the inter-annual variability of the net ecosystem exchange of an alpine meadow. *Agricultural and Forest Meteorology*, 151 (9), pp. 1233-1243. DOI: 10.1016/j.agrformet.2011.04.015
- Cescatti, A., Zorer, R. (2003) Structural acclimation and radiation regime of silver fir (*Abies alba* Mill.) shoots along a light gradient. *Plant, Cell and Environment*, 26 (3), pp. 429-442. DOI: 10.1046/j.1365-3040.2003.00974.x

Presentations at conferences

- Replace with relevant conferences

Main projects (last 5 years)

- 2019-2021 Consulting in viticulture within the PICA project, CAVIT sc
- 2018-2021 PEI-PSR Climate and Agriculture in Mountain Areas C&A 4.0
- 2018 - EIT Climate-KIC Pathfinder "PhenoPiCam"

Memberships and managerial activities

- Member of the Italian Horticultural Society
- Member of the Society of the Civic Museum of Rovereto