

LUCA BRILLANTE, ASS. PROFESSOR – BRONCO WINE CO. CHAIR

Department of Viticulture & Enology

Jordan College of Agricultural Sciences and Technology

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EXPERIENCE

Ass. Professor & Bronco Wine Co. Chair in Viticulture	08/2018-Present
California State University – Fresno, Dep. Viticulture and Enology	
Post-doctoral researcher	05/2016-08/2018
University of California – Davis, Dep. Viticulture and Enology	
Post-doctoral researcher	12/2014-04/2016
CREA (same as USDA-ARS in ITA) Viticulture Research Center, Conegliano, ITA	

RESEARCH INTERESTS

Precision Viticulture; Agricultural Systems; Plant Biophysics and Modeling; Plant and Fruit Physiology; Hyperspectral Imaging and Remote Sensing; Plant-Soil Relationships & Geophysics; Applied Machine-Learning & Space-Time Modeling

SELECTED PUBLICATIONS

1. Bonfante, A., **Brillante, L.**, *Terroir analysis and its complexity*. Oeno One, vol. 56, No. 2, doi: 10.20870/oenone.2022.56.2.5448
2. Yu, R., **Brillante, L.**, Torres, N., Kurtural, S.K. 2021, *Proximal sensing of vineyard soil and canopy vegetation for determining vineyard spatial variability in plant physiology and berry chemistry*. OENO One, vol. 55, No. 2, doi: 10.20870/oenone.2021.55.2.4598
3. Bois, B., Pauthier, B., **Brillante, L.**, Mathieu, O., Leveque, J., Van Leeuwen, C., Castel, T., Richard, Y. 2020. *Sensitivity of grapevine soil water balance to rainfall spatial variability at local scale level*. Frontiers in Environmental Science 8:110. doi: 10.3389/fenvs.2020.00110
4. Yu, R., **Brillante, L.**, Martinez-Lusher, J., Kurtural, S.K. 2020. *Spatial Variability of Soil and Plant Water Status and their Cascading Effects on Grapevine Physiology are linked to Berry and Wine Chemistry*, Frontiers in Plant Science, 11, 790
5. Martinez-Lusher, J., **Brillante, L.**, Kurtural, S. K. 2019. *Flavonol profile is a reliable indicator to assess canopy architecture and the exposure of red wine grapes to solar radiation*. Frontiers in Plant Science, doi.org/10.3389/fpls.2019.00010
6. **Brillante, L.**, Martinez-Luscher, J., Kurtural, S.K. 2018. *Applied water and mechanical canopy management affect berry and wine phenolic and aroma composition of grapevine (Vitis vinifera L., cv. Syrah) in Central California*. Scientia Horticulturae, 227(3), 261-271
7. **Brillante, L.**, Mathieu, O., Lévêque, J., Van Leeuwen, C., Bois, B. 2018. *Water status and must composition in grapevine cv. Chardonnay with different soils and topography and a mini meta-analysis of the $\delta^{13}C$ /water potential correlation*. Journal of the Science of Food and Agriculture, 98, 691-697
8. Martinez-Luscher, J., **Brillante, L.**, Nelson, C., Al-Kereamy, A.M., Zhuang, S., Kurtural, S. K. 2017. *Precipitation before bud break and irrigation affect the response of grapevine “Zinfandel” yields and berry skin composition to training systems*. Scientia Horticulturae, 227(3), 261-271
9. **Brillante, L.**, Martinez-Luscher, J., Yu, R., Plank, C., Sanchez, L.A., Bates, T., Brenneman, C., Oberholster, A., Kurtural, S.K. 2017. *Assessing spatial variability of grape skin*

- flavonoids at the vineyard scale based on plant water status mapping*. Journal of Agricultural and Food Chemistry, 65(49), 10693-10702.
10. **Brillante, L.**, Belfiore, B., Gaiotti, F., Lovat, L., Sansone, L., Poni, S., Tomasi, D. 2016 *Comparing kaolin and pinolene to improve sustainable grapevine production during drought*. PLoS One, 11(6). DOI: 10.1371/journal.pone.0156631
 11. **Brillante, L.**, Mathieu, O., Lévêque, J., Bois, B. 2016. *Ecophysiological modelling of grapevine water stress in Burgundy terroirs by a machine-learning approach*. Frontiers in Plant Science, 7(796). DOI: 10.3389/fpls.2016.00796
 12. **Brillante, L.**, Mathieu, O., Lévêque, J., Bois, B. 2016. *Variations in soil-water use by grapevine according to plant water status and soil physical-chemical characteristics. A 3D spatio-temporal analysis*. European Journal of Agronomy, 77:122-135
 13. **Brillante, L.**, Bois, B., Mathieu, O., Lévêque, J. 2016. *Electrical imaging of soil water availability to grapevine. A benchmark experiment of several machine-learning techniques*. Precision Agriculture, 17(6):637-658.
 14. **Brillante, L.**, Mathieu, O., Bois, B., Van Leeuwen, C., Lévêque, J. 2015. *The use of soil electrical resistivity to monitor plant and soil water relationships in vineyards*. Soil 1:273-286
 15. **Brillante, L.**, Bois, B., Mathieu, O., Bichet, V., Michot, D., Lévêque, J. 2014. *Monitoring soil volume wetness in heterogeneous soils by electrical resistivity. A field based pedo-transfer function*. Journal of Hydrology, 516:56-66

SCHOLARLY ACHIEVEMENTS

- 35 peer-reviewed publications on indexed scientific journals
- 35 conference publications
- 6 outreach publications
- 88 conference presentation (oral and posters)
- 60 outreach presentations
- 934 citations
- h-index: 17
- i10-index: 23

SYNERGISTIC ACTIVITIES

Associate Editor: OENO One – International Viticulture & Enology Society, since 2021;

Guest Associate Editor for Special issue: Biogeosciences and wine, the management and environmental processes that regulate the terroir effect in space and time. Frontiers in Environmental Sciences/Frontiers in Earth Sciences/Frontiers in Plant Sciences, 2020/2021;

Special Issue “Adaptations to Climate Change in Agricultural Systems”, Agronomy, 2021-2022

Review Editor in Plant Biophysics and Modelling on Frontiers in Plant Science

Technical Committee: Board of Directors, International Viticulture & Enology Society; Integrated production system, National Grape Research Alliance; Vintage Report Board of Advisors; Mentorship committee, American Society for Enology and Viticulture; Best Paper Award, American Society for Enology and Viticulture.

Grant Reviewer: LabExCote, USDA SBIR

Journal Reviewer: 59 ad-hoc peer-reviews

Conference Scientific Committee: International Terroir Congress, 15th-20th November 2020, Adelaide, Australia, XXIIInd International Conference GiESCO, Ithaca, NY, July 2023; IInd ISHS-PMVO Precision Management of Vineyards and Orchards, December 2023

Graduate Coordinator: Master of Science in Viticulture and Enology, CSU Fresno since 2018