

# LUCA BRILLANTE, PH. D.

Asst. Professor & Bronco Chair for Viticulture Research

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## EXPERIENCE

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<b>Asst - Professor &amp; Bronco Chair for Viticulture Research</b> California State University – Fresno, Dep. Viticulture and Enology	08/2018-Present
<b>Post-doctoral researcher</b> University of California - Davis Dep. Viticulture and Enology	05/2016-08/2018
<b>Post-doctoral researcher</b> CREA (same as USDA-ARS in ITA) Viticulture Research Center	12/2014-04/2016
<b>Engineer of Studies</b> University of Burgundy – Dijon, FR	02/2014-09/2014
<b>Ph.D. Student</b> University of Burgundy – Dijon, FR	01/2011-12/2013
<b>Viticulture and Enology Intern</b> Chateau Mouton-Rothschild, 1 <sup>st</sup> Growth Bordeaux, FR	04/2010- 12/2010
<b>Viticulture and Enology Intern</b> Cave Les vins de Sylla, Apt – FR	08/2009-11/2009

## EDUCATION

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<b>PhD</b> Earth Science/Viticulture University of Burgundy	2014
<b>MS</b> Bordeaux Sciences-Agro/Montpellier SupAgro, FR, Viticulture and Enology	2010
<b>MS</b> University of Torino, ITA, Viticulture and Enology 2010, Summa cum laude	
<b>BS</b> University of Bari, ITA, Agricultural Sciences and Technology, Magna cum laude	2008

## HONORS AND AWARDS

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<b>\$90,560 Daou Vineyards - PI</b> Ecophysiological characterization of Daou Mountain terroir for site-specific management	2019/2022
<b>\$52,000 CSU – Agriculture Research Initiative - PI</b> Autonomous predictions of vineyard yield at the block level through machine-learning modeling of remote-sensing and historical data	2019/2021
<b>\$23,000 American Vineyard Foundation – PI</b> Project: Physiological responses of grapevine to salt stress and remediation by CaSO <sub>4</sub> amendments in Central Valley of California	2019/2020
<b>\$ 191,250 American Vineyard Foundation – Co-PI</b> Project: Assessing rootstock biology and water uptake through proximal sensing under different wetting/drying conditions.	2017/18-2018/19

<b>\$99,000 BIVB</b>	2011/2014
Ph.D. salary founded by the Office for Burgundy Wines (Bureau Interprofessionnel Vin de Bourgogne)	
<b>\$7,200 Erasmus</b>	2009
European grant for student mobility	
<b>\$4,200 French-Italian University</b>	2009
French-Italian grant for student mobility	

## TEACHING

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California State University – Fresno, Department of Viticulture and Enology	
General Viticulture, VIT101 –	2018/19-Present
Mechanized Viticulture, VIT 160	2018/19-Present
Data analysis and predictive modeling with R, VEN 250T	2018/2019
University of Burgundy, Dijon, FR	
103 teaching hours as teaching assistant in viticulture, agronomy, climatology, soil science, plant pathology, statistical analysis, geophysics, hydrology	2011-2014

I supervised 7 graduate students at UC Davis, 11 undergraduate and 2 graduate students at the University of Burgundy

## ACADEMIC SERVICE

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California State University Fresno:	
Graduate Students coordinator, M.S. Viticulture and Enology	2018 – Present
University Agricultural Laboratory Committee	2018 - Present

## PROFESSIONAL ACTIVITY

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### *Peer-Reviewed Publications on Indexed Scientific Journals*

1. Martinez-Lusher, J., Plank, C. M., **Brillante, L.**, Yu, R., AlRwahnih, M., Cooper, M. L., Smith, R., Girardello, R., Oberholster, A., Kurtural, S. K. *Grapevine red blotch virus may reduce carbon translocation leading to impaired grape berry ripening*. Journal of Agricultural and Food Chemistry, In press, doi: 10.1021/acs.jafc.8b05555
2. 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
3. **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
4. **Brillante, L.**, De Rosso, M., Dalla Vedova, A., Maoz, I., Flamini, R., Tomasi, D. 2018. *Insights on the stilbenes in Raboso Piave grape (Vitis vinifera L.) as a consequence of postharvest vs on-vine dehydration*. Journal of Agricultural and Food Science
5. **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  $\delta^{13}\text{C}$  /water potential correlation. *Journal of the Science of Food and Agriculture*, 98, 691-697
6. 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
  7. Martinez-Luscher, J., Chen, C.C., **Brillante, L.**, Kurtural, S. K. 2017. *Partial solar radiation exclusion with color shade nets reduces the degradation of organic acids and flavonoids of grape berry (Vitis vinifera L.)*. 2017. *Journal of Agricultural and Food Chemistry*, 65(49), 10693-10702
  8. **Brillante, L.**, Martinez-Luscher, J., Yu, R., Plank, C., Sanchez, L.A., Bates, T., Breneman, 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.
  9. **Brillante, L.**, Gaiotti, F., Lovat, L., Giacosa, S., Rio-Segade, S., Vincenzi, S., Torchio, F., Rolle, L., Tomasi, D. 2016. *Changes in texture analysis parameters of wine grape berries at two ripeness stages: a study on varietal effect*. *Italian Journal of Food Science*, 29(2). DOI:10.14674/1120-1770/ijfs.v623
  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., L  v  que, 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., L  v  que, 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., L  v  que, 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.**, Tomasi, D., Gaiotti, F., Giacosa, S., Torchio, F., Rio-Segade, S., Siret, R., Zouid, I., Rolle, L. 2015. *Relationships between skin flavonoid content and berry physical-mechanical properties in four red wine grape cultivars (Vitis vinifera L.)*. *Scientia Horticulturae*, 197:272-279
  15. **Brillante, L.**, Gaiotti, F., Lovat, L., Vincenzi, S., Giacosa, S., Torchio, F., Rio-Segade, S., Rolle, L., Tomasi, D. 2015. *Investigating the use of gradient boosting machine, random forest and their ensemble to predict skin flavonoid content from berry physical-mechanical characteristics in wine grapes*. *Computers and Electronics in Agriculture*, 117:186-193
  16. **Brillante, L.**, Mathieu, O., Bois, B., Van Leeuwen, C., L  v  que, J. 2015. *The use of soil electrical resistivity to monitor plant and soil water relationships in vineyards*. *Soil* 1:273-286
  17. **Brillante, L.**, Bois, B., Mathieu, O., Bichet, V., Michot, D., L  v  que, J. 2014. *Monitoring soil volume wetness in heterogeneous soils by electrical resistivity. A field based pedo-transfer function*. *Journal of Hydrology*, 516:56-66

### **Outreach publications:**

1. **Brillante, L.** Introducing  $\delta^{13}\text{C}$ : biochemical datalogger. Measuring water status during the ripening. American Vineyard Magazine, 2019/01.

### **Scientific Conferences:**

#### International conferences with peer-reviewed proceedings

1. **Keynote talk: Brillante, L.**, Mathieu, O., Lévêque, J., Bois, B. 2014. *Spatio-temporal analysis of grapevine water behaviour in hillslope vineyards. The example of Corton Hill, Burgundy* Proceedings of the X International Terroir Congress, Tokaj, HU
2. **Brillante, L.**, Bois, B., Mathieu, O., Lévêque, J. *Soil moisture dynamic in the root-zone revealed by time-lapse electrical resistivity tomography. Application to Corton Hill, Burgundy (France)*. 2012. Proceedings of the IX International Terroir Congress, Dijon-Reims, FR
3. **Brillante, L.**, Mathieu, O., Lévêque, J., Bois, B. *Plant-soil water relationships in a hillslope vineyard. A time-lapse ERT 2D monitoring*. 2013. Proceedings of the 18th International Symposium GiESCO, Porto, PT
4. **Brillante, L.**, Mathieu, O., Lévêque, J., Van Leeuwen, C., Bois B. *Spatio-temporal visualisation and quantification of grapevine water absorption in hillslope vineyards*. 2015 Proceedings of the 19th International Symposium GiESCO, Montpellier, FR
5. Decharerie, M., **Brillante, L.**, Michelin, F., Alexandre, H., Ballester, J., [...], Peyron, D., Gougeon, R. D., Monamy, C., Bois, B. 2015 *Response of Chardonnay B. grapevines to weak to moderate water deficit: vine growth and must composition* Proceedings of the 19th International Symposium GiESCO, Montpellier, FR
6. **Brillante, L.**, Mathieu, O., Lévêque, J., Bois, B. 2015. *Ecophysiological modelling of Burgundy wine terroirs. Effect of climate and soil on plant water stress and fruit composition*. Proceedings of the 19th International Symposium GiESCO, Montpellier, FR
7. Pauthier, B., **Brillante, L.**, Van Leeuwen, C., Bois, B. 2016. *Water status modelling: impact of local rainfall variability in Burgundy* Proceedings of the XI International Terroir Congress, Willamette Valley, OR, USA
8. **Brillante, L.**, Mathieu, O., Lévêque, J., Van Leeuwen, C., Bois, B. *Soil and topography effects on water status and must composition of Chardonnay in Burgundy & a mini-meta-analysis of the  $\delta^{13}\text{C}$ /water potentials correlation*, Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
9. Martínez-Luscher, J., Cuntty, C., **Brillante, L.**, Yu, R., Gambetta, G., Kurtural, S.K. *Utility of leaf removal timing and irrigation amounts on grape berry flavonoids under climate change*. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
10. Martínez-Luscher, J., **Brillante, L.**, Kurtural, S.K. *Changes in flavonol profile are a reliable indicator to assess the exposure of red grapes to solar radiation, cluster temperature gain and canopy architecture* Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019

International conferences with published abstracts/proceedings:

- **Brillante, L.,** Mathieu, O., Lévêque, J., Bois, B. 2014. *Spatio-temporal effects of soil and bedrock variability on grapevine water status in hillslope vineyards* Geophysical Research Abstracts Vol. 16, EGU2014-14577, 2014 EGU General Assembly 2014
- **Brillante, L.,** Mathieu, O., Lévêque, J., Bois, B. 2015. *Grapevine water absorption in different soils. A spatio-temporal analysis.* Geophysical Research Abstracts Vol. 17, EGU2015-14423, 2015 EGU General Assembly 2015
- **Brillante, L.,** Bonfante, O., Priori, S. 2019 *Site-specific management in viticulture across space and time: from plant-environment interactions to the end product* Geophysical Research Abstracts Vol. 21, EGU2019-19141, 2019 EGU General Assembly 2019
- **Brillante L.,** Walker, M.A., McElrone, A., Kurtural, S.K. Rootstock differences in soil-water uptake during drying wetting cycles imaged with 3D electrical resistivity tomography, Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
- **Brillante, L.,** Yu, R., Martinez-Lusher, J., Kurtural, S. Kaan. Statewide relationships between water potentials, Gas Exchange and  $\delta^{13}\text{C}$  of grape musts in California. Implications for use in precision viticulture. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
- **Brillante, L.,** Sanchez, L., Martinez-Lusher, J., Yu, R., Kurtural, S.K. Mapping plant water status to indirectly assess variability in grape flavonoids and inform selective harvest decisions. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
- **Brillante, L.,** Martinez-Lusher, J., Kurtural, S. K. Deficit irrigation and mechanical canopy management affect berry and wine phenolic and aroma composition of Syrah in Central California. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
- Yu, R., **Brillante, L.,** Martinez-Lusher, J., Kurtural, S. K. Soil proximal sensing provides direction in delineating plant water status of ‘Crimson Seedless’ (*Vitis vinifera*, L.) vineyards. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019
- Yu, R., **Brillante, L.,** Martinez-Lusher, J., Sanchez, L., Kurtural, S. K. From plant water status to wine flavonoid composition: a precision viticulture approach in a Sonoma county vineyard. Proceedings of the 21<sup>st</sup> GiESCO International Meeting, Thessaloniki, GR, June 23-28, 2019

International conferences:

- **Brillante, L.,** Flamini, R., De Rosso, M., Dalla Vedova, A., Giacosa, S., Rolle, L., Tomasi, D. 2016. On-vine vs warehouse dehydration of Corvina wine grapes. Differences in metabolomic and texture evolution with time. 10th International Symposium on Grapevine Physiology and Biotechnology, Verona, IT (talk)

National conferences with peer-reviewed proceedings:

- **Brillante, L.,** Gaiotti, F., Lovat, L., Vincenzi, S., Giacosa, S., Torchio, F., Rio Segade, S., Rolle, L., Siret, R., Zouid, I., Tomasi, D. 2016. *Predire la quantita' di flavonoidi totali nella buccia utilizzando le proprieta' fisico-meccaniche dell'acino di uva da vino.* Acta Italus Hortus 19:105-106

- **Brillante, L.**, Belfiore, N., Gaiotti, F., Lovat, L., Sansone, L., Poni, S., Tomasi, D. 2016. *Confronto tra caolino e pinolene per il miglioramento della produzione viticola sostenibile in condizioni di stress idrico*. Acta Italus Hortus 19:33-34

National conferences:

- **Brillante, L.**, Bois, B., Mathieu, O., Lévêque, J. *Utilisation de la tomographie électrique pour l'analyse des sols et des sous-sols des climats de Bourgogne*. Journée Pari DINOS, Dijon, FR, 2011.
- **Brillante, L.**, Kurtural, K., Sanchez, L., Yu, R., Oberholster, A., Brennaman, C., Bates, T. *Assessing variability in the vineyard through a spatially explicit selective harvest approach*. 68<sup>th</sup> ASEV National Conference, Bellevue, WA, USA, June 26-29 2017
- Yu, R., **Brillante, L.**, Martinez-Lusher, J., Plank, C., Chen, C., Sanchez, L., Bates, T., Sams, B., Kurtural, S. K. *Proximal sensing and stratified sampling in vineyards provide directions in coalescing vineyard variability*. 68<sup>th</sup> ASEV National Conference, Bellevue, WA, USA, June 26-29 2017
- Martinez-Lusher, J., Chen, C. C., **Brillante, L.**, Kurtural S. K. *Partial solar radiation exclusion with color shade cloths may improve red wine grape composition*. 68<sup>th</sup> ASEV National Conference, Bellevue, WA, USA, June 26-29 2017
- Kurtural, S.K., Nelson, C., **Brillante, L.**, Zhuang, S. *Production systems and applied water amounts interact on productivity and berry composition of Zinfandel*. 68<sup>th</sup> ASEV National Conference, Bellevue, WA, USA, June 26-29 2017
- **Brillante, L.**, Martinez-Lusher, J., Yu, R., Smith, R., Bates, T. L., Kurtural S. K. *Assessing variability in the vineyard through a spatially explicit selective harvest approach based on plant water status mapping*. American Society for Horticultural Sciences Annual Conferences 2017, Kona-Hi, WA, US
- Martinez-Lusher, J., Pierce M. A., **Brillante, L.**, Kurtural, S.K. *Grape ripening through source-sink ratio manipulation*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- Martinez-Lusher, J., **Brillante, L.**, Kurtural, S.K. *Changes in grape flavonoid composition driven by exposure to solar radiation: new view on an old topic*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- **Brillante, L.**, Martinez-Lusher, J., Yu, R., Kurtural, S.K. *Assessing spatial variability of grape skin flavonoids at the vineyard scale based on plant water status mapping*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- **Brillante, L.**, Cheng, W.C., Walker, A., McElrone, A., Kurtural, S. K. *Differences in spatial water uptake by rootstocks 110R and 101-14Mg revealed by multidimensional ERT*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- **Brillante, L.**, Yu, R., Martinez-Lusher, J., Kurtural, S.K.  *$\delta^{13}C$  in sugars as a proxy for photosynthesis and water stress in precision viticulture: a statewide study in California*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- Chen, C., Martinez-Lusher, J., **Brillante, L.**, S.K. Kurtural. *Partial solar radiation exclusion, not applied water amount, mitigates grape berry flavonoid concentration*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- Pierce, M.A., Cuntly, C., Martinez-Lusher, J., **Brillante, L.**, Kurtural, S.K. *Applied water amount, not timing of leaf removal, alters grapevine berry flavonoid content in Cabernet Sauvignon*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019

- Yu, R., **Brillante, L.**, Martinez-Lusher, J., Sanchez, L., Kurtural, S. K. *From plant water status to wine flavonoid composition: a precision viticulture approach in a Sonoma County vineyard*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- Yu, R., **Brillante, L.**, Martinez-Lusher, J., Sanchez, L., Kurtural, S. K. *Proximal soil sensing for vineyard management in Crimson Seedless table grape*. 69<sup>th</sup> ASEV National Conference, Monterey, CA, USA, June 18-21 2019
- Ramagli, M., **Brillante, L.** *Meta-analysis of plant water relations in California vineyards* 70<sup>th</sup> ASEV National Conference, Napa, CA, USA, June 17-20 2019
- Drake, C., Ramagli, M., Chou, M-Y, **Brillante, L.**, Shrestha, A. *Potential Use of Remote Sensing in Vineyard Weed Management*, 70<sup>th</sup> ASEV National Conference, Napa, CA, USA, June 17-20 2019
- **Brillante, L.**, Mathieu, O., Leveque, J., van Leeuwen C., Bois, B. *Effects of soil and topography on water status of chardonnay and meta-analysis of the  $\delta^{13}C$ /water potentials correlation*. 70<sup>th</sup> ASEV National Conference, Napa, CA, USA, June 17-20 2019
- **Brillante, L.** *Autonomous predictions of vineyard yield through machine-learning modelling of remote-sensing and historical data*. 70<sup>th</sup> ASEV National Conference, Napa, CA, USA, June 17-20 2019
- Martínez-Luscher, J., **Brillante, L.**, Kurtural, S.K *Flavonol profile of red grape (*Vitis vinifera* L.) berries is a reliable indicator to assess their exposure to solar radiation and study changes in their composition*. American Society for Horticultural Sciences Annual Conferences 2019, Las Vegas, NV

State conferences:

- Drake, C., **Brillante, L.**, Chou, M-Y, Shrestha, A. *Potential Use of Remote Sensing in Vineyard Weed Management*, California Plant and Soil Conference, February, 5-6 2019, Fresno
- Drake, C., **Brillante, L.**, Chou, M-Y, Shrestha, A. *Potential Use of Remote Sensing in Vineyard Weed Management*, 71<sup>st</sup> Annual Meeting of the California Weed Science Society, January, 23-26 2019, Sacramento

***Invited talks:***

- 2013. Variabilite' spatio-temporelle du regime hydrique de la vigne en situation de coteau. Association Terroir de Corton, Burgundy, France
- 2016. Principles of vineyard mechanization. UC Davis on the Road, Madera, CA
- 2016. The use of soil electrical resistivity to monitor plant and soil water relationships in vineyard. Oakville Seminars Series, UC Davis, Oakville, CA
- 2017. Assessing spatial variability in the vineyard through a spatially explicit selective harvest approach. A case study in Sonoma. Recent Advances in Viticulture and Enology, UC Davis, Davis, CA
- 2017. Assessing spatial variability in the vineyard through a spatially explicit selective harvest approach. A case study in Sonoma. Sonoma Fruition Vintage Conference, Santa Rosa, CA
- 2017. From site-specific relationship to variable rate management in precision viticulture. Napa Fruition Vintage Conference, Napa, CA

- 2017. Assessing spatial variability in the vineyard through a spatially explicit selective harvest approach. A case study in Sonoma. Sonoma Grape days, Santa Rosa, CA
- 2017. Terrain and Water-Status Modeling in Vineyards. Current issue in harvest logistic, UC Davis, Oakville, CA
- 2017. New tools to assess water status in the vineyard. Oakville Seminars Series, UC Davis, Oakville CA
- 2017. Introduction to precision viticulture. Central Coast Grapevine Physiology Seminar, UC Davis, San Luis Obispo, CA
- 2017. The use of kaolin to improve sustainable grapevine production during drought. Central Coast Grapevine Physiology Seminar, UC Davis, San Luis Obispo, CA
- 2017. Introduction to precision viticulture. Pete Christensen Short Course, UC Davis, CA
- 2017. La viticoltura di precisione nella prospettiva americana. Innovazione in campo: soluzioni tecnologiche per il futuro dell'agricoltura salentina, Coldiretti Lecce, Lecce, IT
- 2018. The use of soil electrical resistivity to monitor plant and soil water relationships in vineyards. Current Advances in Viticulture Research, UC Davis, Davis, CA
- 2018. Principles of vineyard mechanization. Sonoma grape days, Santa Rosa, CA
- 2018. Grapevine mechanical canopy management in SJV. Tree and Vine Expo, Turlock, CA
- 2018. Grapevine red blotch alters berry ripening of Cabernet Sauvignon. Central Coast Grape Expo, Paso Robles, CA
- 2019. Vineyard Mechanization demo. Mechanical pruning.
- 2019. Vineyard Mechanization demo. Mechanical desuckering and cultivation.
- 2019. Vineyard Mechanization demo. Leaf removal.
- 2019. Environmental variability affect grapevine composition and yield: experiences of monitoring and management in Paso vineyards. Vintage Report Paso Robles
- 2019. Site-selection and pre-plant amendments. UC Davis and UC ANR Wine Grape Short Course, Napa, February 13, 2019
- 2019 Rootstock Differences in Soil-Water Uptake During Drying-Wetting Cycles Imaged with 3D Electrical Resistivity Tomography, Current Wine and Wine Grape Research, UC Davis, February 27, 2019
- 2019. Plant-soil water relationships in vineyards. Southern Oregon Grape Symposium, Medford, Oregon State 2018, March 12, 2019
- 2019. It's Hot! How Central Coast leaders are adapting to raising temperatures. WiVi Central Coast, Paso Robles, March 13, 2019
- 2019. Effects of sun radiation and temperature on grape composition. Implications for vineyard management. Vintage Report Sonoma 2018, March 22, 2019
- 2019. Site-specific management in viticulture. Innovating tradition. Research that will change the way you are making wine. Wine Business Innovation + Quality, Napa, May 22, 2019
- 2019 Esperienze di ricerca e gestione degli stress climatici nei vigneti californiani. In : Cambiamenti climatici e viticoltura : stato dell'arte in regione Campania e prospettive di adattamento – National Research Council, CNR-ISAFOM, Naples, IT, July, 2<sup>nd</sup> 2019
- 2019. Precision viticulture and implementation of variable rate and site-specific management approaches, 20<sup>th</sup> Annual Sustainable Winegrowing Field Day, July 26<sup>th</sup> 2019



***Organizational efforts (events and activities organized):***

- Fresno-State and E&J Gallo Vineyard Mechanization Series. Part 1. Mechanical pruning. January 24, 2019
- Fresno-State and E &J Gallo Vineyard Mechanization Series. Part 2. Mechanical desuckering and cultivation. April 11, 2019
- Fresno-State and E &J Gallo Vineyard Mechanization Series. Part 3. Mechanical leaf removal. May 21, 2019
- Sprayer Calibration – with P. Ako Larbi UC ANR
- Vinifera Euro-Master – Seminar to Student - V. Novello and E. Peterlunger

***Academic and Instructional Activities:***

- Graduate Program Coordinator – Program restarted
- Fresno State DiscoverE program. *Professional Development in Active Learning. DiscoverE program.* May 20 to May 24, 2019
- Center for Faculty Excellence professional Development in Open Educational Resources (OER). May 29, 2019.
- Division of Research and Graduate Studies *Compliance, Integrity and Good Research Practices* workshop, on September 10, 2018.
- Division of Research and Graduate Studies - Research and Sponsored Programs' *GrantLaunch* workshop, on September 5, 2018.
- Division of Research and Graduate Studies - Research and Sponsored Programs' *US Department of Agriculture (USDA)* workshop, on September 13, 2018.
- Division of Research and Graduate Studies - Research and Sponsored Programs' *Serving Community Needs - Contracts & Other Partnerships* workshop September 18, 2018
- Division of Research and Graduate Studies - Research and Sponsored Programs' *How to Develop Budgets* workshop, on September 24, 2018.
- Dean of Jordan College of Agricultural Resources and Technology – *Jordan College 101* 2018/19
- Division of Research and Graduate Studies and the Center for Faculty Excellence at CSU Fresno – *Completion of the Grantsmanship program.*

***Academic Service:***

Graduate Coordinator – Master of Science in Viticulture and Enology, CSU Fresno (2018-ongoing)

Committee member: University Agricultural Laboratory, CSU Fresno (2018/2019)

***Scientific Service:***

- Guest 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*
- Review Editor in *Plant Biophysics and Modelling* on *Frontiers in Plant Science*
- 41 peer-reviews on 17 different journals: *Precision Agriculture, Sensors, International Journal of Machine Learning and Cybernetic, Computers and electronics in Agriculture, Frontiers in Plant Science, Hydrology and Earth System Sciences, Plos One, Scientia Horticulturae, Soil, Agronomy, Arabian Journal of Geosciences, Food Quality and Preference, Horticulturæ, Functional Plant Biology, American Journal of Enology and Viticulture, Remote Sensing of Environment, International Journal of Molecular Sciences*
- Certificate of Outstanding Contribution in Reviewing. *Scientia Horticulturæ*. November 2016.

***Industry service:***

- Fresno State – EJ Gallo Vineyard Mechanization Demo Series: Mechanical Pruning, January 24, 2019
- Fresno State – EJ Gallo Mechanization Demo Series: Suckering and Cultivation, April 11, 2019
- Fresno State – EJ Gallo Mechanization Demo Series: Mechanical Leaf Removal, May 2, 2019

***Community service:***

- Huron Elementary School Career Day: 3rd-5th graders, Huron, CA, April 12, 2019
- Future Farmers of America, High School Vine judging contest, April 13, 2019
- Sons In Retirement – Monthly meeting - July 25, 2019

***Academy Memberships:***

- GiESCO, Group of International Experts of Vitivinicultural Systems for Cooperation
- American Society for Enology and Viticulture
- European Geoscience Union
- International Society for Horticultural Sciences
- SOI, Italian Society of Horticulture (Societa' di Ortoflorofrutticoltura Italiana)

***Media Coverage:***

- Fresno State appoints new faculty for its Department of Viticulture and Enology, *Wine Business Monthly*, August, 09<sup>th</sup>, 2018
- Smoke taint and site-specificity hot topics at *Wine Business IQ*. by Jess Lander on *SevenFiftyDaily* May 24<sup>th</sup>, 2019
- Recent study shows all around benefits of mechanized vineyard canopy management. *California Ag Network and the American Vineyard Magazine*, July 2019