21th July (Wednesday)

Plenary - Red Room

Time	Session
9:00 – 11:00	Session 3 - Topic 03/1: Precision Viticulture - Chair: tbc.
9:00 – 9:20	**L. Pichon**, O. Bopp, B. Tisseyre:Characterising within field variability of vine water status with visual observations of shoot-tip
9:20 – 9:40	**M. Sozzi**, A. Cogato, D. Boscaro, A. Kayad, D. Tomasi, F. Marinello:On-field validation of a novel optoelectronic device for grape quality analysis
9:40 – 10:00	**C. Laurent**, E. Fornieles Lopez, F. Rançon, T. Scholasch, A. Metay, J. Taylor, B. Tisseyre:Is it relevant to account for grapevine phenology in time series of satellite images?
10:00 – 10:20	F. Palacios, P. Melo-Pinto, M.P. Diago, R. Iñiguez, **J. Tardaguila**:Assessing number of berries in grapevines using linear methods and machine learning
10:20 – 10:40	P. Guadagna, T. Frioni, F. Chen, A. Incerti Delmonte, T. Teng, M.I. Ferreira Fernandes, A. Scaldaferri, C. Semini, S. Poni, **M. Gatti**:Fine-tuning and testing of a pre-trained DNN for detecting pruning regions of spur-pruned grapevines
10:40 – 11:00	**M. Rodríguez-Fernández**, M. Fandiño, X.P. González, J.J. Cancela:Relationship between foliar composition and the vigor of vineyards in D.O.Rías Baixas-Spain
11:00 – 11:30	**Coffee break**
11:30 – 13:00	Keynote - In plenary (RED room)
11:30 – 12:00	Dimitros Moshou
12:00 – 12:30	Bruno Tisseyre and James Taylor
12:30 – 13:00	Simon Pearson
13:00 – 14:00	**Lunch**
14:00 – 16:00	Session 4 - Topic 03/2: Precision Viticulture - Chair: tbc.
14:00 – 14:20	**M. Sozzi**, S. Cantalamessa, A. Cogato, A. Kayad, F. Marinello:Grape yield spatial variability assessment using YOLOv4 object detection algorithm
14:20 – 14:40	**A. Kasimati**, A. Kalogrias, V. Psiroukis, K. Grivakis, J.A. Taylor, S. Fountas:Are all NDVI maps created equal? - Comparing vineyard NDVI data from Proximal and Remote Sensing
14:40 – 15:00	**A. Matese**, A. Berton, S.F. Di Gennaro, M. Gatti, C. Squeri, S. Poni:Testing performance of UAV-based hyperspectral imagery in viticulture
15:00 – 15:20	**S.F. Di Gennaro**, G. Agati, A. Berton, L. Cavigli, L. Fabbrini, R. Perria, P. Storchi, L. Tuccio, A. Zombardo, A. Matese:Rapid and non-destructive phenolic maturity assessment in vineyard from RGB imagery acquired by UAV
15:20 – 15:40	**V. Oršulová**, A. Šupčík:Monitoring of temporal and spatial variability of climate parameters and their impact on vineyards
15:40 – 16:00	
16:00 – 16:30	**Coffee break**

Room1 - White Room

Time	Session
9:00 – 11:00	Session 3 - Topic 18, 24: Economics of Precision Agriculture,Decision support for Precision Agiculture - Chair: tbc.
9:00 – 9:20	**A.J. Murdoch**, L. Todman, S. Mahmood, J. Petri, T. Engel, M. Karampoiki, D. Paraforos, S. Antognelli, D. Guidotti, E. Ranieri:Predicting the probability that higher profits could be achieved by adopting PA
9:20 – 9:40	**C. Kempenaar**, T.H. Been, F.K. Van Evert, I.E. Hoving, G.J.T. Kessel, W. Dantuma, J.A. Booij, L.P.G. Molendijk, F.D. Sijbrandij1, K. Van Boheemen:Decision support in the open service platform Akkerweb for precision agriculture
9:40 – 10:00	**E. Memic**, G. Röll, D. Reiser, S. Graeff-Hönninger:Using satellite image based in-season crop vegetation index for improving crop model yield estimates
10:00 – 10:20	**M. Söderström**, K. Piikki, H. Stadig:Yield maps for everyone - scaling drone models to satellite-based decision support
10:20 – 10:40	**F.K. Van Evert**, H.N.C. Berghuijs, I.E. Hoving, A.J.W. De Wit, T.H. Been:A digital twin for arable and dairy farming
10:40 – 11:00	**H. Zha**, Y. Miao, J. Lu, K. Kusnierek, W. Batchelor:In-season Calibration of CERES-Rice Model using Proximal Active Canopy Sensing
11:00 – 11:30	**Coffee break**
11:30 – 13:00	Keynote - In plenary (RED room)
11:30 – 12:00	
12:00 – 12:30	
12:30 – 13:00	
13:00 – 14:00	**Lunch**
14:00 – 16:00	Session 4 - Topic 17: Robotics, Guidance and Automation - Chair: tbc.
14:00 – 14:20	**F. Abdelghafour**, F. Rançon, S. Liu, J. Champ, V. De Rudnicki, C. Guizard, H. Goëau, C. Claude, A. Joly, P. Bonnet, G. Rabatel:Weedelec: a robotic research platform for individual weed detection and selective electrical weeding
14:20 – 14:40	**J. Lowenberg-DeBoer**, K. Behrendt, M. Canavari, A. Gabriel, I. Huang, S. Kopfinger, R. Lenain, A. Meyer-Aurich, G. Milics, K. Oluseyi Olagunju, S.M. Pedersen, D. Rose, O. Spykman, B. Tisseyre, I. Zdráhal: The Impact of Regulation on Autonomous Crop Equipment in Europe
14:40 – 15:00	**N. Lüling**, D. Reiser, H.W. Griepentrog:Volume and leaf area calculation of cabbage with a neural network based instance segmentation
15:00 – 15:20	**O.E. Apolo-Apolo**, D.A.S. Dionisio Andujar-Sánchez, D.R. David Reiser, M.P.R. Manuel Pérez-Ruiz, J.M.G. Jorge Martínez-Guanter:Deep-Learning-Based Detector in-field tomatoes using a terrestrial mobile platform
15:20 – 15:40	**D. Sarri**, R. Lisci, A. Pagliai, S. Lombardo, M. Vieri, M. Pencelli, M. Niccolini, A. Argiolas, A. Cappalunga, L. Bartoli, N. Doveri, F. Tognetti:RoboSpray SMASH: Proof of concept modular robot platform for crop protection in viticulture
15:40 – 16:00	**J. Straub**, D. Reiser, H.W. Griepentrog:Approach for modeling single branches of orchard trees with 3D point clouds
16:00 – 16:30	**Coffee break**

Room2 - Green Room

Time	Session
9:00 – 11:00	Session 3 - Topic 07: Satellite-based applications for Precision Agriculture - Chair: tbc.
9:00 – 9:20	C. Cummings, **Y. Miao**, S. Kang, K. Stueve:Evaluating Different Remote Sensing Platforms for Making Corn Side-dress Nitrogen Recommendations
9:20 – 9:40	G. Kaplan, L. Fine, V. Lukyanov, V.S. Manivasagam, J. Tanny, **O. Rozenstein**:Estimating Tomatoes Water Consumption, Leaf Area Index, and Height Using Sentinel-2 and VENμS Images
9:40 – 10:00	**Y. Sadeh**, X. Zhu, D. Dunkerley, J.P. Walker, K. Chenu:Wheat Yield Prediction Using Fused CubeSat and Sentinel-2 Imagery
10:00 – 10:20	**J.A. Martínez-Casasnovas**, J. Llorens, A. Escolà, J. Arnó:NDVI from satellite images as estimator of geometric parameters in super-intensive almond orchards
10:20 – 10:40	**E. Lopez Fornieles**, G. Brunel, N. Devaux, F. Rancon, L. Pichon, B. Tisseyre:Potential of temporal series of Sentinel-2 images to define zones of vine water restriction
10:40 – 11:00	**A. Uribeetxebarria**, A. Castellon, M. Aranguren, A. Aizpurua:Early delimitation of management zones and yield forecast using Sentinel-2 and auxiliary data
11:00 – 11:30	**Coffee break**
11:30 – 13:00	Keynote - In plenary (RED room)

11:30 – 12:00	
12:00 – 12:30	
12:30 – 13:00	
13:00 – 14:00	Lunch
14:00 – 16:00	Session 4 - Topic 25+23+10: Data Mining, Software and mobile Apps, Embedded sensing systems - Chair: tbc.
14:00 – 14:20	**M. Medici**, M. Mattetti, M. Canavari:A conceptual framework for telemetry data use in agriculture
14:20 – 14:40	**R. Pelta**, O. Beeri, T. Shilo, S. Mey-Tal:Estimating crop coefficient (Kc) on a plot level using AI
14:40 – 15:00	**V. Liakos**, E. Smith, J. Andreis, G. Vellidis, D. Pavlou, A. Orfanou, W. Porter, T. Onker, A. Rabia:Blueberry App. A tool for irrigation scheduling on blueberries for the southeastern U.S
15:00 – 15:20	**M. Melzer**, M. Gandorfer:Functions of commercial Farm Management Information Systems – a demand-oriented analysis in Bavaria
15:20 – 15:40	**M. Michels**, O. Mußhoff:The Timing of Smartphone Adoption in German Agriculture
15:40 – 16:00	K. Tamminga, S. De Jong, **J. Valente**:A human-borne sensor device to foster participatory sensing in precision orchard management
16:00 – 16:30	Coffee break
	Room3 - Blue room
9:00 – 11:00	Session 3 - Topic 05/2: Proximal and Remote Sensing of Soil and Crop - Chair: tbc.
9:00 – 9:20	**Y. Moriuchi**, K. Nakamura, H. Mihara, T. Sasaki, A. Ito, E. Itakura, H. Mori, J. Murayama:Robust Vegetation Segmentation for Image-based Field Survey
9:20 – 9:40	**S. Marino**, A. Alvino:Assessment of crop yield variability by cluster analysis of UAV multispectral imagery
9:40 – 10:00	**S. Moinard**, G. Brunel, A. Ducanchez, T. Crestey, B. Tisseyre:Testing the potential of a new low cost multispectral sensor for decision support in agriculture
10:00 – 10:20	P. Lepej, M. Lakota, **J. Rakun**:A Sensory System for Adaptive Distribution of Plant Protection Agents
10:20 – 10:40	**J. Llorens**, A. Alsina, J. Arnó, J.A. Martínez-Casasnovas, A. Escolà:Multi-beam LiDAR-derived data analysis for optimal canopy 3D monitoring in super-intensive almond
10:40 – 11:00	A.M. Krus, **C. Valero**, J.J. Ramirez, C. Cruz Ulloa, A. Barrientos, J. Del Cerro:Distortion and mosaicking of close-up multi-spectral images
11:00 – 11:30	Coffee break
11:30 – 13:00	Keynote - In plenary (RED room)
11:30 – 12:00	
12:00 – 12:30	
12:30 – 13:00	
13:00 – 14:00	Lunch
14:00 – 16:00	Session 4 - Topic 05/3: Proximal and Remote Sensing of Soil and Crop - Chair: tbc.
14:00 – 14:20	**X. Wang**, Y. Miao, R. Dong, Z. Chen, H. Zha, K. Kusnierek:Improving In-season Nitrogen Status Diagnosis using an Active Canopy Sensor and Machine Learning
14:20 – 14:40	**G. Portz**, T.R. Tavares, S. Reusch, J. Jasper, J.P. Molin:Cotton N-uptake estimation for in-season fertilizer management based on digital image analysis
14:40 – 15:00	**L.N. Lacerda**, J. Snider, Y. Cohen, V. Liakos, G. Vellidis:The Use of Remote Sensing for Variable Rate Irrigation in Cotton
15:00 – 15:20	**R. Madugundu**, K.A. Al-Gaadi, E. Tola:Remote sensing estimates of crop water use for improved irrigation water management
15:20 – 15:40	**K. Kusnierek**, A. Korsaeth:Detecting water status of wheat canopy using spectral reflectance in the 400-900 nm range
15:40 – 16:00	
16:00 – 16:30	Coffee break