

This is a preliminary program indicating which talks are associated with the planned sessions. Talks may yet be moved between sessions (although we will try not to do this). The order of talks within a session is DEFINITELY NOT yet fixed and is subject to change.

	Theme 1	Theme 2	Theme 3
Session 1	Satellite Applications	Precision Horticulture	Crop Disease
<i>Monday morning</i>	<p>User requirements for a satellite-based advisory platform</p> <p>Potential of freely available remote sensing visible images to support growers in delineating within field zones</p> <p>Using Sentinel-2 images to implement Precision Agriculture techniques in large arable fields: First results of a case study</p> <p>How remote sensing is offering complementing and diverging opportunities for precision agriculture users and researchers</p> <p>Identification of High-Variation Fields based on Open Satellite Imagery</p> <p>Monitoring crop growth and key agronomic parameters through multitemporal observations and time series analysis from remote sensing big data</p> <p>Water and nutrient management: the Austria case study of the FATIMA H2020 project</p>	<p>Evaluation of apple flowering intensity using color image processing for tree specific chemical thinning</p> <p>Comparing efficiency of different sampling schemes to estimate yield and quality parameters in fruit orchards</p> <p>Orange tree canopy volume estimation by manual and LiDAR-based methods</p> <p>Mapping properties of an asynchronous crop: the example of time interval between flowering and maturity of banana</p> <p>Over-the-row harvester damage evaluation in super-high-density olive orchard by on-board sensing techniques</p> <p>Combined use of remote sensing and soil sensors to detect variability in orchards with previous changes in land use and landforms: consequences for management</p> <p>Evaluating satellite remote sensing as a method for measuring yield variability in Avocado and Macadamia tree crops</p>	<p>Plant growth regulators on winter wheat – yield benefits of variable rate application</p> <p>Plant disease detection by hyperspectral imaging: from the lab to the field</p> <p>Potato Disease Classification Using Convolution Neural Networks</p> <p>Measuring crop canopy– the development of a dynamic system for precision fruit crop spraying</p> <p>Site-specific application of plant protection products in Precision Farming by direct injection techniques</p> <p>Use of remote sensing technology in the assessment of resistance of maize to tar spot complex</p> <p>Comparison and selection of vegetation indices for detection of Sclerotinia Stem Rot on oilseed rape leaves using ground-based hyperspectral imaging</p>
Session 2	N Management	Geostatistics and Data	Crop Sensors I
<i>Monday afternoon</i>	<p>Early stage variable rate nitrogen fertilization of silage maize driven by multi-temporal clustering of archive satellite data</p> <p>Guiding cover crop establishment to scavenge residual soil nitrate nitrogen using site-specific approaches</p> <p>Measuring canopy size and nitrogen content in oilseed rape for variable plant growth regulator and nitrogen fertiliser application</p> <p>Spatial variation in Nitrogen requirements of cereals, and their interpretation</p> <p>Precision N management for field vegetables in organic soils: a short review</p> <p>GIS-Based Spatial Nitrogen Management Model for Maize</p> <p>Impacts of Variable Rate Nitrogen (VRN) on Nitrate-N Losses from Tile Drained Maize in Minnesota, USA</p> <p>Mapping Optimum Nitrogen Crop Uptake</p> <p>Evaluation of the CERES-Rice Model for Precision Nitrogen Management for Rice in Northeast China</p>	<p>Development of a sensor fusion method for crop row tracking operations</p> <p>Spatial variability of soil fertility in an integrated crop livestock forest system</p> <p>A geostatistical approach for modelling and combining spatial data with different support</p> <p>Simulating yield datasets: an opportunity to improve data filtering algorithms</p> <p>Evaluation of trafficked error paths of trailers in sugarcane fields</p> <p>Delineation of management zones based on the Rasch model in an olive orchard</p> <p>Creating a statistically representative set of Danish agricultural field shapes to robustly test route planning algorithms</p> <p>How significantly different are your within field zones?</p>	<p>Relating active optical sensor measurements to barley yield</p> <p>The prediction of crop biomass, grain yield and grain quality using fluorescence sensing in cereals</p> <p>Multi-sensor imaging retrofit system to test precision agriculture machine-based applications</p> <p>On using the precise sensor</p> <p>An Optical Yield Monitor for Peanuts – Proof of Concept and Evaluation</p> <p>Early stage sugarcane biomass accumulation prediction by proximal sensing and crop parameters</p> <p>The use of RGB cameras in defining crop development in legumes</p> <p>Specific and non-specific changes in optical characteristics of spring wheat leaves under nitrogen and water deficiency</p>
Session 3	Soil Sensing	Crop Models and Economics	PA in Practice I
<i>Monday late-afternoon</i>	<p>Proximal sensing of soil biological activity for precision agriculture</p> <p>Application of a Wireless Sensor Network for Multi-Depth Soil Moisture Monitoring at Farm Scale in New Zealand's Hill Country</p> <p>Characterizing spatial variability in soil water content for precision irrigation management</p> <p>Sensing in the visible spectrum and beyond for Local adaptation of a national digital soil map for use in precision agriculture</p> <p>Inversion of soil electrical conductivity data to estimate layered soil properties</p>	<p>The sensitivity of economic gains from high-speed planting</p> <p>A Whole Farm Analysis of the Implications of Variable Maturity Groups on Harvest Logistics and Net Returns</p> <p>A tool based on remotely sensed LAI, yield maps and a crop model to recommend variable rate nitrogen fertilization for wheat</p> <p>Conceptual Spatial Crop Modelling of Potato</p> <p>Can temperatures from an online weather forecast service be suitable for modelling growth stages using a CERES-Wheat type phenology model?</p> <p>Connecting crop models with highly resolved sensor observations to improve site-specific fertilisation</p>	<p>Translational learnings from Australia: How SPAA plays a role in increasing the adoption of precision agriculture</p> <p>Precision Agriculture in China: Exploring Awareness, Understanding, Attitudes and Perceptions of Agricultural Experts and End-Users in China</p> <p>Farmers' Adoption Path of Precision Agriculture Technology</p> <p>A Web-based GIS Decision Support Tool for Agronomics: transforming crop science through digital technologies</p> <p>A strategy to instigate SSCM in Australian potato production</p>
Session 4	Precision Irrigation	Precision Tillage and Weed Management	Crop Sensors II
<i>Tuesday morning</i>	<p>Temporal dynamics of alfalfa water use efficiency under hyper arid conditions of Saudi Arabia</p> <p>Future approaches to facilitate large-scale adoption of thermal based images as key input in the production of dynamic irrigation management zones</p> <p>Optimization of an automatic irrigation system for precision irrigation of blueberries grown in sandy soil</p>	<p>Mapping Cynodon dactylon in vineyard using UAV images for site-specific weed control</p> <p>Machine vision for spot-application of agrochemical in wild blueberry fields</p> <p>Efficacy of Variable Rate Soil-applied Herbicides Based on Soil Electrical Conductivity and Organic Matter Differences</p>	<p>Multispectral band selection for imaging sensor design for vineyard disease detection: case of Flavescence Dorée</p> <p>High resolution strawberry field monitoring using the compact hyperspectral imaging solution COSI</p> <p>Sweet pepper maturity evaluation</p>

	Dynamic Variable Rate Irrigation – A Tool for Greatly Improving Water Use Efficiency	In field identification of herbicide resistant <i>Apera spica-venti</i> using chlorophyll fluorescence	Accuracy assessment of a mobile terrestrial laser scanner for tree crops
	Technological and agronomic assessment of a Variable Rate Irrigation system integrated with soil sensor technologies	Conservative Precision Agriculture: an assessment of technical feasibility and energy efficiency within the LIFE+ AGRICARE project	Robotic real-time 3D object reconstruction using multiple laser range finders
	VRDI - Variable Rate Drip Irrigation in Vineyards	Plough section control for optimised uniformity in primary tillage	Clustering of Laser Scanner Perception Points of Maize Plants
	Improving vineyard water use efficiency and yield with variable rate irrigation in California	Effects of precision potato planting using GPS-based cultivation	3D monitoring of woody crops using an unmanned ground vehicle
	Hyperspectral imagery as a supporting tool in precision irrigation of karst landscapes	Modelling and simulation of a no-till seeder vertical motion dynamics for precise seeding depth	Automated Measurement of Maize Stalk Diameter and Plant Spacing
		A multi sensor data fusion approach for creating variable depth tillage zones	
Session 5	Precision Viticulture	Ag-engineering and Robotics	N sensing
<i>Tuesday mid-morning</i>	Potential of on-board colour imaging for in-field detection and counting of grape bunches at early fruiting stages	Simulation and Experiment of a Designed Anti-Drift Spray Nozzle	Monitoring wheat fields by RapidScan: accuracy and limitations
	Spatiotemporal stability of management zones in a table grapes vineyard in Greece	RoboWeedSupport - Detection of weed locations in leaf occluded cereal crops using a fully convolutional neural network	Monitoring crop N status by using red edge-based indices
	Using ancillary yield data to improve sampling and grape yield estimation of the current season	Modelling environment for an electrical driven selective sprayer robot in orchards	Proximal fluorescence sensing for in-season diagnosis of rice nitrogen status
	On-the-go thermal imaging for water status assessment in commercial vineyards	Virtual Reality based Mobile Robot Navigation in Greenhouse Environment	Using portable RapidSCAN active canopy sensor for rice nitrogen status diagnosis
	Application of the Kinect sensor for three dimensional characterization of vine canopy	RoboWeedSupport - Presentation of a cloud based system bridging the gap between in-field weed inspections and decision support systems	A spectral correction method for multi-scattering effects in close range hyperspectral imagery of vegetation scenes: application to nitrogen content assessment in wheat
	Two methods for processing yield maps from multiple sensors in large vineyards in California	Evaluation of relevant sprayer parameters for use with precision irrigation in landscape	Evaluation of the chlorophyll meter and GreenSeeker for the assessment of rice nitrogen status
	Assessment of an empirical spatio-temporal model of the grapevine phenology at the within-field scale	Design and development of a navigation system for agricultural aerial spraying	Evaluating a Crop Circle active sensor-based in-season nitrogen management algorithm in different winter wheat cropping systems
Session 6	Industry Showcase	Precision Pastures	
<i>Tuesday afternoon</i>		Profitability of controlled traffic in grass silage production – economic modelling and machinery systems	
		Estimating pasture biomass with active optical sensors	
		Development of methods for remotely sensing grass growth to enable precision application of nitrogen fertiliser	
		Mapping within-field biomass variability: a remote sensing-based approach	
		Hyperspectral Aerial Imaging for Grassland Yield Estimation	
		Potential for Controlled Traffic Farming (CTF) in Grass Silage Production: Agronomics, system design and economics	
		A review of Precision Agriculture as an aid to Nutrient Management in Intensive Grassland Areas in North West Europe	
		Interactions between landscape defined management zones and grazing management systems	
		Capability of crop canopy sensing to predict crop parameters of cut grass swards aiming at early season variable rate nitrogen top dressings	
		Proximal sensing for monitoring the productivity of a permanent Mediterranean pasture: influence of rainfall patterns	
Session 7	UAVs	Information Systems and DSS	PA in Practice II
<i>Wednesday morning</i>	Using Unmanned Aircraft Systems for Early Detection of Soybean Diseases	An uncertainty-based comprehensive decision support system for site-specific crop management	Precision Agriculture in Latvia in the Last 20 Years
	Applications of Unmanned Aerial Vehicles in Weed Science	Yield mapping at different scales to improve fertilizer decision making in the Australian sugar industry	Educating producers on the profitability of precision agriculture technologies
	Identification of the onset of disease within a potato crop using a UAV equipped with unmodified and modified commercial off-the-shelf digital cameras	Ontology as Contribution to Delegate Individual Responsibility in Cotton Production in Brazil	Crop Production of the future – possible with a new approach?
	Evaluation of spectral-based and canopy-based vegetation indices from UAV and Sentinel 2 images to assess spatial variability and ground vine parameters	Determining Corn Aflatoxin Risk within Counties in Southern Georgia using Remotely Sensed Data, USA	From a Precision Agriculture Consortium to a Dual Master's Degree in Sustainable Agriculture
	A systemic approach to identify relevant information provided by UAV in precision viticulture	Prototype Environment for integrating and sharing Farm Things and associated data	Design of Smart Agriculture Japan Model

Expedited generation of terrain digital classes in flat areas from UAV images for precision agriculture purposes	Automating the process of importing data into an FMIS using information from tractor's CAN-Bus communication
Retrieving wheat Biomass by using a hyper-spectral device on UAV	Implementation of Ag Data Agricultural Services for Precision Agriculture