Ginkgo biloba	Almond	Tomato	Tomato
Potato	Adansonia grandidieri	None	Wheat



Almond	Grass	Sugar beet	Rice, tomato
Maize	Wheat	POTATO!!	Araucaria araucana



tree	All	vines	Forest
maize	Wheat	Wheat	Grass



cork oak	Geranium	NAN	Wheat
olive	Araucaria araucana	wheat	Pines



Maize	Maize	Tomato	forage grasses
potato > tomato	Wheat	banana	Sunflower



almond	None!	wheat maize	Tomato
Banana	tilia	rice	Chickpea



Rice	Potato	Olive	beech
maize	Wheat	tomato	banana



rice	Barley	soybean	Apple
Aristolochia samsunensis	Sesame	nicotiana benthamiana	Potato



Mango	senior researcher	Professor	Professor
Taxus bacata	Founder and ceo	Assistant Professor	Tomato



electronic engineering



Senior reseaecher	PhD student	Researcher	Researcher
Researcher	Professor	PhD student	senior researcher

PhD student	PhD student	Senior Researcher	Postdoc researcher
PhD student	Chief researcher	senior researcher	assistant professor

phd student	PhD student	Assistant professor	Postdoc researcher
PhD student	senior researcher	Professor	Postdoc researcher

Researcher	PostDoc	senior researcher	1st year PostDoc
Senior researcher	Senior researcher	PhD Student	senior researcher

professor	Senior researcher	Senior researcher	Team leader / senior researcher
PI	PostDoc	Wheat	Post Doc Fellow in University of Southampton

Founder and ceo	Associate professor	Associate professor	Assistant professor (Italian RTD-A)
Postdoc	Senior researcher	Senior Scientist	Phd candidate

Assistant professor	Full prof	Junior researcher	Researcher
senior researcher	Assistant Profesor	CEO	Senior reseacher and phd candidate in plant biotechnolgy department

Spectral imaging

Molecular biology and biotechnology

remote sensing

remote sensing

Enviromental science + remote sensing

water management in agriculture

Still to find out

field spectroscopy





Fieldspec, Floxbox

Ecophysiologist	Remote sensing	Chemical sensors	Remote sensing
plant ecophysiology	ecohydrologist	PhD in Ecology	Quantitative genetics



Remote Sensing / Plant Physiology / Data Science / Plant Phenotyping

Environmental scientist+

Forestry and remote sensing

Mechatronics engineer and farmer

Remote sensing

ecosystem ecology

Imaging spectroscopy

Geoinformatics and remote sensing





Remote sensing of Agriculture economics remote sensing Remote sensing Vegetation Molecular biology Biology Metrology science, GIS Computer Vision, Vision system set-ups





Agriculture Remote sensing PhenotypingAgronomistS Remote Sensing / Plant ensor Remote sensing Al Phenotyping Hyperspectral Remote Sensing / Space ecophysiology, highgeospatial data science Technology throughput field phenotyping



Remote sensing, plant **Environmental Physics** ecologist Plant physiology ecophysiology, phenotyping, water-related traits **Environmental Sciences** crop breeding and Remote sensing Forestry genetics





metrology

Genetic Resources, Fruits, Breeding, Molecular Genetics, Digital Phenotying

remote sensing

satellite imagery

Remote Sensing/ Agriculture/ Data Analysis / GIS Forestry and RS. Web and mobile development

Remote sensing/photogrammetry

Biophysics





biotechnology Remote Sensing biotechnology Paddy Remote Sensing / LiDAR PhD in Environmental Agronomy/ Agriculture Forestry/Plant Engineering/Precision phenotyping Enginnering Agriculture





Electronic engineering

remote sensing

Field Spectroscopy

Spatial analysis

Klab and field spectroscopy

Metrology science (standards, protocols, uncertainty) which mostly intertwines with WG4

Automatic digital image processing / tools

Lab and field spectroscopy





phenotyping speacialist designing UAV protocols Deep learning tools structural analysis for specific neds implementation RGB, multispectral sensors crop physiology Plant physiology Plant physiology and databases





Prism

To get hands-on expertise in field phenotyping

How plants adapt the abrupt environmental conditions

Phenotyping specialist

my charming personality

Spectral data analysis of field data

Digital phenotyping and image analytics

UAV and airborne imaging spectroscopy

Remote sensing

Applied research in close collaboration with end-users (farmers, foresters)

Hyperspectral imagery





hybrid machine learning methods

Remote Image analysis

Sensors and data analysis

10 years of experience in UAV remote sensing for field phenotyping

Still to figure out

Systems development

Practical solutions for UAV plant phenotyping

My expertise and hardworking





UAV imaging

Tree phenotyping

Remote sensing-based plant phenotyping

sensor synergies and data integration

RS and UAV-app development

my sense of humor

Spectral data analysis

Plant Physiology





uav based pp using rgb, ms and thermal sensors linked to different plant traits and abiotic stresses

Highthrouput phenotyng

Lab and field spectroscopy

Proximal and remote spectroscopy

Highthroughput phenotyping

Spatial analysis for forestry and agriculture

Metrology science (protocol definition, uncertainty analysis, standardization)

Disease detection





Expertise in sensors understanding

Plant physiology and genetics

3D RTM use in combination with Machine Learning

Thermal imaging

experience in the use of uav for plant phenotyping and precision agriculture applied measurements and analysis of hyperspectral data, both imaging and single-point

Establishing permanent monitoring plots of Mediterranean forests

I'm mostly here to understand the connection with other WGs





RGB data analysis

HTTP applied in forestry

Autonomous UAV Navigation Pure luck and Field experience about plant comunities

Design multispectral UAV protocols for specifics needs

Sun Induced Chlorophyll Flourescecne (SIF)

Precision agriculture techniques and technologies

UAV imaging





Phenotipic data manageme t

Sentinel 2, modis, landsat

Satellite and UAV remote sensing, field spectroscopy

FluoWat, molecular techniques, HPLC

envi

UAV, Lidar, RGB, MS, thermal, satellite, image analysis, deep learning

Expand knowledge

collaboration opportunities with academics





What is your key competence you bring to WG1?

Employ UAV

Curiousity, networking, learn new techniques and also data handling, also subside interested to find new ideas and collaborations for our new study programme:)



sentinel-2 UAV Chat GPT Lidar, SLAM, computer vision, mapping, robotics RGB cameras UAV Optical sensors gaussian processes regression

Spectroscopy

SCOPE

Hyper/multi spectral cameras

Field spectrometry

Hyperspectral UAV birne imagery

Thermal imaging sensors. Energy balance models.

UAV data extraction and sensor synergies

rgb, multispectral, thermal and lidar sensors





thermal sensors

Plant stress physiology

Object Detection with YOLO

ArcGIS, bioeconomic modelling

leaf-clip sensors

Field spectral data collection

Field spectrometers/spectrorad iometers GEE, GOM 3D, QGIS, GNSS, UAV





rgb, ms, thermal, time series analysis

Thermal hyperspectral RGB based data

Hyperspectral

UAVs and cameras

SWAT models eddy covariance EnMap

PROSAIL-PRO

optical sensors, hyper/multi cameras, pytorch, tensorflow, MATLAB Filed spectrometry





Multispectral and hyperspectral satellite, airborne and uav sensors, evaporranspuration modelling

Spectral data preprocessing and analysis

DART

Multispectral

sensor data fusion

multispectral cameras

Satellite (e.g., Sentinel-2, PRISMA)

LAI data collection





FieldMap, GIS, LiDAR, TreeTalker High resolution infrared radiometers, UAVs, LICOR, scholander chamber, EddyCovariance towers

GIS-based software

machine learning models

spectral imagers, thermal imagers

Spectrometers, multi/hyperspectral image acquisition and processing, general GIS, AI/ML algorithms

drone

data science and mashine learning





leaf-clip sensors

RS, field spectroscopy, field imaging, yield prediction models, Al/ML

Machine learning, satellite and UAV

UAVRGB camerasmachine learning models

Learn from the others about best practices, sensor choices etc.

To work with international scientists and to establish collaboration networks

Knowledge and ideas exchange, publishing, future new R&D project

To collaborate for landscape ecology



trips to network

network, learn each other, exchange ideas

Objective 1.4 - Applying WG1 knowledge to the forestry field

Be part of some great projects

condense datasets

Network

to connect my project on cereal stress

learning in a networking environment





Networking and exchange in expertise, education.

networking

UAV in forestry

Invasive Alien Plants mapping

Sharing research experiences, methods, widen network

Connect with researchers, promote collaborations and exchange data

Networking, learning new methods, get some inspiration from other related fields Synergies and learning new methods





Exchange experiences, network

collaborations

Networking and Research interest

validation data

Create nice paper and new ideas

I'm actually participating in WG2 and WG4, here just to understand what the other WGs are about

meet likeminded individuals and see the world (or at least europe) Networking and learning





learn from each other and work towards standardize methodologies

Ideas for better phenotyping

Network & Cooperation

Learn from the others about the best practices

Networking and experience exchange.

For save the trees, save the world:)) save my childerns home.networking

to exchange knowledge and learn some new skills

how to better process my data/images





gain new knowledge

multidisciplinarity boosting plant phenotyping

Better understand on vegetation

Exchange and sharing of experience/knowledge

Work to support the farmer in the challenges he faces.

networking, data collection

Project and Scientific collaboration

Contribute in this WG by publishing the scientific articleConnectDeep learning about the topics of wg

To find out, how to meaningfully connect the information from different sensors

collaborations

Feed the future

networking and exchanging knowledge

To learn and share knowledge

Learn modern measurement technology

get inspired, try to inspire other

NetworkTo be a scientific partner in research projectsNew Knowledges and competencescollaborations





Knowledge and ideas exchange, publishing, new R&D projects

Better Al models (standard, models, training/benchmark datasets)

standardize methodologies and transfer them Develop an Al-based image processing tool to identify specific tree species.

Improve sustainable management

Explaining better the plant physiology from RS data

Integration of forests with agriculture

improving models parameterizations for field predictions

New remote sensing-based índices for plant phenotyping and agricultural/forestry management

Coupling better photosynthesis processes

save the world

improve knowledge on plant adaptations





Expand foundations on traits retrievals through RS

See how these techniques could be practically applied

Select best performing genotypes

Identification of suitable breeding material

Improved workflow for evapotranspiration models using UAVs.

advancing knowledge and promoting sustainable agriculture

Find better explanations on vegetation behavior

Best bands or indices for plant phenotyping in agriculture/forestry

Scale to view global processes

standardize methodologies and transfer them improve the use of machine and deep learning techniques using in-field data

high resolution satellite imaging for pp

create a huge validation dataset for model training

To come up with UAV standardizations for UAV implementation in PP

Promoting the upscaling of field monitoring to support realtime monitoring at a large scale

get more data, plants especially wild types interesting for me. because i think in future we need some genes of wild types.





Better AI models (standards, models, training/benchmark datasets) Advance the field toward true agriculture 4.0

predictive data driven models - early stress detection phenomic prediction, speed up breeding cycles

Reliable models and designs of adequate monitoring systems to promote sustainable management of green infrastructure.

Improve the selection of promising varieties in breeding by quantitative and repeatable measurements in high throughput.

New product/ideas for Precision Agriculture and Digital Agriculture business/ market

help in achiving the goal of European green deal

Improving the plant physiology model through data assimilation

Better understanding of RS results with PP

data management standards to perform repeatable measurements One article practically implementing all the guidelines and best practices that will come out of this WP.

Exchanging research methodogies

that we can meet in real life

More physical meeting, otherwise Zoom for whole days is difficult Bridging knowledge of WG1 to the forestry domain

Share practical solutions for UAV phenotyping.

openness in data sharing

recruitment of young researchers

Do science and have fun!

Publish scientific papers, participate in Workshops, summer schools





Participating in WG meetings to create a better network.

learning and learning, and sharing

Sharing ideas and contributing for scientific publications.

Sharing measurement technology and experience

hybrid meeting are nice but physical meeting are way better for discussions Concrete results with the core group of people that really want to work together

Learn from the best and share

share technologies and experience





active research

collaborations and networking

increase networking on plant phenotyping

Give opportunities to meet for new members not just for the same people everytime

Potential group collaborations for transnational projects, research stays possibilities, etc

sharing knowledge and building capacity

simplify the PP by RS

learn about new methodology





Transferring knowledge /
partecipate in meetings

pragmatic approaches for htpp

I would be very happy to learn from colleagues and find collaborators with complimentary skills.and beer?

Start on reserach work

collaborations

Exchange research methods

Collaboration and networking

Taking advantage of opportunities to learn





(If you participate in other WGs) What synergies should we specifically focus on?

EnMap/PRISMA with I need to read again the Upscalling and upscalling MoU and more information sentinel 2 downscalling about the wg3 measurements Sharing of standard/best Networks Upscalling joint protocols practices



(If you participate in other WGs) What synergies should we specifically focus on?

best practice protocols

Integrate field data and observations derived from RS to manage forest ecosistems

scalability of RS observations

Good question:)

sensor synergy

paricipate in the whole processing workflow

collaborationsField practicesTest field trials





Any suggestion you want to provide to WG1 Chairs?



Any further questions?