

IAMPS Programme 2018

Lectures will be in LT1 Exchange building, Jubilee Campus

Tea/Coffee C3 Exchange building, Jubilee Campus

Primary authors listed below. See abstract book for full author list.

Monday 22nd January

10.00 Registration opens (Computer Science Foyer, Tea/coffee in atrium)

11.00 Introduction to the workshop

Plant phenotyping using image analysis

11.10 Photometric stereo imaging system for non-invasive *Arabidopsis thaliana* phenotyping
Gytis Bernotas

11.30 Adventitious flora detection through FFT spatial filtering on maize crops from UAV:
performance on RGB and multispectral data. *Antoine C.G. Fournier*

Deep learning for plant phenotyping

11.50 Visualization of Leaf Botanical Features Extracted from AlexNet Convolutional Layers
Sarah Bertrand

12.10 3D Computer Vision for Early Stage Root Bulking in Cassava Using Aeroponic Imaging
Platform. *John Atanbori*

12.30 LUNCH (Hot buffet, C3)

14.00 Learning on Deep Network without the Hot Air by Scattering Transform Application to
Weed Detection in Dense Culture. *David Rousseau*

14.20 Differentiation of plant species with hyperspectral and deep learning technology.
Anthony Gelibert

14.40 Automatic root detection for minirhizotron images: machine learning coupled with
common image processing *François L Postic*

15:00 Citizen Power and Deep Learning to Count Leaves. *Feng Chen*

15.20 TEA/COFFEE BREAK (C3)

16.00-16.30 Poster spotlight talks. 5 minute talks from select poster authors:

Developing methods to analyse the structure of the plant endoplasmic reticulum.
Charlotte Pain

Application of hyperspectral imaging for non-destructive measurement of quality parameters for plum.

Bo Li

Multispectral image analysis of series of large images of plant sections.

Marie-Françoise MF Devaux

Measuring raspberry fruit yield and quality using hyperspectral imaging.

Dominic Williams

Grass Improvement using Satellite Technologies.

Benjamin J Hockridge

16.30-17.30 Full poster and discussion session C3. *All attendees are invited to bring an A1 poster to display their relevant work.*

Tuesday 23rd January

9.30 Keynote Talk – *Ji Zhou*. From Field to Cells: the role of multi-scale phenomics in crop improvement

10.30 TEA/COFFEE BREAK (C3)

Image Analysis of plants

11.00 A parametric active 4D model for the automatic construction of developmental atlases from confocal images of shoot apical meristems *Guillaume Cerutti*

11.20 Automatic extraction of leaf network of veins *Aurélie Leborgne*

11.40 Mapping hyperspectral data onto a 3D plant model *Amy Lowe*

12.00 Computation of parametric mapping of cellular morphology using gray scale texture analysis *David Legland*

12.20 Close of workshop

12.30 Cold buffet lunch (C3)