

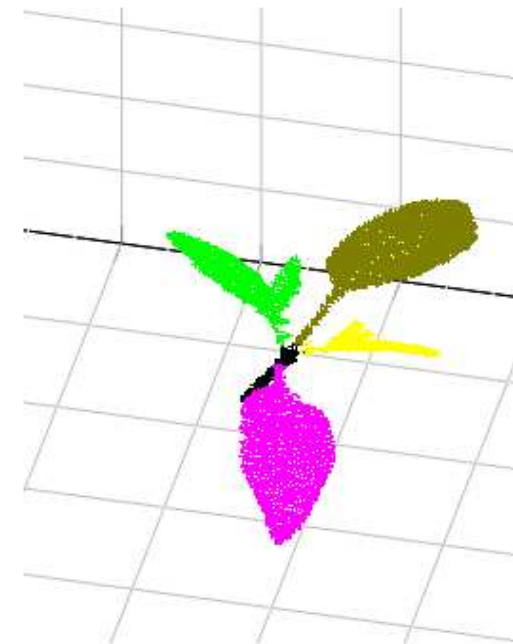


Novel Sensor Technologies

for Plant Phenotyping

The European Plant Phenotyping Network (EPPN) is an EU-funded infrastructure project that creates structural and functional synergies among plant phenotyping institutions in Europe. The objective is to link phenotyping experts, user communities and technology developers. EPPN organises the developers' workshop 'Novel Sensor Technologies for Plant Phenotyping' to identify technologies that are not yet utilized by the EPPN platforms. The workshop aims to foster joint technology development projects beyond those already available at phenotyping platform locations.

The scope of this workshop covers novel sensor technologies, including, but not limited to, novel sensor development, new vision and new robotics techniques suitable for application in plant phenotyping. The topics will be presented by leading experts from outside the EPPN, with many possibilities for networking and for exchange of ideas and experience. The technologies developed and utilised by the EPPN partners and at Wageningen UR will be presented in poster sessions. After each session, there will be opportunities to further discuss interesting leads with the speakers at so-called speakers' corners.



Information about the FP7 EPPN project
<http://www.plant-phenotyping-network.eu/>

Second Announcement

Workshop venue

Hotel de Nieuwe Wereld, Marijkeweg 5,
6709 PE Wageningen, The Netherlands
<http://www.denieuwewereld.nl/>



WAGENINGEN UR
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Programme

Thursday, 13 September

12.00-13.10 Registration, sandwich lunch (optional)

Opening Session

13.10-13.25 Welcome by Wageningen UR

13.25-13.35 Introduction to FP7 EPPN

Session 1: Novel Sensors for Phenotyping

13.35-14.00 *Monitoring the Plant Water Status with Terahertz Waves*,
Dr. Gunter Urbasch, University of Marburg

14.00-14.25 *Wireless Sensor Networks for Precision Agriculture: Methods and Experiences*, **Dr. Antonio-Javier Garcia-Sanchez**,
Technical University of Cartagena

14.25-14.50 *Characterization of the Root Structure by Electrical Impedance Spectroscopy*, **Dr. Repo Tapani**,
Finnish Forest Research Institute

14.50-15.00 Poster pitch I: EPPN

15.00-15.20 Refreshments

15.20 - 16.00 Parallel sessions I

Speakers' corners with speakers of Session 1

Poster session I: EPPN posters

Session 2: Novel Vision for Phenotyping

16.00-16.25 *Plant Phenotyping using Depth Cameras*,
Prof. David Rousseau, University of Lyon

16.25-16.50 *Three Dimensional Analysis for the Plant Phenotyping Process from the Root to the Leaf*, **Prof. Dr. Randolph Hanke**,
Fraunhofer IIS Erlangen

16.50-17.15 *Possibilities and Challenges of 3D High Resolution X-Ray Computed Tomography for Plant Structure Investigation*,
ir. Denis Van Loo, Ghent University

17.15-17.40 *SPICY: Towards Automated Phenotyping of Pepper Plants*,
Dr. Ir. Gerrie van der Heijden, Wageningen UR

17.40-17.50 Poster pitch II: WUR

17.50-18.20 Snacks and refreshments

18.20 - 19.00 Parallel sessions II

Speakers' corners with speakers of Session 2

Poster session II: Wageningen UR

19.30-22.30 Dinner in the city centre (optional)

Friday, 14 September

8.30-9.00 Coffee

9.00-9.30 Keynote speech: *Potential of (Portable) NMR and MRI for Plant Phenotyping*, **Dr. Henk van As**, Wageningen UR

Session 3: Novel Robotics for Phenotyping

9.30-9.55 *Studying Plant Communities and Phenotypic Traits by UAV-Based Close Range Remote Sensing and Image Analysis*,
Dr. Torsten Prinz/Christian Knoth, University of Münster

The workshop will focus on novel sensor development, new vision and new robotics techniques.



9.55-10.20 *Smart Technological Solutions Inspired from Behaviour and Adaptive Strategies in Plant Roots*, **Dr. Barbara Mazzolai**, Center for Micro-BioRobotics, Italian Institute of Technology

10.20-10.45 *Multisensor Platforms for Field Phenotyping of Low and High Density Plants*, **Lucas Busemeyer**, University of Applied Sciences Osnabrück

10.45-10.55 Poster pitch III: Company R&D

10.55-11.05 Closing remarks / Announcements

11.05-11.20 Refreshments

11.20 - 12.00 Parallel sessions III

Speakers' corner with speakers of session 3

Poster session III: Company R&D

12.00-13.00 Sandwich lunch (optional)

Participation and Registration

Participation is FREE to those interested in developing and applying new methods and technologies for plant phenotyping. Acceptance is on a first-come-first-served basis. Registration to participate should be made before 15 August 2012 via the project website at: http://www.plant-phenotyping-network.eu/eppn/developer_workshop

Organising committee

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