

The Nordic-Baltic Plant Phenotyping Network (NBPPN) Annual Conference in Båstad, November 21-22

Title: Use and Interpretation of Crop Phenotyping Data for Agriculture

Participants: NBPPN members and others interested in the use and interpretation of crop phenotyping data for agriculture.

Fee: Participation is free of charge for NBPPN members– attendees are responsible for their own transport and accommodation. ´

There will be a participation fee for non-members of 2.500 DKK.

Format: Keynote speakers, oral presentations with one session from all six representing countries (Norway, Sweden, Denmark, Finland, Estonia, Lithuania), poster sessions, a tech corner, and writing group meetings.

Organisers: The NBPPN Steering Committee

About NBPPN: The NBPPN was founded as an independent organization in 2015, originally as part of the public-private partnership project entitled "6P: Nordic Public Private Partnership Plant Phenotyping," funded by a Nordic Council grant until December 31, 2023. As of February 1, 2024, the network will continue as a membership-based organization. NBPPN aims to promote, enable, and enhance the exchange of research and innovation in plant/crop sensing and phenotyping among technology providers, plant breeders, agricultural advisors, industries, and research institutions in the Nordic and Baltic regions.

DRAFT PROGRAM

Day 1: Thursday, November 21, 2024

09:30 - 10:00

Registration with coffee and snacks.

10:00 - 10:45

Keynote 1:

Title: [Keynote Topic]

Speaker: Ioannis N. Athanasiadis, Professor and Chair of Artificial Intelligence, Wageningen University and Research, The Netherlands

(30 min presentation + 15 min Q&A)

10:45 - 11:00

Coffee Break

11:00 - 12:00

Session 1 (Chair: Erik Alexandersson- Swedish University of Agricultural Sciences): Oral Presentations

- Abozar Nasirahmadi, SLU: “Generative AI for plant identification and phenotyping-use case in Rangeland monitoring” (20 min + 10 min Q&A)
- Adrian Gustafson, LU: “Realising the perennial vision – measurements and modelling” (20 min + 10 min Q&A)

12:00 - 13:00

Lunch Break

13:00 - 14:30

Tech Corner & Poster Session

Interactive sessions for technology demonstrations and poster presentations

14:30 - 15:30

Session 2 (Chair: Kristiina Himanen- University of Helsinki): Oral Presentations

- Dr Juho Hautsalo, Natural Resources Institute Finland: “Experiences from appliance of drones in practical research projects at Natural resources institute Finland” (20 min + 10 min Q&A)
- Presentation 2 (20 min + 10 min Q&A)

15:30 - 15:45

Coffee Break

15:45 - 16:45

Session 3 (Chair: Morten Lillemo- Norwegian University of Life Science): Oral Presentations

- Shirin Mohammadi, NMBU: “Phenotyping of faba bean agronomical traits and disease classification based on RGB and multispectral cameras” (20 min + 10 min Q&A)
- Mallikarjuna Rao Kovi, NMBU: “Estimation of nitrogen use efficiency and yield in perennial ryegrass using RGB, multispectral cameras and LiDAR sensors” (20 min + 10 min Q&A)

16:45 - 17:00

Coffee Break

17:00 - 18:00

Session 4 (Chair: Gintaras Brazauskas - Lithuanian Research Centre for Agriculture and Forestry): Oral Presentations

- Rita Armonienė, Dr. Head of the Laboratory of genetic and Physiology: “Freezing Tolerance in the Nordic-Baltic Region: A Vital Trait for the Survival of Overwintering Crops.” (20 min + 10 min Q&A)

- Birutė Frercks, Dr. Head of the Department of Orchard Plant Genetics and Biotechnology: "Phenotyping of plants and its whole-community: who plays the crucial role in horticulture?" (20 min + 10 min Q&A)

19:00 - 21:00

Conference Dinner

Location: Hotel Skansen in Båstad - Restaurant Sand

Day 2: Friday, November 22, 2024

08:30 - 09:15

Keynote 2:

Title: "Computer vision for plant phenotyping: the Polyploidbreeding 4.0 project and the AGRI-VISION initiative"

Speaker: Filippo Biscarini, Senior Research Scientist, National Research Council (CNR), Milan (Italy).

(30 min presentation + 15 min Q&A)

09:15 - 09:30

Coffee Break

09:30 - 10:30

Session 5 (Chair: Rene Aavola- Centre of Estonian Rural Research and Knowledge): Oral Presentations

- Ainar Härm, METK: "UAV remote sensing application in METK for phenotyping and crop monitoring: a brief overview of past challenges and future considerations" (20 min + 10 min Q&A)
- Presentation 2 (20 min + 10 min Q&A)

10:30 - 10:45

Coffee Break

10:45 - 11:45

Session 6 (Chair: Svend Christensen- University of Copenhagen): Oral Presentations

- Andreas Bergmann, KU: "Reliability of Crop Height Estimations from UAV Imagery" (20 min + 10 min Q&A)
- Chandana Pandey, KU: "Assessment of the impact of drought stress on barley resistance against fungal pathogens by high-throughput multispectral, microscopic and physiological phenotyping" (20 min + 10 min Q&A)

11:45 - 12:00

Closing Remarks and Farewell

12:00 - 12:45

Lunch Break

12:45 - 14:45

Writing Group Meetings

Interactive sessions for collaborative writing