

Programme | Program

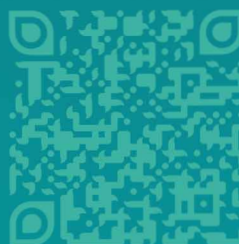
LES 30 ANS DU LEPSE

Laboratoire d'Écophysiologie
des Plantes sous Stress Environnementaux

<https://www.inrae.fr/evenements/30-ans-du-lepse>

21 & 22
NOVEMBRE
2023

2 place
Pierre Viala
MONTPELLIER



Célébration des 30 ans du LEPSE

21 Novembre 2023 8h30 - 12h20

Amphithéâtre Philippe Lamour, Institut Agro Montpellier

2 place Pierre Viala - MONTPELLIER

08h30 ACCUEIL

09h15 Mot de bienvenue

Pierre MARTRE, Directeur du LEPSE

09h20 Le LEPSE sur le centre INRAE Occitanie-Montpellier

Sylvain LABBÉ, Président du Centre INRAE Occitanie-Montpellier

09h30 Le LEPSE dans l'Institut Agro Montpellier

Carole SINFORT, Directrice de l'Institut Agro Montpellier

09h40 Aux origines du LEPSE

Jacques WERY, Directeur de la Politique Scientifique et Partenariale de l'Institut Agro Montpellier

09h50 Le projet scientifique initial, de la "commande" aux intuitions collectives

François TARDIEU, Ex Directeur du LEPSE

10h00 L'Institut de Biologie Intégrative des Plantes : une nouvelle discipline à bord d'un nouveau bâtiment ?

Thierry SIMMONEAU, Ex Directeur du LEPSE

10h10 Phénotypage : quand l'écophysiologie change de nom avant de se marier avec la génétique

Bertrand MULLER, Ex Directeur du LEPSE

10h20 Film : Les installations expérimentales et les métiers du LEPSE

Myriam DAUZAT, Directrice Adjointe du LEPSE

10h30 PAUSE CAFÉ

11h00 Le LEPSE à l'INRAE

Christian HUYGHE, Directeur Scientifique Agriculture, INRAE

11h10 Trajectoire du LEPSE dans le département Environnement & Agronomie

Laurent BRUCKLER, Ex Chef de Département Environnement & Agronomie,
Ex Président du Centre INRA de Montpellier

11h20 Le LEPSE et la structuration nationale et européenne du phénotypage

Stéphane AYMERICH & Gilles AUMONT, Délégués aux infrastructures de recherche d'INRAE

11h30 Le LEPSE vu par le département Biologie et Amélioration des Plantes

Peter ROGOWSKY, Chef de Département Adjoint Biologie et Amélioration des Plantes

11h40 Le LEPSE vu par le département AgroEcoSystem

Sylvain PELLERIN, Chef de Département Adjoint AgroEcoSystem

11h50 Le LEPSE face aux enjeux de diversification et d'adaptation au changement climatique

Pierre MARTRE, Directeur du LEPSE

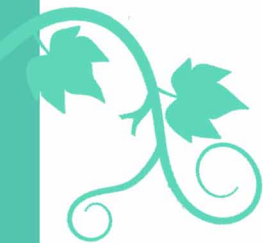
12h10 Conduite de la culture : l'oubliée des analyses génétiques

Aude COUPEL-LEDRU, Chargée de Recherche INRAE, LEPSE

12h20 Sur les épaules du LEPSE : recherche de convergence pour l'adaptation des cultures

Randall WISER, Directeur de Recherche INRAE, LEPSE

12h30 FIN



From Plant ecophysiology to crop yield A tribute to the career of François Tardieu

November 21, 2023 14h15 - 18h10

Amphithéâtre Philippe Lamour, Institut Agro Montpellier

2 place Pierre Viala - MONTPELLIER

14h15 - ARRIVAL AND REGISTRATION

14h30 Welcome address

Bertrand MULLER & Pierre MARTRE, LEPSE, INRAE, Montpellier, France

14h35 The need for an agricultural revolution and a role for plant science

Bill DAVIES, Lancaster University, The UK

14h52 From one to infinity. François and population size expansion in genetic studies of environmental adaptation

Alain CHARCOSSET, GQE, INRAE, Le Moulon, France

15h09 Crop ecophysiology and modelling - François and the nexus

Graeme HAMMER, University of Queensland, Brisbane, Australia

15h26 François: A good friend doing "hard science"

Jean-Marcel RIBAUT, Integrated Breeding Platform, Mexico

15h43 Harnessing the power of science to overcome the challenges of the Anthropocene: LEPSE and the legacy of François Tardieu

Wendy SILK, University of California Davis, USA

16h00 COFFEE BREAK

16h30 François in Belgium

Xavier DRAYE, Earth and Life Institute, Agronomy, Université catholique de Louvain, Louvain-la-Neuve, Belgium

16h47 What is a good model?

Fred VAN EEUWIJK, Biometris, Mathematical and Statistical Methods, Wageningen University and Research,
Wageningen, The Netherlands

17h04 From concept to commercial varieties

Alain MURIGNEUX, Limagrain Europe, Chappes, France

17h21 A 15-year cruise with François on the ocean of plant responses to temperature, churned by spatial and temporal scales

Boris PARENT, LEPSE, INRAE, Montpellier, France

17h38 Can we really contribute to improve yield in dry areas

François TARDIEU, LEPSE, INRAE, Montpellier, France

18h10 ADJOURNED

Plant ecophysiology in the face of innovations and climate change

November 22, 2023 08h00 - 18h00

Amphithéâtre Philippe Lamour, Institut Agro Montpellier

2 place Pierre Viala - MONTPELLIER

08h00 - ARRIVAL AND REGISTRATION

08h30 Welcome address

Pierre MARTRE, LEPSE, INRAE, Montpellier, France

Session I: How can big data improve our understanding of plant ecophysiology?

Chairs: Anne PELLEGRINO / Boris PARENT

08h40 Keynote: Artificial Intelligence recipes for improving our understanding of crop growth and yield forecasting

Ioannis ATHANASIADIS, Wageningen Data Competence Center and Geo-Information
Science & Remote Sensing Lab, Wageningen University and Research,
Wageningen, The Netherlands

09h05 Using interpretable machine learning to identify climatic drivers of yield failure

Lily SWEET, Helmholtz Centre for Environmental Research - UFZ, Leipzig, Germany

09h20 Plant modeling: learning plants or teaching machines

Christian FOURNIER, LEPSE, INRAE, Montpellier, France

09h35 Make the link between metabolism and plant performance through modelling

Yves GIBON, BFP, INRAE, Bordeaux, France

09h50 Panel Discussion

10h20 - COFFEE BREAK

Session II: Ecophysiology and modelling, driving advances in plant phenomics

Chairs: Christine GRANIER / Bertrand MULLER

10h50 Keynote: Extracting relevant traits from phenotyping platforms: Beyond high-throughput

Lorenç CABRERA-BOSQUET, LEPSE, INRAE, Montpellier, France

11h15 Using model outputs to prototype new phenomic methods and machine learning techniques

Scott CHAPMAN, University of Queensland, Brisbane, Australia

11h30 Assessing crop plants stress response by non-invasive phenotyping

Kerstin NEWMANN, IPK, Gatersleben, Germany

11h45 Phenotyping across borders – national to international, below to above ground, controlled to natural environment

Astrid JUNKER, Syngenta, Halle, Germany

12h00 Panel Discussion

12h30 - LUNCH

Session III: Renewing ecophysiological approaches to meet the challenges of climate change

Chairs: Jessica BERTHELOOT / Benoit PALLAS

14h00 **Keynote: Extreme climatic events and plant production: new challenges for plant ecophysiologicalists?**

Thierry SIMONNEAU, LEPSE, INRAE, Montpellier, France

14h25 **Does a first thermal stress impact plant response during a second stress? A case study in Sorghum**

Christine GRANIER, AGAP Institut, INRAE, Montpellier, France

14h40 **A plant micro-hydrological journey to phenotypes : There and back again**

Valentin COUVREUR, Earth and Life Institute, Agronomy, Université catholique de Louvain, Louvain-la-Neuve, Belgium

14h55 **Challenges in assessing climatic risk to crops**

Heidi WEBBER, ZALF, Müncheberg, Germany

15h10 **Panel Discussion**

15h40 **COFFEE BREAK**

Session IV: Contributions of ecophysiology and modeling to GxE analysis: from platforms to fields

Chairs: Aude COUPEL-LEDRU / Randall WISSER

16h10 **Keynote: Uncovering how plant roots sense soil stresses**

Malcolm BENNETT, Division of Plant and Crop Sciences, School of Biosciences, University of Nottingham, UK

16h35 **Modeling individual plant growth in variety mixtures to understand phenotypic plasticity**

Jérôme ENJALBERT, GQE, INRAE, Le Moulon, France

16h50 **Integrating traits at different scales to predict GxE: where statistics and ecophysiology meet**

Daniela BUSTOS KORTS, Universidad Austral de Chile, Valdivia, Chile

17h05 **Transpiration response to high VPD and transpiration efficiency (TE): Where are we today**

Vincent VADEZ, IRD, Dakar, Sénégal

17h20 **Panel Discussion**

17h50 **Concluding remarks**

18h00 **SEMINAR ADJOURNED**

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