



PLANT HEALTH and QUALITY
SUMMER SCHOOL – 2018
Angers, FRANCE
Scientific and social program

Overview of the scientific program.....	2
Detailed scientific and social program.....	4
List of speakers.....	11
List of organizers and facilitators.....	12
Partners.....	13

PLANT HEALTH and QUALITY

SUMMER SCHOOL – 2018

Overview of the scientific program

Slight amendments may occur until the opening of the summer school

Plant Health sessions:

- Plant pathogenic bacteria, genomics, translational taxonomy
- Plant pathology : new technologies for disease diagnostic and pathogen detection
- Weed control in intercropping systems
- Chemical ecology of insect crop pests
- Plant resistance inducers (elicitors) in crop protection
- Parasitic plants

Plant Quality sessions:

- Fruit post harvest quality
- Architecture characterization of ornamental plant
- Plant breeding and varietal resistance
- Physiological quality of seeds / modelling plant architecture
- Phenotyping for seed germination and plant symptoms

Studying in Angers and preparing a PhD thesis in France

- Presentation of the Plant Science campus
- General information by the International Office (University of Angers)
- Roundtable with PhD students

Hands-on activities

- Databases and web tools for pathogen identification in Plant Health
- Droplet digital PCR applied to plant health and quality
- e-phytia, web applications and mobile tools specialized in Plant Health
- Bioinformatic with Galaxy for Dummies
- Analytical and sensory methods to assess fruit quality
- Quantitative trait Loci
- Aphid olfactory choice experiments
- Electrophysiological recordings of insect antennae
- qPCR - a methodology to quantify defense gene expression in plant
- Characterization of parasitic plant- host plant relationship
- Plant photosynthetic activity
- Architectural analysis of plant by 3D digitization
- Phenotyping -Image analysis and study of germination
- Phenotyping - Quantification of disease severity using image analysis

Scientific visits

- [SNES GEVES](#) (Variety and Seed Study and Control Group)
- [LSV-ANSES](#) (Plant Health Laboratory)
- [CIRM-CFBP](#) (French Collection of Plant associated Bacteria)
- [PHENOTIC](#) (instrumentation for high throughput plant phenotyping)
- [ITEIPMAI](#) (French research institute for perfume, medicinal and aromatic plants)
- [Roses Loubert](#) (national collection, old rose garden)
- [FNAMS](#) (National federation of seed growers)
- [Tropical greenhouse of the National Museum of Natural History, Paris](#)

PLANT HEALTH and QUALITY
SUMMER SCHOOL – 2018
Detailed scientific and social program

Slight amendments may occur until the opening of the summer school

Monday 2nd July

9:00-9:30

Welcome coffee and Distribution of the Welcome packs

9:30-10:30

Presentation of the Plant Health and Quality Summer School by Marion Fischer-Le Saux & Pascal Poupard (scientific coordinators of the Summer School) - Presentation of the participants and their research interests / experiences

10:45 - 11:00 Opening ceremony introduced by the President of the University of Angers (with all the Summer Schools)

11:00 – 12:00

Plenary conference (with all the Summer Schools)

12:00-15:00 Welcome Barbecue

Afternoon

FREE - SHOPPING

Tuesday 3rd July

Plant Health Session 1: Plant pathogenic bacteria, genomics, translational taxonomy

9:00-10:00 Conference

Carolee T. Bull, Pennsylvania State University, USA

10:00-10:30 Coffee Break

10:30-12:00

Workshop: Databases and web tools for pathogen identification in Plant Health

Carolee T. Bull, Pennsylvania State University, USA and Marion Fischer-Le Saux, IRHS-Angers

12:00-14:00 Lunch

14:00-15:15 / 15:30-16:45

Visit of the LSV (Plant Health Laboratory) - ANSES (Agency for Food, Environmental and Occupational Health & Safety)

Pascal Gentit, ANSES-Angers

Visit of CIRM-CFBP: a microbial resource center

Perrine Portier, IRHS-Angers

Social Program at evening: visit of Angers by train - Castle of Angers

Wednesday 4th July

Plant Health Session 2 : Plant pathology : new technologies for disease diagnostic and pathogen detection

9:00-10:00

Conference: Plant partial resistance against fungal pathogens

Romain Berruyer, IRHS-Angers

10:00-10:30 Coffee Break

10:30-12:00

Workshop : Bioinformatic with Galaxy for Dummies

Benoît Remenant, Pascal Gentit, Mathieu Rolland, ANSES-Angers

12:00-14:00 Lunch

14:00-15:30/ 15:30-17:00

Workshop 1 (Groups A/B): e-phytia, web apps and mobile tools specialized in Plant Health

Jonathan Gaudin, INRA –Bordeaux

Workshop 2(Groups A/B): Droplet digital PCR applied to plant health and quality

Mathieu Rolland, Méryl Le Gallo, ANSES-Angers

Social programme at evening: Summer schools challenge

Thursday 5th July

Plant Quality Session 1: Fruit post-harvest quality

9:00 - 12:00

Workshop: Analytical and sensory methods to assess fruit quality

Ronan Symoneaux, Marie Dufrechou, GRAPPE- ESA, Angers

12:00-14:00 Lunch at ESA

Plant health Session 3: Weed control in intercropping systems

14:00-15:30 Conference

Guénaëlle Hellou, LEVA- ESA, Angers

15:30-17:00

Visit of field experiments at the FNAMS (National federation of seed growers)- Bus transport

Friday 6th July

9:00-12:00: Student personal work

Pascal Poupard, Marion Fischer-Le Saux IRHS- Angers

12:00-14:00 Lunch

14:00-15:30 / 15:30- 17:00

Plant Quality Session 2: Architecture characterization of ornamental plant

Workshop 1 (group A/B): plant photosynthetic activity

Lydie Huché-Thélier, IRHS- Angers

Workshop 2 (group B/A): Architectural analysis of plant by 3D digitization

Laurent Crespel & Philippe Morel-Chevillé, IRHS, Angers

Saturday 7th July

Atlantic seacoast day

Sunday 8th July

Visit of Terra Botanica, Angers

Monday 9th July

Plant Quality Session 3: Plant breeding and varietal resistance

9:00-10:15 Conference

Apple breeding program

François Laurens, IRHS- Angers

10:15-10:30 Coffee Break

10:30-12:00 Activities of the Variety and Seed Study and Control Group, presentation of the pathology laboratory, assessment of varietal resistance

Nathalie Augé and Valérie Grimault, GEVES (Variety and Seed Study and Control Group)-Angers

12 :00-14 :00 Lunch

14:00-15:30

Workshop : Quantitative trait Loci

Claude Koutouan, IRHS-Angers & Laurence Hibrand Saint Oyant IRHS-Angers

15 :45-17:00 conference

A general introduction into epigenetics and its role in the control of gene expression

Etienne Bucher IRHS, Angers

Social program at evening : kayak or bicycle ride along the Loire River

Tuesday 10th July

Plant Health Session 4: Chemical ecology of insect crop pests

9:00-10:00: Conference

Carme Quero, Institute of Advanced Chemistry of Catalonia, Spain

10:00-10:30 Coffee Break

10:30-12:00

Presentation of Research on insects in IGEP-EGI Team

Sylvia Anton, IGEP-EGI- Angers

12:00-14:00 Lunch

14:00-15:15/ 15 :45-17 :00

Workshop 1 (Group A/B) : Aphid and parasitoid olfactory choice experiments

Martin Luquet and Marie Gay IGEP-EGI, Angers

Workshop 2 (Group B/A): Electrophysiological recordings of Insect antennae

Olympe Tritto and Sylvia Anton IGEP-EGI, Angers

Wednesday 11th July

Plant Health Session 5: Plant resistance inducers (elicitors) in crop protection

9:00-9:30

Matthieu Gaucher - IRHS, Angers

9:30-10:00 Coffee Break

10:00-12:00

Workshop: qPCR quantitative polymerase chain reaction - a methodology to quantify defense gene expression in plant

Matthieu Gaucher, Brice Marolleau and Romain Warneys, IRHS-Angers

12:00-14:00 Lunch

Plant Quality session 4: Physiological quality of seeds / modelling plant architecture

14:00-15:00 Conference

Physiological quality of seeds and impact of abiotic stresses on seed development

Jérôme Verdier, IRHS-Angers

15:30-16:30 Conference

Modelling to understand the complexity of plant architecture construction

Jessica Bertheloot, IRHS- Angers

Thursday 12th July

Plant health session 6: characterization of parasitic plant-host plant relationship

9:00-10:00 Conference and presentation of workshop activities

Grégory Montiel & Jean-Bernard Pouvreau LBPV (Laboratory of plant biology and pathology)
-University of Nantes

10:00-10:30 Coffee Break

10:30-12h Workshop: parasitic plant seed preparation

12:00-14:00 Lunch

14:00-15:00 Workshop 1 (group A/B): parasitic plant seed germination: a Strigolactone Bioassay, JB Pouvreau

15:00-16:00 Workshop 2 (group B/A): parasitic plants - host plant interaction: minirhizotron experiment, G. Montiel

16:00-17:00 plate reading and workshop conclusion

Friday 13th July

Visit of Paris - departure Angers 5:30 bus transport

10:30-12:00 Guided tour in the alpine garden and visit of the tropical greenhouse of the National Museum of Natural History (MNHN)

12:00-14:00 picnic in the Gardens of the MNHN

After 14:00 Free time, Possibility of return from Paris at 21:00 by bus

Saturday 14th July and Sunday 15th July

Free time in Paris (Night in Paris and Return transportation not included, to be organized by the students)

Monday 16th July

Plant Quality Session 5: Phenotyping for seed germination and plant symptoms

9:00-10:15: conference and visit of the Phenoplant facilities

Tristan Boureau, IRHS-Angers

10:30-12:00am

Visit of SNES GEVES (Variety and Seed Study and Control Group): Phenosem facilities

Didier Demilly, GEVES- Angers

12:00-14:00 Lunch

14:00-15:15 / 15:45-17:00

Workshop 1: Phenotyping -Image analysis and study of germination

Didier Demilly (GEVES, Angers)

Workshop 2: Phenotyping - Quantification of disease severity using image analysis

Tristan Boureau (IRHS, Angers)

Tuesday 17th July

Studying in Angers and preparing a PhD thesis in France

9:00 – 10:00

General information about doctoral studies in France by the International Office of the University of Angers and visit at the SUIO-IP (University of Angers)

Céline David, Adeline Monchâtre International office of the University of Angers, Hélène Tricoire-Leignel, International office of Faculty of Science, University of Angers

10:15- 10:35

Presentation of VEGEPOLYS (competitive cluster)

10:35-11:00

Presentation of the Federative research structure on Plant Quality and Health

Marion Fischer-Le Saux & Pascal Poupard, scientific coordinators of the summer school

11:00-12:00

General information about PhD fellowships - Roundtable with foreign students studying in Angers and researchers at IRHS, Angers

M. Fischer-Le Saux, P Poupard IRHS, Angers- N. Dueso, T. Redjala, RFI Objectif Vegetal

12:00-14:00 Lunch

14:00-17:00

Oral presentation of the students works and projects

M. Fischer-Le Saux, P. Poupard IRHS, Angers, N. Dueso, T. Redjala, RFI Objectif Vegetal, University of Angers

Wednesday 18th July

9:00-12:00

Visit of iteipmai -The French research institute for perfume, medicinal and aromatic plants

Laurence Hibrand Saint Oyant & Tatiana Thouroude - IRHS, Angers

12 :00-14 :00 Lunch (Picnic in a rose garden)

14:00-15:00

Visit of an old rose garden (Roses Loubert, Rosier s/ Loire)

Laurence Hibrand Saint Oyant & Tatiana Thouroude - IRHS, Angers

16 :00-17:00

Closing ceremony of the summer school Plant Health and Quality in the presence of Philippe Simoneau Vice-President (Research) University of Angers

PLANT HEALTH and QUALITY SUMMER SCHOOL – 2018

List of speakers

ANTON Sylvia, IGEPP-EGI-INRA – Angers (FR)
AUGE Nathalie, GEVES – Angers (FR)
BERRUYER Romain, IRHS-University of Angers (FR)
BERTHELOOT Jessica, IRHS-INRA – Angers (FR)
BOUREAU Tristan, IRHS – University of Angers (FR)
BUCHER Etienne, IRHS-INRA – Angers (FR)
CRESPÉL Laurent, IRHS-Agrocampus Ouest – Angers (FR)
DAVID Céline, International office, University of Angers (FR)
DEMILLY Didier, GEVES – Angers (FR)
DUFRECHOU Marie, GRAPPE – ESA - Angers (FR)
FISCHER-LE SAUX Marion, IRHS-INRA – Angers (FR)
GAUCHER Matthieu, IRHS-INRA – Angers (FR)
GAY Marie, IGEPP-EGI – Angers (FR)
GENTIT Pascal, ANSES – Angers (FR)
GRIMAUULT Valérie, GEVES – Angers (FR)
HELLOU Guénaëlle, LEVA - ESA – Angers (FR)
HIBRAND SAINT OYANT Laurence, IRHS-INRA – Angers (FR)
HUCHE-THELIÉ Lydie, IRHS-INRA – Angers (FR)
KOUTOUAN Claude, PhD student, IRHS – Angers (FR)
LAURENS François, IRHS-INRA – Angers (FR)
LE GALLO Méryl, ANSES-Angers (FR)
LUQUET Martin, IGEPP-EGI – Angers (FR)
MAROLLEAU Brice, IRHS-INRA – Angers (FR)
MONCHÂTRE Adeline, International office, University of Angers (FR)
MONTIEL Grégory, LBPV - University of Nantes (FR)
MOREL-CHEVILLET Philippe, IRHS-INRA – Angers (FR)
PORTIER Perrine, IRHS-INRA – Angers (FR)
POUPARD Pascal, IRHS-University of Angers (FR)
POUVREAU Jean-Bernard, LBPV - University of Nantes (FR)
REDJALA Tanegmart, Business Developer, RFI Objectif Végétal, Angers (FR)
REMANANT Benoît, ANSES-Angers (FR)
ROLLAND Mathieu, ANSES-Angers (FR)
SYMONEAUX Ronan, GRAPPE – ESA - Angers (FR)
THOUROUDE Tatiana, IRHS-INRA – Angers (FR)
TRICOIRE-LEIGNEL Hélène, International office of the Faculty of Science, University of Angers (FR)
TRITTO Olympe, IGEPP-EGI – Angers (FR)
VERDIER Jérôme, Researcher, IRHS-INRA – Angers (FR)
WARNEYS Romain, IRHS – Angers (FR)

Confirmed invited speakers

BULL Carolee, Pennsylvania state University (USA)
QUERO Carme, Institute of Advanced Chemistry of Catalonia (SP)
GAUDIN Jonathan, INRA – Bordeaux (FR)

PLANT HEALTH and QUALITY
SUMMER SCHOOL – 2018
List of organizers and facilitators

Scientific Coordinators:

FISCHER-LE SAUX Marion, IRHS-INRA – Angers (FR)
POUPARD Pascal, IRHS-University of Angers (FR)

Organisation, logistics:

GIACOMINI Aurélie, Project Coordinator, University of Angers (FR)
HUBERT Fabienne, Administrative Supervisor, University of Angers (FR)
ACKA Nuriye, expenditure management, University of Angers (FR)
QUEVREUX Fanny, expenditure management, University of Angers (FR)
ROUSSEAU Audrey, University of Angers (FR)
DEGRAVE Alexandre, Agrocampus Ouest (FR)
POUTIER Nathalie, Agrocampus Ouest (FR)

Other organisers and facilitators:

DUESO Nadine, Operational Director, RFI Objectif Végétal, Angers (FR)
GROLLEAU Françoise, Vice-President (International Relations) University of Angers (FR)
TUDEAU Marie-Paule, International office of the Faculty of Science, University of Angers (FR)

Buddy students:

To be recruited

PLANT HEALTH and QUALITY
SUMMER SCHOOL – 2018

Partners



UNIVERSITÉ DE NANTES



