

Scientific programme: 3rd International Plant Spectroscopy
Conference, 2022, Nantes, 12-15 September

Monday	12th September
12h00-13h30	Registration
13h30-14h15	Opening Ceremony
Session 1	FT-IR and Raman spectroscopies and imaging -1-
14h15-14h55	Keynote lecture Monika Szymańska-Chargot (Polish Academy of Sciences, Warsaw, Poland) <i>“Raman spectroscopy and imaging in investigation of plant biomolecules”</i>
14h55-15h15	Ana González Moreno (Universidad de Málaga, Spain) <i>“Depth profiling of tomato fruit cuticle during development using Confocal Raman Microscopy”</i>
15h15-15h35	Andrea Ponzecchi (University of Copenhagen, Denmark) <i>“Raman microspectroscopy of pristine and brown rot degraded acetylated wood at controlled relative humidity”</i>
15h35-15h55	Raphaël Coste (Université de Reims Champagne Ardenne, INRAE, France) <i>«Raman microspectroscopy and AFM-IR as tools to characterize the physicochemical properties of plant cell walls at the nanoscale”</i>
15h55-16h10	Flash presentations by poster authors Stefan Kolašinac, Ilinka Pećinar, Hannele Tuominen
16h10-16h40	Coffee break
16h40-17h00	Angelina D’Orlando (INRAE, Nantes, France) <i>“AFM/Raman micro-spectroscopy coupling to study the correlation between mechanical properties and chemical composition of plant cell walls”</i>
17h00-17h20	Abdallah Alayan (Université de Montpellier, France) <i>“Impregnation of emulsion in banana leaf for phytosanitary application by means of vibrational micro spectroscopies”</i>
17h20-17h40	Alexander Veber (Humboldt-Universität zu Berlin, Germany) <i>“In situ imaging of the local orientation of cellulose fibrils in Sorghum bicolor secondary cell walls”</i>
17h40-17h55	Flash presentations by poster authors Sylvie Durand, Miriam Aledda, Julien du Pasquier
18h30-19h30	Ice breaker

Tuesday	13th September
Session 2	Chemometrics
8h30-9h10	Keynote lecture Ana de Juan (Universidad de Barcelona, Spain) “Image fusion to investigate the structure of vegetal tissues“
9h10-9h30	Anne-Sophie Blervacq (Université de Lille, France) <i>«Proprioception in plants? How flax faces up to gravitropic adversity“</i>
9h30-9h50	Oriane Morel (Université de Lille, France) <i>“Component specific Raman imaging of Arabidopsis cell walls by pixel resolved reference spectra fitting“</i>
9h50-10h05	Flash presentations by poster authors Daniela Antonova, Kevin Vidot, Ivana Grubor
10h05-10h35	Coffee break
10h35-10h55	Lisbeth Garbrecht Thygesen (University of Copenhagen, Denmark) <i>"Role and location of extractives during incipient brown rot decay of Norway spruce heartwood explored using Raman Microspectroscopy"</i>
10h55-11h15	Edouard Pesquet (Stockholm University, Sweden) <i>“Unravelling the function and spatial control of specific lignin chemistries during the development of different wood cell types and morphotypes”</i>
11h15-11h35	Els Bobelyn (Flanders Centre of Postharvest Technology, Belgium) <i>“Reverse calibration transfer between desktop and handheld spectrofotometer for prediction of optimal picking date for Conference pears”</i>
11h35-11h50	Flash presentations by poster authors Eduard Pesquet, Johannes Wellmann, Patrycja Pękala
11h50-12h00	Jeol presentation
12h00-12h30	Poster session =P1-P10
12h30-14h00	Lunch break
Session 3	NMR spectroscopy and Imaging -1-
14h00-14h40	Keynote lecture John Ralph (University of Wisconsin-Madison, USA) “NMR of lignins and whole plant cell wall materials: Improved assignments, and discovery of new lignin components”
14h40-15h00	Céline Moreau (INRAE, Nantes, France) <i>“Contribution of ¹³C CP/MAS NMR to the comprehension of enzyme action on cellulose fibers”</i>
Session 4	Mass, X-ray and photoacoustic spectroscopies -1-
15h00-15h05	Introduction
15h05-15h25	Mathieu Fanuel (INRAE, Nantes, France) <i>«Spatial correlation of water distribution and fine structure of arabinoxylans in developing wheat grain”</i>
15h25-15h45	Alexis Pirat (Université de Toulouse, INP-PURPAN, France) <i>“Global metabolomic analysis of steviol glycosides”</i>
15h45-16h05	Flash presentations by poster authors Cécile Barron, Camille Alvarado, Edwige Audibert, Kanchan Vishwakarma,
16h05-16h35	Coffee break
16h35-18h05	Technical Workshops

Wednesday	14th September
Session 5	Autofluorescence based techniques and Imaging
8h30-9h10	Keynote lecture Giovanni Agati (Istituto di Fisica Applicata “Nello Carrara”, Florence, Italy) “Talking about <i>in situ</i> fluorescence spectroscopy and plant phenolic compounds“
9h10-9h30	Marie Berger (INRAE, Nantes, France) <i>« Fluorescence macrovision to assess chemical tissue variability in whole cross-sections of maize stems »</i>
9h30-9h50	Anne-Laure Chateigner-Boutin (INRAE, Nantes, France) <i>“Following autofluorescent compounds of developing wheat grain by autofluorescence multispectral macroscopic imaging”</i>
9h50-10h10	William Gardi (Stockholm University, Sweden) <i>“Fluorescent dyes discriminating cell wall glycans for quantitative glycomic imaging with subcellular resolutions”</i>
10h10-10h40	Coffee break
Session 6	Mass, X-ray and photoacoustic spectroscopies -2-
10h40-11h00	Lucia Cavigli (Istituto di Fisica Applicata “Nello Carrara », Sesto Fiorentino Italy) <i>“Photoacoustic sensing as a non-destructive optical tool to detect seed-borne phytopathogens”</i>
11h00-11h20	Camille Rivard (SOLEIL Synchrotron, Gif sur Yvette, France) <i>“X-Ray fluorescence imaging and X-ray absorption for plant studies on LUCIA beamline at SOLEIL synchrotron”</i>
11h20-11h40	Marie-Laure Pons (INRAE, Aix en Provence, France) <i>“Contribution of X-ray absorption spectroscopy techniques to the understanding of cadmium fate in plants: evidence of sulfur-bound CD in the CD-hyperaccumulator Solanum nigrum and the non-accumulator Solanum Melongena”</i>
11h40-11h55	Flash presentations by poster authors Sally Ralph, Pierre-Nicolas Boulc'h, Catherine Deborde
11h55-12h30	Poster session P11-P19
12h30-14h00	Lunch break
Session 7	FT-IR and Raman spectroscopies and imaging -2-
14h00-14h40	Keynote lecture Andras Gorzsás (Umeå university, Sweden) “Fourier-transform infrared (FTIR) spectroscopic imaging for plant sciences”
14h40-15h00	Nikolay Kotov (KTH Royal Institute of Technology, Stockholm, Sweden) <i>“Characterization of nanocellulosic materials at ultrahigh lateral resolution with nano-infrared spectroscopy”</i>
15h00-15h20	Aude Lereu (Aix Marseille Univ, France) <i>“Physical and chemical properties of plant cell walls by multimodal near field optical microscopy”</i>
15h20-15h40	Mustafa Kansiz (Photothermal Spectroscopy Corp, Santa Barbara, USA) <i>“Enhanced tri-modal optical-photothermal infrared (O-PTIR) spectroscopy- Advances in spatial resolution, sensitivity & tri modality (IR, Raman Fluorescence)”</i>
15h40-16h00	Sabrina Diehn (The Hebrew University of Jerusalem, Rehovot, Israel) <i>“Structural and chemical properties underlying lodging resistance in TEF “</i>

16h00-16h30	Coffee break
16h30-18h00	Technical Workshops
	Social dinner

Thursday	15th September
Session 8	NMR spectroscopy and imaging -2-
9h00-9h40	Keynote lecture Annick Moing (INRAE Bordeaux, IBVM Villenave Dornon, France « <i>NMR-based metabolomics of fruits and crops</i> »
9h40-10h00	Guilhem Pagés (INRAE, St Genès-Champanelle, France) <i>“Can metabolic MRI be useful to image tomato metabolism ?”</i>
10h00-10h20	Maja Musse (INRAE, Rennes, France) <i>“Tissue characterisation of potato tubers using localised MRI T2 relaxometry”</i>
10h20-10h40	Nuix M (INRAE, St Genès-Champanelle, France) <i>« Low-field MRI: a useful tool to characterize water in intact plants »</i>
10h40-11h10	Coffee break
11h10-11h50	Feedback on the technical workshops
11h50-11h55	« Biomolecules 2022 Best Poster Awards »
11h55-12h05	Closing Remarks
12h00-12h30	Meal basket