

## **Program**

11.09.2023 (MONDAY)

### **12:00 – 18:00**

Workshops (Rooms for smaller workshops can be provided upon request.)

### **18:00 – 19:00**

Registration

### **19:00 – 21:00**

Welcome Reception

Entrance hall of the University of Applied Science Dresden (Pillnitzer Platz 1-2, 01326 Dresden)

12.09.2023 (TUESDAY)

### **08:00 – 08:45**

Registration

Conference hall of the Saxon State Office for Environment, Agriculture and Geology (Söbrigener Straße 3A, 01326 Dresden)

### **08:45 – 10:00**

Welcome, Opening Addresses (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

- Prof. Dr. Frank Ordon, President of the Julius Kühn Institut (JKI) – Federal Research Centre for Cultivated Plants
- Dr. Falk Hohmann, Vice President of the Saxon State Office for Environment, Agriculture and Geology (LfULG)
- Prof. Dr. Marina Vogel, Dean of the Faculty of Chemical Engineering of the, University of Applied Science Dresden (HTW)
- Dr. Francois Laurens, President of International Society for Horticultural Science (ISHS)
- Prof. Dr. Henryk Flachowsky, head of the JKI's Institute for Breeding Research on Fruit Crops Dresden-Pillnitz, symposium convener

### **10:00 – 10:30**

Coffee Break

## 10:30 – 13:00

Session 1 – Genetic Resources (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Matthew Ordidge

- **Exploration of new sources of sweet cherry genetic diversity prospected in Azerbaijan, Caucasus, supposed center of origin of *Prunus avium***  
Marie Brault, Teresa Barreneche, Mehraj Abbasov, Mirko Schuster, Gregorio Lopez-Ortega, José Quero García
- **Genetic resources, a source of traits for pome fruit breeding**  
Anna Dalbosco, Simone Bühlmann-Schütz, Luzia Lussi, Bettina Hänni, Jakob Schierscher, Markus Kellerhals, Andrea Patocchi
- **Leveraging the Swiss Apple Core Collection for future apple breeding**  
Giovanni Broggini, Simone Bühlmann-Schütz, Bruno Studer
- **Pomological and molecular characterization of apple cultivars of the German Fruit Genebank**  
Lea Broschewitz, Monika Höfer
- **The conservation of fruit germplasm in Bosnia and Herzegovina**  
Gordana Djuric, Nikola Micic
- **Microsatellite fingerprinting of the ARC peach collection**  
Werner-Marcel Pieterse, Lawrence Kwalimba, Kenneth Tobutt
- **Optimization of a genetic traceability protocol for safeguarding chestnut production**  
Daniela Torello Marinoni, Vera Pavese, Paola Ruffa, Lorenzo Antonio Marino, Alberto Acquadro, Lorenzo Barchi, Nadia Valentini, Roberto Botta
- **Analysis of fruit samples with different ploidy levels using molecular markers**  
Joerg Plieske, Andreas Peil, Dora Pinczinger, Monika Höfer, Henryk Flachowsky, Dagmar Kulosa, Thomas Gross, Eva Grafahrend-Belau, Andreas Polley, Martin Ganal, Heike Gnad
- **Proposition of a SNP set to replace SSRs for standardized cultivar identification in apple**  
Hélène Muranty, Caroline Denancé, Aurélien Petiteau, Nicholas P. Howard, Diego Micheletti, Beatriz García-Gómez, Maria José Aranzana, Carole Confolent, Charles Poncet, Stijn Vanderzande, Matthew Ordidge, Cameron Peace, Charles-Eric Durel
- **Different mechanisms of 2n gamete formation as route for sexual polyploidization in apple (*Malus x domestica*)**  
Nico De Storme, Han Palmers

## 13:00 – 14:00

Lunch

## 14:00 – 15:30

Session 2 – Resistance evaluation and QTL detection (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Felicidad Fernandez Fernandez (requested)

- **Can the choice of rootstock reduce damages caused by European Canker in apple orchards?**  
Larisa Gustavsson, Jonas Skytte af Sättra, Oksana Korniienko, Marina Kuzmenkova, Darius Kviklys
- **Phenotypic variability and plasticity of stem and leaf-based traits in olive cultivars to drought resilience**  
Siham Wakib, Ahmed El Bakkali, Hayat Zaher, Abdelilah Meddich, Cherkaoui El Modafar, Karim Barkaoui, Eric Garnier
- **Identification of apple cultivars less susceptible to apple blotch disease**  
Sophie Richter, Monika Höfer, Anne Bohr, Sascha Buchleither, Henryk Flachowsky, Thomas Wöhner
- **Investigation on apple blotch resistance of *Malus baccata* 'Jackii'**  
Matthias Pfeifer, Sophie Richter, Thomas Wöhner, Andreas Peil, Moritz Knoche, Henryk Flachowsky
- **Preliminary identification of QTLs associated with fire blight resistance in pear**  
Francesco Pacini, Lorenzo Bergonzoni, Luca Dondini, Roberto Gregori, Assunta Bertaccini, Stefano Tartarini
- **QTL mapping for fire blight resistance in F2 generation of *Malus fusca* MAL0045**  
Ofere Francis Emeriewen, Henryk Flachowsky, Andreas Peil

**15:30 – 16:00**

Coffee Break

**16:00 – 17:45**

Session 3 – Genome wide association studies and genomic prediction (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Maria José Aranzana

- **Genome-wide association study of flowering date in olive tree to understand the adaptation to climate change**  
Laila Aqbouch, Bouchaib Khadari, Philippe Cubry, Omar Abou-Saaid, Gautier Sarah, Hayat Zaher, El Bakkali Ahmed, Pierre Mournet, Lison Zunino, Evelyne Costes
- **Increasing multi-pest and disease resistance in stone fruit trees through genome-wide association studies using two apricot and peach core collections**  
Marie Serrie, Alain Blanc, Laurent Brun, Freddy Combe, Amandine Fleury, Freddy Gavanon, Frédéric Gilles, Mathilde Le-Pan, Béatrice Monnet, Véronique Signoret, Sabrina Viret, Jean-Marc Audergon, Bénédicte Quilot-Turion, Morgane Roth
- **Unraveling the genetics of resistance to airborne and soil-borne fungal diseases in cultivated strawberries using the genome-wide association study**  
Amparo Monfort, Gehad Rabie, Konstantinos Alexiou, Pedro Dominguez, Mourad Mnejja
- **GWAS analysis of sweet cherry for MAS**

Katerina Holusova, Jana Cmejlova, Pavol Suran, Ivona Zdarska, Radek Cmejla, Jiri Sedláč, Lubor Zeleny, Jan Bartos

- **GWAS analysis of a germplasm collection of almond unravels the genetic regulation of aroma in fresh and roasted kernels**  
Mario Di Guardo, Brian Farneti, Iuliia Khomenko, Leonardo Luca, Giuseppe Cannizzaro, Francesco Sottile, Stefania Bennici, Stefano La Malfa, Alessandra Gentile, Franco Biasioli, Gaetano Distefano
- **Fine-tuning genomic prediction in peach using additive and non-additive genetic effects for phenology and disease tolerance**  
Morgane Roth, Marie Serrie, Octave Cabel, David Ray, Jean-Marc Audergon, Bénédicte Quilot-Turion
- **Modeling genotype by environment interactions using genomic and environmental data in apple**  
Michaela Jung, Hélène Muranty, Walter Guerra, Beatriz Ester García-Gómez, Marijn Rymenants, Bruno Studer, Giovanni Broggin, Andrea Patocchi

**18:00 – 19:30**

Poster Session (Entrance hall of the University of Applied Science Dresden)

**18:00 – 19:30**

Workshops (Rooms for smaller workshops can be requested in parallel to the poster session.)

13.09.2023 (WEDNESDAY)

**08:30 – 10:15**

Session 4 – The use of pedigree information in breeding research (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Hélène Muranty (requested)

- **Keynote: Kai Voss-Fels**  
**Genetic algorithm-guided allele stacking to develop high yielding, resistant varieties**  
Kai Voss-Fels
- **Apple ground color QTL discovery and characterization in a multi-family population via an IBD approach**  
Stijn Vanderzande, Dr. Eric van de Weg
- **Tracing traits to ancestral origins: streamlined pedigree visualization for efficient crop breeding**  
Nicole Pradas, Federico Jurado-Ruiz, Carles Onielfa, Pere Arús, Maria José Aranzana
- **Deciphering the genetic control of the tolerance to mal secco in lemon through a multi-parental QTL approach**

Mario Di Guardo, Chiara Catalano, Giuseppe Cannizzaro, Giulio Dimaria, Sebastiano Seminara, Martina Cortese, Riccardo Russo, Carmen Arlotta, Michela Troggio, Vittoria Catara, Silvia di Silvestro, Donata Pietro Paolo, Giuseppe Russo, Marco Caruso, Gaetano Distefano, Luca Bianco, Stefano La Malfa, Alessandra Gentile

- **Finding the way in the apple genome - A systematic evaluation of the map problem resulting in a standardized virtual linkage map**

Jonas Skytte af Sättra, Bjarne Larsen, Nicholas P Howard, Larisa Garkava-Gustavsson, Eric van de Weg

- **Opportunities for the use of Identity-By-Descent information in fruit crops**  
Stijn Vanderzande, Nick Howard, Luca Bianco, Diego Micheletti, Michela Troggio, Eric van de Weg

**10:15 – 10:45** Coffee Break

**10:45 – 13:00**

Session 5 – Fruit breeding (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Simone Bühlmann-Schütz (requested)

- **Keynote: Jean-Marc Audergon**  
**Innovative Organic Fruit Breeding and uses" InnOBreed - A targeted approach for maximizing technological, environmental, and social innovation impacts through all over the fruit chain**  
Jean-Marc Audergon, Khaled Djelouah, Danilo Christen, Mariagiulia Marini, Marc Lateur
- **Breeding for fruit quality of highbush blueberry (*Vaccinium corymbosum* L.) at the National Institute of Horticultural Research, Skierniewice, Poland**  
Stanislaw Pluta, Sylwia Keler-Przybylkowicz, Lukasz Seliga, Agnieszka Walencik
- **Phenotype and crossability of synthetic bilberry (*Vaccinium myrtillus* L.) autotetraploids with highbush blueberry (*V. corymbosum* L.)**  
Malgorzata Podwyszynska, Katarzyna Mynett, Monika Markiewicz, Stanislaw Pluta, Agnieszka Marasek-Ciolakowska, Monika Mieszczakowska-Frac
- **Genetic analysis and Breeding of new Passion Fruit Cultivars**  
Alon Samach, Noam Chayut, Michal Ackerman- Lavert, Shiri Sobol, David Jolles, Michael Inlender, Martin Gitonga, Avital Fraenkel- Beery, Hector Candela Anton
- **Pomological evaluation of newly bred and market-established apple varieties**  
Jiri Sedlák, Boris Krska
- **Recent progress in apple breeding at NARO in Morioka, Japan**  
Shigeki Moriya, Taku Shimizu, Ayato Hori, Yutaka Sawamura, Hirohisa Nesumi
- ***Rubus* breeding and supporting research at NIAB East Malling – from public funding to industry consortium**  
Felicidad Fernández Fernández
- N.N.

**13:00 – 14:00**

Lunch

**14:00 – 15:00**

Session 6 – QTL mapping and molecular markers (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Janne Lempe

- **Development and validation of a molecular marker for red-flesh early selection in pear (*Pyrus communis*)**  
Lorenzo Bergonzoni, Giuseppina Caracciolo, Marco Pietrella, Sara Montanari, Lester Brewer, Sara Alessandri, Cecilia Domenichini, Luca Dondini, Richard V. Espley, Andrew C. Allan, Gianluca Baruzzi, Stefano Tartarini
- **Marker-assisted breeding in the IRTA peach and almond scion breeding programs**  
Iban Eduardo, Felipe Pérez de los Cobos, Ioannis Kandylas, Nathalia Zaracho, Ignasi Batlle, Gemma Reig, Luís Asín, Simó Alegre, Werner Howad, Maria José Aranzana, Pere Arús
- **Development of SNP markers for the powdery mildew resistance gene *PI1* in apple**  
Beatriz E. García-Gómez, Simone Buehlmann-Schuetz, Marius Hodel, Andrea Patocchi, Maria José Aranzana
- **Development of SNP molecular markers targeting the major apple scab resistance gene *Rvi14***  
Aurélien Petiteau, Hélène Muranty, Bernard Petit, Caroline Denancé, Maryline Cournol, François Lebreton, Charles-eric Durel, François Laurens

**15:00 – 15:30**

Coffee Break

**15:30 – 17:00**

Session 7 – Fruit quality traits (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Stefano Tartarini

- **Recent advancements on the cyanogenic glucoside pathway and variability of the *bHLH1-5* gene expression in almond**  
Raquel Sánchez-Pérez, Mr. Jesús Guillamón Guillamón, Maria Rosa Pete, Maria Buitrago, Manuel Piero, Alexandra B. Maimann, Federico Dicenta, Birger L. Moller
- **Deciphering the molecular mechanisms of enzymatic browning of apple pulp**  
Francisco Javier Bielsa-González, Jerome Grimplet, Patricia Irisarri, Pilar Errea, Ana Pina
- **Crosstalk between ovate family proteins and brassinosteroid hormones controlling fruit shape**

Veredas Coletto-Alcudia, Beatriz E. García-Gómez, Christian Dujak, Arnau Fiol, Maria José Aranzana

- **Selection of *Vaccinium oxycoccos* genotypes based on the amounts of biologically active compounds**  
Remigijus Daubaras, Laima Cesoniene
- **Marker-trait association approaches unravel the genetic determinism of fruit quality traits in a collection of blood oranges**  
Mario Di Guardo, Sebastiano Seminara, Stefania Bennici, Chiara Catalano, Alessio Giuffrida, Giuseppina Las Casas, Martina Cortese, Biagio Torrisi, Gaetano Distefano, Filippo Ferlito, Stefano La Malfa, Alessandra Gentile
- **High-throughput genotyping and SNP-trait association of phenology, fruit quality, and physiological traits in apricot (*Prunus armeniaca* L.) by using GBS**  
Juan Salazar, María Nicolas-Almansa, German Ortuño-Hernández, Pedro Martínez-Gómez, David Ruiz

**17:15 – 19:45**

**Dresden City Tour with the Red Double Decker Bus**

**17:15 – 19:00**

Workshops (Rooms for smaller workshops can be provided upon request.)

14.09.2023 (THURSDAY)

**09:00 – 10:30**

Session 8 – Flowering time and dormancy control (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Jonas Skytte af Sättra

- **Genetic analyses of flowering time and disease resistance in sour cherry using the cherry 6+9K SNP array**  
Ofere Francis Emeriewen, Thomas Wolfgang Wöhner, Mirko Schuster, Andreas Peil, Henryk Flachowsky
- **Candidate biomarkers for endodormancy release in *Prunus* species**  
Jesús Guillamón, Federico Dicenta, David Ruiz, Jesús Lopez-Alcolea, Raquel Sánchez-Pérez
- **Differential expression of miRNAs between juvenile and adult olive trees highlights their potential use as early selection markers for short juvenility period**  
Paola Romero Rodriguez, Ana Gordon, Teresa Garcia Lopez, Esteban Meca Alvarez, Juan Moral, Concepcion Muñoz Diez
- **Functional characterization of the *Dormancy-Associated MADS-box gene 4* in *Malus domestica***  
Janne Lempe, Mirko Moser, Azeddine Si Ammour, Henryk Flachowsky
- **Early epigenetic changes are involved in bud dormancy release in grapevine**

Valeria De Rosa, Rachele Falchi, Giannina Vizzotto, Emanuele De Paoli

- ***In vitro* dormant bud break and leaf-based regeneration for efficient pear micropropagation and novel breeding strategies**

Cecilia Domenichini, Lorenzo Bergonzoni, Sara Alessandri, Stefano Tartarini, Luca Dondini

**10:30 – 11:00**

Coffee Break

**11:00 – 12:30**

Session 9 – Digitalization and phenotyping (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Andreas Peil

- **Keynote: Uli Schurr** (title requested)
- **Generating images from SNP data through artificial intelligence**  
Federico Jurado-Ruiz, Carles Onielfa, Maria José Aranzana
- **UAV-based digital phenotyping of European pear rust in genetic**  
Stefanie Reim, Virginia Mass, Pendar Alirezazadeh, Johannes Seidl-Schulz, Matthias Leipnitz, Eric Fritzsche, Martin Geyer, Michael Pflanz
- **Comparison between field and greenhouse phenotyping to identify sources of resistance to mal secco in lemon hybrids**  
Martina Cortese, Carmen Arlotta, Angelo Ciacciulli, Donata Pietro Paolo, Riccardo Russo, Grazia Licciardello, Concetta Licciardello, Silvia Di Silvestro, Marco Caruso
- N.N.

**12:30 – 13:30**

Lunch

**13:30 – 15:30**

**Field trip to the orchard (JKI, LfULG)**

**13:30 – 18:00**

Workshops (Rooms for smaller workshops can be provided upon request.)

**20:00 – 24:00**

**Conference dinner**

15.09.2023 (FRIDAY)

**09:00 – 10:45**



Session 10 – New Breeding Technologies and whole genome sequencing (Conference hall of the Saxon State Office for Environment, Agriculture and Geology)

Session chair: Giovanni Brogini

- **Sequencing of the sour cherry (*Prunus cerasus* L.) 'Schattenmorelle' genome**  
Thomas Wöhner, Ofere Emeriewen, Alexander Wittenberg, Koen Nijbroek, Rui Peng Wang, Evert-Jan Blom, Jens Keilwagen, Thomas Berner, Katharina Hoff, Lars Gabriel, Hannah Thierfeld, Omar Almolla, Harrie Schneiders, Lorenzo Barchi, Mirko Schuster, Janne Lempe, Andreas Peil, Henryk Flachowsky
- **Next-generation sequencing technologies and genome editing to investigate the genetic bases of self-incompatibility in citrus**  
Stefania Bennici, Lara Poles, Mario Di Guardo, Lawrence Percival-Alwyn, Concetta Licciardello, Fabrizio Salonia, Mario Caccamo, Alessandra Gentile, Gaetano Distefano, Stefano La Malfa
- **Challenges faced in editing the apple genome using CRISPR/Cas**  
Susan Schröpfer, Dr. Henryk Flachowsky
- **Development of new biotechnological tools to accelerate breeding in woody species**  
Vera Pavese, Andrea Moglia, Anna Maria Milani, Elena Corredoira, Maria Teresa Martínez, Daniela Torello Marinoni, Roberto Botta
- **DNA-editing for enhanced resistance against apple tree pathogens**  
Cecilia Domenichini, Lorenzo Bergonzoni, Sara Alessandri, Marco Defrancesco, Leonardo Ferrari, Paola Negri, Mickael Arnaud Malnoy, Luca Dondini, Stefano Tartarini
- **The Italian experience on the New Breeding Technologies in citrus: advanced and marker-free approaches to improve fruit quality and resistance to plant diseases**  
Angelo Ciacciulli, Fabrizio Salonia, Helena Domenica Pappalardo, Lara Poles, Massimo Pindo, Stefano Piazza, Mickael Malnoy, Marco Caruso, Alessandra Gentile, Stefano La Malfa, Concetta Licciardello

**10:45 – 11:15**

Coffee Break

**11:15 – 12:15**

Business Meeting and closing of the symposium

16.09.2023 (SAT)

**09:00 – 17:00**

**Social tour**