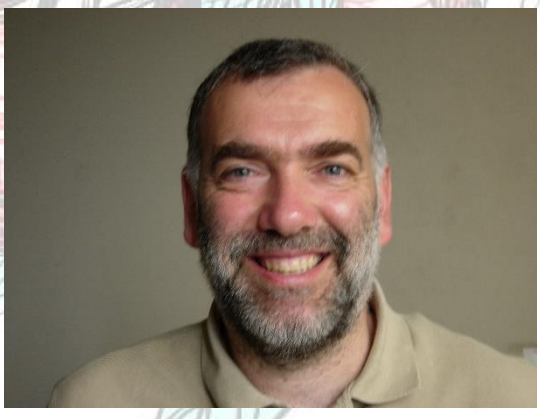
INTERNATIONAL SPRING SCHOOL ON
Sustainable Orchard Management in a changing environment
2 – 3 MAY CEUB Bertinoro
SPEAKERS

Lara Maistrello is Associate Professor in General and Applied Entomology at the Department of Life Sciences and Interdepartmental Center BIOGEST-SITEIA of the University of Modena and Reggio Emilia (UNIMORE), where she was hired as a researcher since 2002. Graduated with honors in Biological Sciences (University of Parma, 1992), holds a PhD in Animal Biology (University of Bologna, 1996). Post-Doctoral Researcher promoted to Research Assistant Professor at LSU (Louisiana State University), Dept. Entomology (Baton Rouge, Louisiana) (1999-2002). She leads the Laboratory of Applied Entomology and her research is focused on sustainability in the agri-food sector, both in terms of ecofriendly management of pests, protection and enhancement of beneficial species and use of insects as valuable resources in a circular economy perspective. Principal investigator of projects on biology and sustainable management of the invasive brown marmorated stinkbug *Halyomorpha halys*, she has been appointed member of the national technical-scientific coordination table for the biocontrol of this pest by the Italian Ministry of Agriculture, Food and Forestry since November 2019. She coordinated projects on the use of the black soldier fly *Hermetia illucens* as bioconverter of organic byproducts to obtain compounds useful in agriculture and in the feed/food/biomedical industry. She has obtained important technical-scientific consultancy assignments, also at an international level, on issues related to pests of stored products, wood and other goods. She carries out an intense scientific dissemination activity in Italy and abroad on the results of her research and on current issues relating to insects. She is a passionate lover of nature, insects, science and a healthy & sustainable lifestyle.

José Quero García, born in Madrid in 1975, is currently a Researcher at INRAE-Bordeaux, within the Department 'Biology and Plant Breeding'. He is an 'Agronomic Engineer' from both the 'Escuela Técnica Superior de Ingenieros Agrónomos' (ETSIA) of Madrid and the 'Institut National Agronomique Paris-Grigon' (INAP-G) of Paris. He defended his PhD thesis at CIRAD (Montpellier), in 2004, where he studied the diversity and the breeding of taros (*Colocasia esculenta*). After a two-year post-doctoral fellowship at the Department of Virology, at ETSIA Madrid, he was hired by INRAE in 2007, as permanent researcher, with the main responsibility of leading the sweet cherry (*Prunus avium*) breeding programme. The applied objective of his research is the release of high-quality sweet cherry varieties with good adaptation to climate change. The main scientific objective of José Quero García is to study the genetic and molecular control of the variation of phenology and fruit quality-related traits. From a methodological point of view, he aims at optimizing the breeding process by implementing DNA-informed breeding approaches, such as for example marker-assisted selection. From 2012 to 2016, he was the Chair of COST Action FA1104 'Sustainable production of high-quality cherries for the European market'. Today, José Quero García coordinates the working group 'Sweet and sour cherry' of EUFRIN ('European Fruit Research Institutes Network'), one of its objectives being the implementation of a European network for the evaluation of new promising sweet and sour cherry varieties.



Davide Neri. Professor of Arboriculture and Olive Growing at the Department of Agricultural, Food and Environmental Sciences (D3A) of the Polytechnic University of Marche, Ancona, of which he is director since November 1, 2021. Degree in Agricultural Sciences in 1985 and doctorate in Tree crops in 1991 at the University of Bologna. "Visiting scholar" at Michigan State University, USA, in 1987, "visiting professor" at the Global Agricultural School of Tokyo University, Japan, in 2000, and adjunct professor at the University of Molise (1995-99). Director of the "Research Center for Fruit Growing" of CREA from 1 October 2014 to 30 April 2017 and director of the experimental teaching farm of the Polytechnic University of Marche (2009-2014 and 2017-2021). Author and co-author of about 300 scientific and technical articles (of which 116 reviewed on Scopus). Member for more than 20 years of the SOI Italian Horticultural Society, of which he was president of the fruit section from 2014 to 2016. Member of the ISHS International Horticultural Society and of the Japanese Horticultural Society. He was a member of the International Advisory Board of Research Center of Excellence for Sustainable Pomology - PomoCentre, Skierniewice, Poland and head of the bilateral project Italy Japan "Strawberry fruit quality: genetic and physiological background" and chairman of the working group on the physiology of the strawberry of COST 836 "Integrated berry production". The sectors of scientific and technical interest are linked to propagation, pruning and training systems, flower differentiation and architecture of plants, evaluation and management of fruit germplasm, sustainable management of the fruit and olive agroecosystem with particular reference to the problem of replanting, intensification and sustainability of tree crops, precision agriculture. He is currently coordinator of the CORE Organic project "DOMINO - Dynamic sod mulching and use of recycled amendments to increase biodiversity, resilience and sustainability of intensive organic fruit orchards and vineyards" and head of the UNIVPM unit of the MiPAAFT project "BIOPAC - Innovation and sustainability in the management of organic orchards: peach, apricot, cherry ".

Dr. **Gregory Lang** is a Professor of Tree Fruit Physiology at Michigan State University, having served previously on the faculties of Washington State University and Louisiana State University. He earned graduate degrees in Pomology and Plant Physiology from the University of California-Davis, and a Bachelor's in Science at University of Georgia. Greg's laboratory teams have been instrumental in advancing the physiological understanding and adoption of dwarfing precocious rootstocks for sweet cherries and advancing innovations in labor-efficient orchard training systems. He has also led projects on various orchard covering systems for cherries, apricots, peaches, and plums, and conducted research on apple rootstocks. Dr. Lang has published more than 200 research and industry articles and 7 books on cherry production and plant science, chaired several international fruit science working groups, and is the recipient of the 2001 Distinguished Research Award from the International Fruit Tree Association; the 2010 Graduate Educator Award, the 2017 Outstanding Extension Materials Award, and the 2019 Outstanding Fruit Research Publication Award from the American Society for Horticultural Science; and the 2019 Cherry Research Award from the Italian Academy of Agriculture. Greg travels extensively to speak on cherry production practices, and exchange ideas and experiences with growers and scientists worldwide.

Dr. **Matthew Whiting** leads an applied, whole-tree physiology research, extension, and teaching program that addresses key issues that limit sweet cherry growers' ability to efficiently, consistently, and sustainably produce superlative fruit. His team takes a pragmatic and collaborative approach to solve industry challenges central to orchard production efficiency (e.g., development of planar architectures, mechanization of operations), yield security (e.g., pollination biology, precision pollination systems), and fruit quality. Dr. Whiting's program goal is to improve orchard production efficiency while growing the highest quality fruit. Over the years this has been addressed from work on orchard systems and light interception, crop load management, fruit set, pollination biology, variability in fruit quality, cold hardiness, and mechanization of key operations including pruning, harvest, and, most recently, pollination. Over his 20 years at Washington State University, Dr. Whiting's program has secured more than $8M in research funding and published 100+ research/extension publications. His extension program has been leading the transition to high efficiency orchard systems using a model of grower collaboration throughout Washington state, and around the world.

Luca Dondini Current position: Associate Professor (DISTAL; University of Bologna). He is has graduated in Biological Sciences and got the PhD in "Cell Biology and Physiology". Then he has obtained a Post-Doc position at the Department of fruit Trees and Woody plant sciences in Bologna in 1999 where he worked as contracted professor in Plant Biotechnologies and as Post-Doc until 2008. He was researcher from 2008 to 2015 and Associate Professor since 2015. At present he holds the courses in plant biotechnologies, applied breeding and pomology at the University of Bologna and Bolzano and since 2019 he is the chairman of the Degree Course in International Master in Horticultural Science. His research focuses on fruit trees genetics, mainly for flower biology, fruit quality traits and resistances. His expertise encompasses phenotyping and genotyping in fruit tree species (apple, pear, peach, apricot, cherry and chestnut), development of markers linked to monogenic and polygenic traits, genome mapping, genetic diversity characterization and gene identification. He is author of 60 papers in international peer-reviewed journals; 9 book chapters; 31 papers in Italian journals; 54 works in congress proceedings.

Brunella Morandi. Associate Professor and tree ecophysiology lecturer at the Department of Agricultural and Food Sciences of the University of Bologna. Her research focuses on the effects of the environment on fruit tree physiology with the aim to develop new strategies to improve water use efficiency in temperate fruit crops, while maintaining production quality and yields, in conditions of water scarcity and climate change. Currently involved in national and international projects addressing issues related to sustainable fruit production, fruit quality and efficient water use. PhD in fruit orchard management (since 2006) and M. Sci. in Agricultural Sciences and technologies (since 2003). She is coordinator of the Master Degree in Agricultural Sciences and Technologies of the University of Bologna. Chair of the EUFRIN Working Group on "Water Relations and Irrigation". Author of more than 60 indexed publications in scientific journals and of more than 40 contributions to professional journals, she has joined the scientific and organizing committee of many international symposia. She will be co-convener of the symposium "Water: a worldwide challenge for agriculture at the XXXI International Horticultural Congress 2022 (Angers) and she is currently co-convener of the International Cherry Symposium 2022.

Juan Pablo Zoffoli is professor at the School of Agriculture and Forestry of Pontificia Universidad Católica de Chile. He works in the areas of fruit physiology and postharvest technology. His research has been focussed to understand critical physiological disorders that affects Chilean fruit export, such as hairline in table grapes, internal browning and mealiness in peaches, abnormal softening in kiwifruits and pitting in sweet cherries, together with early prediction of internal browning and bitter pit in apples, using non destructive equipments. His lab, in collaboration with projects associated with packaging companies, developed passive modified atmosphere packaging for sweet cherry, blueberry and kiwifruit. The ongoing postharvest research program for sweet cherries has made possible to extend the storage time and explore new ideas to help the industry to consolidate the export to distant markets such as China.

Moritz Knoche, born in 1960 in Germany, received his BSc, MSc (1986) and PhD (1989) from the Department of Horticulture at Bonn University. He then joined the laboratory of John Bukovac at Michigan State University as a postdoc to study cuticular penetration of plant growth regulators. Following his postdoc in the US, Moritz moved to the Netherlands and worked as a research scientist on the effect of spray application factors on performance of foliar applied agrochemicals at the DLO Institute for Agrobiology and Soil Fertility in Wageningen. In 1995, he became Full Professor for Horticulture at the Institute for Agronomy and Crop Science, Martin-Luther University Halle-Wittenberg, Halle, Germany. At Halle University, he began a research program on sweet cherry fruit cracking that continued until today. In 2006 he moved to Hannover to work as a Full Professor for fruit science in the Institute for Horticultural Production Systems, Leibniz University Hannover. Moritz has published more than 130 research papers including papers on foliar uptake and cuticular penetration of agrochemicals, water transport and fruit water relations and fruit surface defects such as russeting (apple, pear), skin spots (apple), neck shrivel (plum), water soaking (strawberry) and cracking (sweet cherry and grape).

Michael Blanke Is a senior researcher at the University of Bonn after starting. his career viz PhD at both Bonn and East Malling, then Long Ashton, University of Bristol, UK and spent sabbaticals in South Africa and California. Michael Blanke was (probably) the first one to grow cherry trees under cover, first on GiSela 3 and then on G5, when he gained experience with excessive vegetative growth, soft fruit and risk of frost and allergens, which will be all covered in his talk. His small Gothic Richel tunnel was substituted by cherry trees on G5 in a large Haygrove tunnel. The results were presented locally and at the IHC Toronto 2002 as well as in Chile 2019 and in this lecture. Michael was part of the European COST Cherry FA 1104 project (Jose is here as the project leader); In the climate change section, Michael edited and published a dedicated Acta Horticulturae as a result of this work. One of Michael PhD students looked at the chilling requirements of cherry, another student in Michigan (Greg is here from MSU) looks at frost hardiness, another one at cherry ripening based on anthocyanin index, another work with post-doc investigated the changes in microclimate and fruit quality(allergens). His book chapter in THEEE CABI Cherry book is on microclimate manipulation (”modification”). His ca. 370 intl publications are cited over 6000 x and this one will be his 199th talk within the last 15 years.