International Workshop

Multidisciplinary studies for sustainable agriculture

November, 20-21st 2019

Department of Agriculture Food and Environment
University of Pisa

20th November
Monitoring and managing tree crop systems by remote sensing and precision agriculture techniques

21st November
Genomes and transcriptomics of plants and their ‘symbionts’

Conveners: Dr. Giacomo Palai, Dr. Luca Giovannini, Dr. Claudia Pisuttu, Dr. Marya Rabelo Lanza, Dr. Mino Sportelli, Dr. Maria Ventimiglia
International Workshop on Multidisciplinary studies for sustainable agriculture
November 20th 2019, Pisa

Monitoring and managing tree crop systems by remote sensing and precision agriculture techniques
Aula Magna, Department of Agriculture Food and Environment, University of Pisa

Programme

9:00 – Registration

9:30 - Welcome address
Alberto Pardossi
Director of the Department of Agriculture Food and Environment, University of Pisa
Andrea Cavallini
Coordinator of the PhD programme in Agriculture Food and Environment, University of Pisa
Massimo Tagliavini
Chairman of the Italian Society for Horticultural Science (SOI)

9:45 – Application of remote sensing for irrigation detection on Mediterranean arboriculture
Dr. Marta Debolini, French National Institute for Agricultural Research

10:10 - Precision olive growing: a modern management for an ancient tree
Dr. Giovanni Caruso, Department of Agriculture Food and Environment, University of Pisa

10:35 - Precise Orchard Management (POM): innovative techniques to take control of fruit production
Dr. Luigi Manfrini, Department of Agricultural and Food Sciences, University of Bologna

11:00 - Break

11:25 - Using the OliveCan process-based model for assisting in site-specific crop management of olive orchards
Dr. Álvaro López Bernal, Department of Agronomy, University of Cordoba, Spain

11:50 - Variable Rate Operation for Orchards
Prof. Manuel Pérez Ruiz, Department of Aerospace Engineering and Fluid Mechanics, University of Seville

12:15 - Break

14:00 – Remote and proximal sensing technologies in precision viticulture
Dr. Giacomo Palai, Department of Agriculture Food and Environment, University of Pisa

14:15 - Land-cover changes in four Western Mediterranean countries by using data from national censuses of agriculture.
Dr. Marya Rabelo Lanza, Department of Agriculture Food and Environment, University of Pisa

14:30 - Variable rate applications for weed management
Dr. Mino Sportelli, Department of Agriculture Food and Environment, University of Pisa

14:45 - Assessing the performances of remote sensing systems for crop monitoring and yield prediction in grapevine.
Dr. Riccardo Rossi, Department of Agri-Food Production and Environmental Sciences, University of Florence

15:00 - Discussion and Conclusions
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November 21st 2019, Pisa

Genomes and transcriptomics of plants and their ‘symbionts’
Aula Magna, Department of Agriculture Food and Environment, University of Pisa

Programme

9:00 - Introduction and chair: Prof. Andrea Cavallini
Coordinator of the PhD programme in Agriculture Food and Environment, University of Pisa

9:10 - Arbuscular mycorrhizas as key players in sustainable plant phosphorus acquisition: An overview on the mechanisms involved
Dr. Nuria Ferrol, Department of Soil Microbiology and Symbiotic Systems, CSIS, Spain

9:50 - Plant-pathogen interaction: Fusarium verticilliodes (FV) in Zea mays and genome editing approaches to enhance plant resistance
Dr. Virginia Maria Grazia Borrelli, Department of Sustainable Crop Production, Università Cattolica del Sacro Cuore, Piacenza, Italy

10:30 - Break

10:50 - Transcriptome changes induced by arbuscular mycorrhizal symbiosis in sunflower roots
Dr. Alberto Vangelisti, Department of Agriculture Food and Environment, University of Pisa

11:30 - Gene capture by transposable elements leads to epigenetic conflict
Dr. Alexandros Bousios, Royal Society University Research Fellow (Evolution, Behavior and Environment), University of Sussex, United Kingdom

12:10 - Break

14:00 - Diversity of phosphate transporter genes among species and isolates of arbuscular mycorrhizal fungi
Dr. Luca Giovannini, Department of Agriculture Food and Environment, University of Pisa

14:15 - Work-in-progress for the creation of ASTER-REP: a database of Asteraceae transposable sequences
Dr. Maria Ventimiglia, Department of Agriculture Food and Environment, University of Pisa

14:30 - De novo assembly of the highly heterozygous fig (Ficus carica L.) genome reveals epigenetic patterns
Dr. Gabriele Usai, Department of Agriculture Food and Environment, University of Pisa

14:45 - What about functional traits of plants under pathogen challenge?
Dr. Claudia Pisutti, Department of Agriculture Food and Environment, University of Pisa

15:00 - Discussion and Conclusions