

1ST RHEA WORKSHOP – MONTPELLIER SEPTEMBER 9, 2011

10:55 **Opening ceremony: Gilles Rabatel (Cemagref)**

General Techniques for Precision Agriculture

Weed management. Chairperson: Pilar Barreiro (UPM-EIA)

11:00	A step by step guide for planning a site-specific weed management program for winter wheat Cesar Fernandez-Quintanilla ¹ , Jose Dorado ¹ and Angela Ribeiro ² (¹ CSIC-ICA, ² CSIC-CAR)
11:15	Effect of thermal and mechanical weed control on garlic M. Fontanelli, M. Raffaelli, C. Frascioni, L. Martelloni, A. Peruzzi, (Universita di Pisa)
11:30	Effect of flaming at different LPG doses on maize plants C. Frascioni, M. Raffaelli, M. Fontanelli, L. Martelloni, A. Peruzzi, (Universita di Pisa)

Perception and analysis (I). Chairperson: Maria Guijarro (UCM)

11:45	Evaluating chemometric tools to spectrally discriminate weeds in wheat M. T. Gómez-Casero ¹ , J. M. Roger ² , M. Jurado-Expósito ¹ , J. M. Peña-Barragán ¹ , G. Rabatel ² and F López-Granados ¹ , (¹ CSIC-IAS, ² Cemagref)
12:00	Hyperspectral imagery to discriminate weeds in wheat G. Rabatel ¹ , F. Ougache ² , N. Gorretta ¹ , M. Ecartot ³ (¹ Cemagref, ² Univ. Montpellier II, ³ INRA Montpellier)
12:15	Software for mosaicking remote imagery from aerial mobile units D. Gómez-Candón ¹ , S. Labbe ² , M. Jurado-Expósito ¹ , JM Peña-Barragán ¹ , G. Rabatel ² and F López-Granados ¹ , (¹ CSIC-IAS, ² Cemagref)

Lunch

Perception and analysis (II). Chairperson: Nathalie Gorretta (CE)

14:00	Strategies for video sequence stabilization Angela Ribeiro ¹ , Nadir Sainz-Costa ¹ , Gonzalo Pajares ² , and Maria Guijarro ² , (¹ CSIC-CAR, ² Universidad Complutense de Madrid)
14:15	Effect of the spatial resolution and number of tie points in the mosaicking process. D. Gómez-Candón ¹ , S. Labbe ² , M. Jurado-Expósito ¹ , JM Peña-Barragán ¹ , G. Rabatel ² and F López-Granados ¹ , (¹ CSIC-IAS, ² Cemagref)
14:30	System geometry design for site specific treatment in precision agriculture Jose Miguel Guerrero, Martín Montalvo, Juan Romeo, P. Javier Herrera, María Guijarro, Angela Ribeiro, and Gonzalo Pajares, (Universidad Complutense de Madrid)
14:45	Techniques for Area Discretization and Coverage in Aerial Photography for Precision Agriculture employing mini quad-rotors João Valente, David Sanz, Jaime Del Cerro, Claudio Rossi, Mario Garzón, Juan Hernández, and Antonio Barrientos, (Universidad Politecnica de Madrid-EII)

Specific Techniques for the RHEA Fleet (I) Chairperson: Maria Guijarro (UCM)

15:00	Analysis of engine thermal effect on electronic control units for RHEA robots Pilar Barreiro, Constantino Valero, Tatiana Heidi and Miguel Garrido, (Universidad Politecnica de Madrid-EIA)
15:15	Path-planning of a Robot Fleet Working in Arable Crops. First experiments and results Angela Ribeiro and Jesus Conesa-Muñoz, (CSIC-CAR)
15:30	Simulation of communication within the RHEA robotic fleet Mariona Roca, Slobodanka Tomic, (Forschungszentrum Telekommunikation Wien - FTW)

Coffee break

Specific Techniques for the RHEA Fleet (II) Chairperson: Angela Ribeiro (CSIC-CAR)

16:15	Safety functional requirements for RHEA robots Pilar Barreiro, Constantino Valero, Adolfo Moya, Miguel Garrido, (Universidad Politecnica de Madrid-EIA)
16:30	Application of mechanical and thermal weed control in maize in RHEA project A. Peruzzi, M. Raffaelli, M. Fontanelli, C. Frascioni, L. Martelloni, (Universita di Pisa)
17:00	Wireless Multi-Interface Management for QoS-enabled Communication in the RHEA robotic fleet Thomas Hinterhofer, Slobodanka Tomic, (Forschungszentrum Telekommunikation Wien - FTW)
17:15	Vehicle Guidance on a Single-Board Computer Michael Hoedlmoser, Christoph Bober, Martin Kampel, Michael Brandstoetter, (CogVis)

Closing ceremony: P. Gonzalez-de-Santos (CSIC-CAR)