

		Room I	Room II	Room III
<b>DAY 1</b>  <b>Monday</b> <b>13<sup>th</sup> November</b>	09.00 - 09.30	Welcome		
	09.30 - 10.15	Plenary Talk		
	10.15 - 10.40	Coffee break		
	10.40 - 12.40	<b>M1.1 - Automation and Communication Technology for Flexible Energy Management</b>	<b>M2.1 - Performance Monitoring of Industrial Processes</b>	<b>M3.1 - Process Control</b>
	12.40 - 14.10	Lunch		
	14.10 - 15.30	<b>M1.2 - Neural Network and Fuzzy Control (1)</b>	<b>M2.2 - Petri Nets for Modelling and Control</b>	<b>M3.2 - Security and Safety Control for Critical Infrastructures (1)</b>
	15.30 - 16.00	Coffee break		
	16.00 - 17.20	<b>M1.3 - Neural Network and Fuzzy Control (2)</b>	<b>M2.3 - Analysis, Optimisation and Coordination of Logistic and Production Systems</b>	<b>M3.3 - Security and Safety Control for Critical Infrastructures (2)</b>
	19.30	<b>Dinner</b>		
<b>DAY 2</b>  <b>Tuesday</b> <b>14<sup>th</sup> November</b>	09.30 - 10.30	Plenary Talk		
	10.30 - 11.00	Coffee break		
	11.00 - 13.00	<b>T1.1 – Robot Control</b>	<b>T2.1 - Modelling and Control of Reconfigurable Manufacturing Systems</b>	<b>T3.1 - Italian Districts for Automation</b>
	13.00 - 14.30	Lunch		
	14.30 - 15.30	<b>T1.2 – Object-Oriented Methods for Mechatronic System Modelling (1)</b>	<b>T2.2 - Low Cost Automation in Agroindustry (1)</b>	<b>T3.2 - Advanced Control Applications (1)</b>
	15.30 - 16.00	Coffee break		
	16.00 - 17.00	<b>T1.3 – Object-Oriented Methods for Mechatronic System Modelling (2)</b>	<b>T2.3 - Low Cost Automation in Agroindustry (2)</b>	<b>T3.3 - Advanced Control Applications (2)</b>
	17.30	<b>Museum</b>		
<b>DAY 3</b>  <b>Wednesday</b> <b>15<sup>th</sup> November</b>	09.30 - 10.30	Plenary Talk		
	10.30 - 11.00	Coffee break		
	11.00 - 12.40	<b>W1.1 - Real-Time Systems for Control Applications</b>	<b>W2.1 - Controlled Plant Design by Dedicated Software</b>	
	12.40 - 14.10	Lunch		
	14.10 - 15.30	<b>W1.2 - Land Control and Monitoring System for Fire Prevention (1)</b>	<b>W2.2 - Control of Advanced Telecommunication Networks (1)</b>	<b>W3 – Hands-on Tutorial on OpenModelica</b>
	15.30 - 16.00	Coffee break		
	16.00 - 17.00	<b>W1.3 - Land Control and Monitoring System for Fire Prevention (2)</b>	<b>W2.3 - Control of Advanced Telecommunication Networks (2)</b>	<b>W3 – Hands-on Tutorial on OpenModelica</b>
	17.15 - 17.30	<b>Closing Session</b>		

## Monday, 13<sup>th</sup> November

### Room I

- 09.00 - 09.30 Welcome to participants
- 09.30 - 10.15 Plenary Talk: Towards improved Energy Efficiency: IST contribution to FP7  
*B. Lepape* - European Commission DG INFSO/G5, EU

#### M1.1 - Automation and Communication Technology for Flexible Energy Management

- Organizers: *G. Mauri* - CESI RICERCA, Italy  
*L. Ferrarini* – Politecnico di Milano
- Chairman: *G. Mauri* - CESI RICERCA, Italy
- Co-Chairman: *L. Ferrarini* – Politecnico di Milano
- 10.40 - 11.00 Enel Technologies for Smart Grids Operation  
*L. Gallo* - member of ETP "Smart Grid" Advisory Council - ENEL SpA, Italy
- 11.00 - 11.20 DEMAND RESPONSE: Technology Requirements for an Emerging Business  
*C. Chemelli, W. Grattieri* - CESI RICERCA, Italy
- 11.20 - 11.40 Energy and Gas Telemeter for an Energy Trader  
*M. De Vecchi* - DALMINE ENERGIE, Italy
- 11.40 - 12.00 Innovative Load Shedding and Demand Side Management Enhancements to improve Security of a National Electrical System  
*G. Mauri, D. Moneta* - CESI RICERCA, Italy
- 12.00 - 12.20 Bringing Efficiency through Energy Management: the UTILTEC Project  
*M. De Chirico* - SDI Automazione Industriale, Italy  
*S. Esposito* - Beta 80, Italy  
*L. Ferrarini, S. Radaelli* - Politecnico di Milano, Italy  
*P. Magni* - Fondazione Politecnico di Milano, Italy  
*C. Montecucco* – MISARC, Italy  
*S. F. Nicolodi* - IBM Italia, Italy
- 12.20 - 12.40 New Solutions for Demand Measurement and Control: Automated Meter Management and Energy Management  
*A. Branchesi, S.F. Nicolodi* - IBM Emerging Business Opportunities Organization, Italy  
*C. Drago* - IBM Automated Meter Management Center of Excellence, Italy

#### M1.2 - Neural Network and Fuzzy Control (1)

- Chairman: *G. Finzi* – Università di Brescia, Italy
- Co-Chairman: *T. Papazoglou* – TEI of Crete, Greece
- 14.10 - 14.30 Wind Generation and Flexible Electric Load Management Issues for the System Operation in Crete  
*T. Papazoglou, G. Santipantakis, M. Papazoglou, J. Syllignakis* – TEI of Crete, Greece
- 14.30 - 14.50 Rule-Driven Optimization Maximizes Real-Time Performance  
*F. Roveta* – Gensym, Italy
- 14.50 - 15.10 Neural Network Models for Tropospheric Ozone Control  
*C. Carnevale, G. Finzi, E. Pisoni, M. Volta* – Università di Brescia, Italy
- 15.10 - 15.30 Neural Network Modeling for Alstom Gasifier

*W. Ipanaqué, M. Flores, A. Rivadeneyra Bardales* - Universidad de Piura, Peru  
*D. Soares Barboza* - Universidad de Santa Catarina, Brazil

**M1.3 - Neural Network and Fuzzy Control (2)**

- 16.00 - 16.20 A Fuzzy Inference System Applied to Quality Control in Paper Industry  
*V. Colla, L. Giori, M. Vannucci, G. Bioli* - Scuola Superiore S. Anna, Italy
- 16.20 - 16.40 Quadratic Optimal Fuzzy Control  
*P. Salgado* - Universidade de Trás-os-Montes e Alto Douro, Portugal  
*G. Igrejas* - Instituto Politécnico de Bragança, Portugal  
*P. Garrido* - Universidade do Minho, Portugal

**Monday, 13<sup>th</sup> November**

**Room II**

**M2.1 - Performance Monitoring of Industrial Processes**

Organizers: *C. Scali* – Università di Pisa, Italy

*A. Servida* – Università di Genova, Italy

Chairman: *C. Scali* – Università di Pisa, Italy

Co-Chairman: *A. Servida* – Università di Genova, Italy

10.40 - 11.00 Closed Loop Performance Monitoring: Automatic Diagnosis of Valve Stiction by means of a Technique based on Shape Analysis Formalism

*H. Manum* - Norwegian University of Science and Technology, Norway

*C. Scali* - Università di Pisa, Italy

11.00 - 11.20 On the use of Soft-Sensors for Monitoring and Controlling Processes with Complex Dynamics

*A. A. Barresi, S. Velardi, D. Fissore, R. Pisano* - Politecnico di Torino, Italy

11.20 - 11.40 Estimation of Ternary Distillation Column via a Tailored Data Assimilation Mechanism

*A. Pulis, R. Baratti* – Università di Cagliari, Italy

*C. Fernandez, J. Alvarez* - Universidad Autónoma Metropolitana-Iztapalapa, México

11.40 - 12.00 A Prediction Error Based Method for Performance Monitoring of Model Predictive Controllers

*G. Pannocchia, A. Brambilla* – Università di Pisa, Italy

*G. Scaturchio* - AspenTech S.r.l, Italy

12.00 - 12.20 An Intelligent/Smart Framework for Real-Time Process Monitoring and Supervision

*B. Bhushan, J. A. Romagnoli* - Louisiana State University, USA

12.20 - 12.40 Quality Monitoring Through a Dynamic Neural Software Sensor

*A. Servida, P. Moretti* - Università di Genova, Italy

*C. Parisi* - Lamberti S.p.A., Italy

*M. Suar* - Polimeri Europa, S.p.A, Italy

**M2.2 - Petri Nets for Modelling and Control**

Organizers: *M. P. Fanti, M. Dotoli* -Politecnico di Bari, Italy

Chairman: *M. P. Fanti* -Politecnico di Bari, Italy

Co-Chairman: *S. Hammadi* - Ecole Centrale de Lille, France

14.10 - 14.30 A Model to Evaluate Supply Chain Performances via Coloured Petri Nets

*M. Dotoli, M. P. Fanti, G. Iacobellis* - Politecnico di Bari, Italy

14.30 - 14.50 Simulation Based Control of Urban Traffic based on a Hybrid Model

*F. Basile, P. Chiacchio, D. Teta* - Università di Salerno, Italy

14.50 - 15.10 Discrete-Event Model Based Simulation of a Tobacco Packing Line

*A. Paoli, L. Melandri, C. Bonivento* - Università di Bologna, Italy

*V. Fiorini* -G.D Spa, Italy

15.10 - 15.30 Hierarchical Control Applying Supervisor Synthesis and Relation Extraction

*K. Andersson, B. Lennartson, M. Fabian* – Chalmers University of Technology, Sweden

*J. Richardsson* - Volvo Car Corporation, Sweden

### **M2.3 - Analysis, Optimisation and Coordination of Logistic and Production Systems**

Organizers: *M. P. Fanti* – Politecnico di Bari, Italy

*R. Minciardi* – Università di Genova, Italy

Chairman: *M. P. Fanti* – Politecnico di Bari, Italy

Co-Chairman: *R. Minciardi* – Università di Genova, Italy

16.00 - 16.20 A Decision Support System for Purchasing Management in Supply Chains

*N. Costantino, M. Falagarì, M. Dotoli, M. P. Fanti, G. Iacobellis* – Politecnico di Bari, Italy

16.20 - 16.40 Services Flow Optimization in a Transport Multimodal Information System

*H. Zgaya, S. Hammadi* - Ecole Centrale de Lille, France

16.40 - 17.00 Estimator Agent Approach for Distributed Logistic Chain Optimization

*N. Zoghlami, S. Hammadi* - Ecole Centrale de Lille, France

17.00 - 17.20 An Agent-Based Integrated Resource Control System

*R. Pesenti* – Università di Palermo, Italy

*F. Rosi* – EIDON S.p.a., Italy

*S. Salvador, W. Ukovich* - Università di Trieste, Italy

## Monday, 13<sup>th</sup> November

### Room III

#### M3.1 - Process Control

Chairman: *F. Casella* - Politecnico di Milano, Italy

Co-Chairman: *F.A. Cuzzola* - Danieli Automation SpA, Italy

- 10.40 - 11.00 Remote Supervision Centre for the ENEL Combined Cycle Plants  
*D. Pestonesi, M. Scapecchia, M. Costarelli, L. Franceschini* –  
Enel - Generation and Energy Management Division, Italy
- 11.00 - 11.20 The Integration of Rigorous Dynamic Simulation and Advanced Process Control  
*F. Trivella, G. Marchetti* - AspenTech srl, Italy
- 11.20 - 11.40 Pickling Line Modelling for Advanced Process Monitoring and Automation  
*C. Aurora, D. Sciauzero, F.A. Cuzzola* - Danieli Automation SpA, Italy
- 11.40 - 12.00 Modeling, Simulation and Predictive Control of a Gasoline Engine  
*G. Lorini, A. Miotti, R. Scattolini* – Politecnico di Milano, Italy
- 12.00 - 12.20 Monitoring of a Diesel Hydrotreatment Unit by Dynamic Principal Component Analysis  
*M. B. de Souza Jr., L. F. Tunala* – Federal University of Rio de Janeiro, Brazil  
*M. C. M. M. Campos* -PETROBRAS, Brazilian State Oil Company, Brazil
- 12.20 - 12.40 A Simulation Study of the Flue Gas Path Control System in a Coal-Fired Power Plant  
*A. Bartolini* - ACT Solutions s.r.l., Italy  
*F. Casella, A. Leva* - Politecnico di Milano, Italy  
*V. Motterle* - Alstom Power Italia S.p.A, Italy

#### M3.2 - Security and Safety Control for Critical Infrastructures (1)

Chairman: *E. Ciapessoni* - CESI RICERCA, Italy

Co-Chairman: *S. Panzieri* - Università degli Studi Roma Tre, Italy

- 14.10 - 14.30 Why SCADA and Control Systems need a different Information Security Approach?  
*E. M. Tieghi* - Vision Automation srl, Italy
- 14.30 - 14.50 CISIA: a Simulator for Critical Infrastructures  
*S. De Porcellinis, R. Setola* – Università CAMPUS Bio-Medico, Italy  
*S. Panzieri, G. Ulivi* - Università degli Studi Roma Tre, Italy
- 14.50 - 15.10 Formalising and Testing Attack Scenarios for Information Intensive Critical Infrastructures  
*C. Balducelli, G. Vicoli, X. Jin* –  
ENEA, Italian Agency for New Technologies, Energy and Environment, Italy
- 15.10 - 15.30 A Survey on existing SCADA Security Standards  
*A. Stefanini, M. Masera* - Joint Research Centre of the European Commission - Institute for the  
Protection and Security of the Citizen, Italy  
*E. Ciapessoni* - CESI RICERCA, Italy

#### M3.3 - Security and Safety Control for Critical Infrastructures (2)

16.00 - 16.20 Integrating an IEC61508/11-compliant Safety System with a DCS

*M. Bloemen* - Yokogawa Europe BV, The Netherlands

*M. Veronesi* - Yokogawa Italy, Italy

16.20 - 16.40 A Multi-Agent and Timed Methodology to Design Power Systems Integrated Defense

*E. Ciapessoni, E. Corsetti* – CESI RICERCA, Italy

16.40 - 17.00 Tele-Medical Assistance Systems in Large Territorial Crisis: Dependability Measure of GPRS Connections

*E. Ciancamerla, M. Minichino* – ENEA, Italy

*G. L. Amicucci, G. Platania* - ISPESL, Italy

## Tuesday, 14<sup>th</sup> November

### Room I

09.30 – 10.30 Plenary Talk: Automation and Robotics Applications for Space Missions  
*G. Visentin* - European Space Agency (ESA), The Netherlands

#### T1.1 – Robot Control

Chairman: *P. Fritzon* - Linköpings Universitet, Sweden

Co-Chairman: *P. Rocco* - Politecnico di Milano, Italy

- 11.00 - 11.20 Task Space Tracking Control of a 2-link Robot with Uncertain Kinematics and Dynamics  
*S. Liuzzo, R. Marino, P. Tomei* - Università di Roma Tor Vergata, Italy
- 11.20 - 11.40 AIDA Advances in Haptic Interfaces Design and Applications: Soft Contact, Multi-point and Multi-modal Integration  
*C. Melchiorri* - Università di Bologna, Italy  
*D. Prattichizzo* - Università di Siena, Italy  
*P. Fiorini* - Università di Verona, Italy  
*M. Bergamasco* - Scuola Superiore S. Anna, Italy  
*G. Baud-Bovy* - San Raffaele Università di Milano, Italy
- 11.40 - 12.00 Exponentially Stable Trajectory Tracking Control for Wheeled Nonholonomic Robots  
*F. M. Raimondi, M. Melluso* – Università di Palermo, Italy
- 12.00 - 12.20 Decentralized Kalman Filter Based Robot Control  
*T. Cangemi, F. D'Ippolito, R. Padalino* – Università di Palermo, Italy
- 12.20 - 12.40 Digital Pole Placement Control of Multi-Mode Flexible Arms  
*L. Bascetta, P. Rocco* – Politecnico di Milano, Italy
- 12.40 - 13.00 Experiments of Impedance Control for a Dual-Arm Cooperative System  
*F. Basile, P. Chiacchio* – Università di Salerno, Italy  
*F. Caccavale* – Università della Basilicata, Italy  
*A. Marino, L. Villani* – Università di Napoli Federico II, Italy

#### T1.2 – Object-Oriented Methods for Mechatronic System Modelling (1)

Organizers: *C. Fantuzzi* - Università di Modena e Reggio Emilia, Italy

*S. Simani* – Università di Ferrara, Italy

Chairman: *C. Fantuzzi* - Università di Modena e Reggio Emilia, Italy

Co-Chairman: *H.-M. Hanisch* - Martin Luther University of Halle-Wittenberg, Germany

- 14.30 - 14.50 Formal Verification of Hybrid Models for Physical Systems  
*M. Bonfè, S. Simani* – Università di Ferrara, Italy
- 14.50 - 15.10 Inheritance for Dynamical Systems  
*C. Secchi, C. Fantuzzi* - Università di Modena e Reggio Emilia, Italy
- 15.10 - 14.30 A Modular Modelling and Implementation of Automation Functions for Flexible Manufacturing Systems  
*L. Ferrarini, C. Veber, V. Schirò* – Politecnico di Milano, Italy

#### T1.3 – Object-Oriented Methods for Mechatronic System Modelling (2)

16.00 - 16.20 Design of Controllers for Plug-and-Play Composition of Automated Systems from Smart Mechatronic Components

*V. Vyatkin* - The University of Auckland, New Zealand

*H.-M. Hanisch* - Martin Luther University of Halle-Wittenberg, Germany

16.20 - 16.40 Design and Modelling of a Mechatronic Packaging Machine

*D. Borghi, R. Borsari, M. Poppi, E. Sacchetti* – Tetra Pak Carton Ambient S.p.A., Italy

*L. Bassi* - Università di Bologna, Italy

16.40 - 17.00 Meta-Modeling for Multi-Physics Co-Simulations applied for OpenModelica

*A. Siemers, P. Fritzson* - Linköpings Universitet, Sweden

*D. Fritzson* - SKF Engineering Research Centre MDC, RKs-2, Sweden

**Tuesday, 14<sup>th</sup> November**

**Room II**

**T2.1 - Modelling and Control of Reconfigurable Manufacturing Systems**

Organizer: C. Veber – Politecnico di Milano, Italy

Chairman: C. Veber – Politecnico di Milano, Italy

Co-Chairman: A. Bratukhin - Austrian Academy of Sciences, Austria

11.00 - 11.20 Order Oriented Manufacturing Control - The PABADIS'PROMISE Approach

A. Lüder, J. Peschke - University of Magdeburg, Germany

11.20 - 11.40 The PABADIS'PROMISE - Architecture

A. Lüder, J. Peschke - University of Magdeburg, Germany

A. Bratukhin, A. Treytl - Austrian Academy of Sciences, Austria

A. Kalogeras, J. Gialelis - Industrial Systems Institute, Greece

11.40 - 12.00 Domain Specific Languages for the Development of Reconfigurable Control Applications

G. Fogliazza - Machining Center Manufacturing S.p.A, Italy

12.00 - 12.20 A Case Study for the Development of an Order-Oriented Control Architecture: a Car Production System

E. Benazzi, A. Cotta Ramusino, A. Leverano – CRF, Centro Ricerche Fiat, Italy

L. Ferrarini, C. Veber – Politecnico di Milano, Italy

12.20 - 12.40 Agents on RFID Tags – A Chance to Increase Flexibility in Automation

A. Treytl, G. Pratl, B. A. Khan - Austrian Academy of Sciences, Austria

12.40 - 13.00 Round table

**T2.2 - Low Cost Automation in Agroindustry (1)**

Organizers: L. Glielmo – Università del Sannio, Italy

F. Garofalo – Università di Napoli Federico II, Italy

Chairman: L. Glielmo – Università del Sannio, Italy

Co-Chairman: F. Garofalo – Università di Napoli Federico II, Italy

14.30 - 14.50 UML Description of a Remote Monitoring System for Apiculture

A. Pontecorvo, F. Garofalo – Università di Napoli Federico II, Italy

O. R. Natale – Mosaico Monitoraggio Integrato s.r.l., Italy

L. Glielmo – Università del Sannio, Italy

14.50 - 15.10 Object Oriented Data Modeling for Continuous Processes in Food Industry

L. Glielmo, I. Tagliamonte, F. Vasca – Università del Sannio, Italy

O.R. Natale - Mosaico Monitoraggio Integrato s.r.l., Italy

15.10 - 15.30 Applications of RFID Technology in the Warehouses Management

F. Basile, P. Chiacchio, D. Del Grosso – Università di Salerno, Italy

G. De Tommasi – Università di Napoli, Italy

**T2.3 - Low Cost Automation in Agroindustry (2)**

16.00 - 16.20 Toward the Full Integration of Frozen Food Production utilizing RFID. A Case Study

A. Caldara, C. Briante, F. Garofalo – Università di Napoli Federico II, Italy

16.20 – 17.00 Riditt Agrimation demonstration activities

L. *Giulio* – Università del Sannio, Italy

**Tuesday, 14<sup>th</sup> November**

**Room III**

**T3.1 - Italian Districts for Automation**

Organizers: *C. Melchiorri* – Università di Bologna, Italy

*E. Toschi* – ASTER sspa, Italy

Chairman: *C. Melchiorri* – Università di Bologna, Italy

Co-Chairman: *E. Toschi* – ASTER sspa, Italy

11.00 - 11.20 Industrial Automation Research and Technological Transfer in the Emilia-Romagna Region

*C. Bonivento* - Università di Bologna, Italy

11.20 - 11.40 The ICT Metadistricts in the Lombardia Region

*L. Ferrarini, P. Rocco* – Politecnico di Milano, Italy

11.40 - 12.00 Joint Industry-University Research Initiatives and Technology Transfer in the Liguria Region

*G. Casalino* – Università di Genova, Italy

*R. Pertica* – Gruppo Finmeccanica, Italy

12.00 - 12.20 Research, Innovation and Technology Transfer in Mechatronics and Robotics: the Piemonte Region Initiatives

*B. Bona* – Politecnico di Torino, Italy

*B. Nicoletta* - CREA S.r.l., Italy

**T3.2 - Advanced Control Applications (1)**

Chairman: *F. Basile* – Università di Salerno, Italy

Co-Chairman: *A. Galbiati* – Ascon spa, Italy

14.30 - 14.50 Distributed Control Systems using CANopen as Embedded Network

*H. Zeltwanger* – CAN in Automation, Germany

14.50 - 15.10 Data Sharing in Modern Automation Systems: Integration of a CANopen Line in an Ethernet/IP System

*A. Galbiati* – Ascon spa, Italy

15.10 - 15.30 Horizontal and Vertical Integration for Automation Systems – Virtual Automation Networks

*C. Schwab, A. Klostermeyer* – Siemens AG, Germany

*M. Hoffmann* – University of Magdeburg, Germany

*R. Messerschmidt* - Institut für Automation und Kommunikation Magdeburg, Germany

*J. Beran* - Brno University of Technology, Czech Republic

**T3.3 - Advanced Control Applications (2)**

16.00 - 16.20 A New Concept for Industrial Roughness Measurement - Test Case of the Industrialization of a Device for Small Productive Scale

*V. Moroli, M. Gabriele* - Centro Sviluppo Materiali s.p.a., Italy

16.20 - 16.40 Design and Implementation of an Hydraulic Actuator Controller

*F. Basile, P. Chiacchio, D. Del Grosso* – Università di Salerno, Italy

16.40 - 17.00 Modern Solution for Data Acquisition System in a Tritium Removal Pilot Plant

*C. Bucur, C. Retevoi, I. Stefanescu, I. Stefan, O. Balteanu, L. Stefan* - Institute of Cryogenics and Isotopic Technologies, Romania

## Wednesday, 15<sup>th</sup> November

### Room I

09.30 - 10.30 Plenary Talk: Real-Time Aspects in Control  
*K.-E. Arzen* - University of Lund, Sweden

#### W1.1 - Real-Time Systems for Control Applications

Organizer: *G. Buttazzo* - Scuola Superiore S. Anna, Italy

Chairman: *K.-E. Arzen* - University of Lund, Sweden

Co-Chairman: *P. Gai* – Evidence Srl, Italy

11.00 - 11.20 Why Real-Time Computing?

*G. Buttazzo* - Scuola Superiore S. Anna, Italy

11.20 - 11.40 Kernel and Tools for Real-Time Applications in Multicore Systems

*P. Gai* – Evidence Srl, Italy

*G. Lipari, M. Di Natale, N. Serreli, L. Palopoli* – Scuola Superiore S. Anna, Italy

*A. Ferrari* – PARADES - CNR, Italy

11.40 - 12.00 Linux and Real-Time: Current Approaches and Future Opportunities

*C. Scordino* – Università di Pisa, Italy

*G. Lipari* - Scuola Superiore S. Anna, Italy

12.00 - 12.20 Dynamic Rate Adaptation in Distributed Computer Control Systems

*A. Antunes* - Escola Superior de Tecnologia de Setúbal, Portugal

*P. Pedreiras, L. Almeida, A. Mota* - Universidade de Aveiro, Portugal

12.20 - 12.40 A Realtime Simulation Environment for Rapid Prototyping of Digital Control Systems and Education

*C. Melchiorri, G. Palli* – Università di Bologna, Italy

#### W1.2 - Land Control and Monitoring System for Fire Prevention (1)

Organizers: *C. Demartini* – Politecnico di Torino, Italy

*G. Buttazzo* - Scuola Superiore S. Anna, Italy

Chairman: *C. Demartini* – Politecnico di Torino, Italy

Co-Chairman: *G. Buttazzo* - Scuola Superiore S. Anna, Italy

14.10 - 14.30 Land Control and Monitoring System for Fire Prevention

*G. Buttazzo* – Scuola Superiore S. Anna, Italy

*G. Chiandussi, C. Demartini, F. Quagliotti* – Politecnico di Torino, Italy

*G. Iannizzotto* – Università di Messina, Italy

*L. Lo Bello* – Università di Catania, Italy

14.30 - 14.50 Progress in the MicroHawk Research Program

*F. Quagliotti, G. Guglieri* – Politecnico di Torino, Italy

14.50 - 15.10 An Embedded Real-Time System for Autonomous Flight Control

*M. Marinoni, T. Facchinetti, G. Buttazzo, G. Franchino* – Università di Pavia, Italy

15.10 - 15.30 Robust and Randomized Control Design of Mini-UAVs: The MH1000 Platform

*L. Lorefice, B. Pralio* – Politecnico di Torino, Italy

*R. Tempo* - IEIT-CNR, Italy

### **W1.3 - Land Control and Monitoring System for Fire Prevention (2)**

16.00 - 16.20 An Approach to Support UAV to Ground Station Real-Time Communications in a Land Monitoring System

*L. Lo Bello, G. A. Kaczyński* – Università di Catania, Italy; KORE University, Enna, Italy

*T. Nolte* - Università di Catania, Italy; KORE University, Enna, Italy; Mälardalen University, Västerås, Sweden

*G. Sorbello, O. Mirabella* – Università di Catania, Italy

*F. Sgrò* - KORE University, Enna, Italy

16.20 - 16.40 A Wearable Computer for Sensors Data Monitoring and Visualization in Autonomous Exploration Systems

*G. Iannizzotto, F. La Rosa* – Università di Messina, Italy

16.40 - 17.00 A Ground Control Station for Control and Remote Piloting of UAVs

*A. Sanna* – Politecnico di Torino, Italy

**17.15 - 17.30 Closing Session**

**Wednesday, 15<sup>th</sup> November**

**Room II**

**W2.1 - Controlled Plant Design by Dedicated Software**

Organizer: *A. De Carli* - Università di Roma "La Sapienza"

Chairman: *A. De Carli* - Università di Roma "La Sapienza"

Co-Chairman: *D. Tavella* – Università di Calabria, Italy

- 11.00 - 11.20 Modelling and Simulation of Manufacturing Systems using ProModel® Software  
*A. De Carli, M. Zanchiello* - Università di Roma "La Sapienza", Italy
- 11.20 - 11.40 Modelling and Simulation of a Washing Machine  
*F. Donida, G. Ferretti, F. Schiavo* – Politecnico di Milano, Italy
- 11.40 - 12.00 Parameter Estimation of an Electromechanical Model of a DC Motor in the MATLAB®/SIMULINK® Environment  
*P. Bizzarri* – The MathWorks, Italy
- 12.00 - 12.20 A New Development Environment for Embedded Control Systems Design: F.I.R.E.  
*A. Casavola, I. Montalto, D. Tavella* – Università di Calabria, Italy  
*F. De Cristofaro, F. Garofalo* - Elasis – Fiat Powertrain Technologies
- 12.20 - 12.40 An Integrated Environment for Industrial Control Performance Assessment, Diagnosis and Improvement  
*P. Belli, N. Bonavita* - ABB Process Solutions & Services SpA, Italy  
*R. Rea* - GE-Bayer Specialties S.r.L., Italy

**W2.2 - Control of Advanced Telecommunication Networks (1)**

Organizer: *F. Delli Priscoli* - Università di Roma "La Sapienza"

Chairman: *F. Delli Priscoli* - Università di Roma "La Sapienza"

Co-Chairman: *A. Pietrabissa* - Università di Roma "La Sapienza"

- 14.10 - 14.30 Optimization of a Dynamic Resource Allocation in DVB-RCS Satellite Networks  
*F. Nivor, P. Berthou, S. Abdellatif, T. Gayraud* – LAAS CNRS, France
- 14.30 - 14.50 Return Channel Terminal Architecture for Quality of Service provisioning in DVB-RCS Systems  
*B. de la Cuesta, J. Aguiar, H. Vega, B. Carro* – University of Valladolid, Spain  
*A. Sánchez* - Parque Tecnológico de Boecillo, Spain
- 14.50 - 15.10 UML 2.0 Based Methodology for Designing and Developing Real-Time and QoS-Oriented Communication Protocols  
*E. Exposito, N. Van Wambeke, C. Chassot, M. Diaz* - LAAS CNRS, France
- 15.10 - 15.30 Autonomic Wireless Sensor Networks: Intelligent Ubiquitous Sensing  
*G.M.P. O'Hare, M.J. O'Grady, D. Marsh, A. Ruzzelli, R. Tynan* - University College Dublin, Ireland

**W2.3 - Control of Advanced Telecommunication Networks (2)**

- 16.00 - 16.20 Wi-MAX Extension to Isolated Research Data Networks  
*E. Angori* – Datamat, Italy  
*A. Cimmino* - Alcatel, Italy  
*M. Dinis* – Portugal Telecom Inovação, Portugal  
*E. Guainella* – Università di Roma "La Sapienza", Italy  
*J. Huusko* – VTT, Finland

*E. Monteiro* – University of Coimbra, Portugal

*M.R. Spada* - Wind Telecomunicazioni, Italy

16.20 - 16.40

A Control Theoretic Approach to DVB-H Bandwidth Management using Content Adaptation Node

*E. Guainella, F. Meneguzzi, A. Pietrabissa* – Università di Roma “La Sapienza” , Italy

**Wednesday, 15<sup>th</sup> November**

**Room III**

**W3 – Hands-on Tutorial on OpenModelica**

14.10 - 15.30, 16.00 - 17.00

Introduction to Object-Oriented Modeling and Simulation with Modelica – Hands-on exercises using OpenModelica

*P. Fritzson* - Linköpings Universitet, Sweden