



UNIVERSITÀ DEGLI STUDI DI PAVIA



UNIVERSITÄT PADERBORN  
Die Universität der Informationsgesellschaft

*PHD SCHOOL IN INFORMATICS, ELECTRONICS AND ELECTRICAL ENGINEERING, UNIV. PAVIA*

# Paderborn-Pavia in Mantua Informatics Phd Workshop

28 February – 2 March 2011



## Scientific Program and Abstracts

Sala Consiliare, Fondazione Università di Mantova, Via Scarsellini 2  
Info: Prof. M. Ferretti, DIS, University of Pavia ([marco.ferretti@unipv.it](mailto:marco.ferretti@unipv.it)), 0376 286225





# Monday 28, February

10:30-11:00 **Opening Addresses**  
*G. Pacchioni, President, Fondazione Università di Mantova*  
*E. Fontanili, President, Provincia di Mantova*  
*C. Ciaponi, Dean, Faculty of Engineering, Università di Pavia*

## Session I

11:00-11:30 **Cyber Physical Systems and Cyber Biosphere**  
*Franz Joseph Rammig*

11:30-11:55 **Handling Complex Events in Surveillance Tasks**  
*Marco Ferretti*

11:55-12.20 **Adaptive Computing for Green Data Center**  
*Simon Oberthür*

12.20-12.45 **App-Oriented Protocols for Wireless Sensor Networks**  
*Emanuele Goldoni*

## Session II

14:30-14:55 **Server Power Management**  
*Diana Riemer*

14:55-15:20 **Geometrical Constraints for Ligand Positioning**  
*Alessandro Gaggia*

15:20-15:45 **Power Management at Electronic System Level (ESL)  
A Design and Verification Perspective**  
*Fabian Mischkalla*

15:45-16:00 **Coffee Break**

## Session III

16:00-16:25 **Using Virtual Forces for Image Registration and Coarse  
Granular Multi-microcontroller reconfiguration**  
*Claudius Stern*

16:25-16:50 **Human Settlement Mapping from Multisensor and  
Multiresolution SAR Images**  
*Massimiliano Aldrighi*

16:50-17:15 **UAV Coordination**  
*Christoph Rasche*

# Tuesday 1, March

## Session IV

- 09:30-09:55      **Towards Self Adaptive Binary Code Optimization Based on Annotated Control Flow Graphs**  
*Daniel Baldin*
- 09:55-10:20      **Business Oriented Information Technology Service Level Management**  
*Thiago Barroero*
- 10:20-10:45      **Online Model Checking**  
*Yuhong Zhao*
- 10:45-11.10      **Synchronization of a SystemC Based Restbus Simulator with a Hardware-In-the-Loop System in a FlexRay Network**  
*Gilles Gnokam Defo*
- 11:10-11:20      **Short break**

## Session V

- 11:20-11:45      **Real-Time Segmentation and Tracking of Multiple Subjects by Time-of-Flight Cameras**  
*Piercarlo Dondi*
- 11:45-12:10      **Real-Time Considerations on Swarm Robotics**  
*Yara Khaluf*
- 12:10-12:35      **User Interface Evaluation by Eye-Tracking Methodology: Some Recent Studies.**  
*Alice Ravarelli*
- 12:35-13.00      **Simulation Based Real Time Software Verification and Refinement**  
*Markus Becker*

## Session VI

- 14:30-14:55      **Towards Virtualization of Embedded RT Systems**  
*Timo Kerstan*
- 14:55-15:20      **Comparison of Alternative Hierarchical Scheduling Techniques for the Virtualization of Embedded Real-Time Systems**  
*Stefan Grösbrink*

15:20-15:45 **Compositing Management in Heterogeneous Embedded Systems**  
*Mirto Musci*

15:45-16:00 **Coffee break**

## **Session VII**

16:00-16:25 **Towards Open, Robust and Flexible RT Systems**  
*Andreas Thuy*

16:25-16:50 **Real-Time Physical Systems and Energy Efficiency**  
*Marco Della Vedova*

16:50-17:15 **Online Power-Aware Scheduling for Hard RT Systems**  
*Da He*

# Wednesday 2, March

## **Session VIII**

09:05-09:30 **Project of an e-Government Laboratory**  
*Francesca Tassini*

09:30-09:55 **Performance Aware of Business Process**  
*Calet Jimenez Perez*

09:55-10:20 **Persuasive Design and e-Learning**  
*Stefania Ricotti*

10:20-10:45 **A Framework for Runtime Evolution of Embedded Systems**  
*Fahad Bin Tariq*

10:45-11:10 **Design Space Abstraction and MDE Process for Embedded Systems Design**  
*Marcio Ferreira da Silva Oliveira*

11:10-11:20 **Short break**

## Session IX

- 11:20-11:45 **A Matrix of Capacitive Sensors for Automotive Applications**  
*Elisa Marenzi*
- 11:45-12:10 **Introduction to Industrial Ethernet**  
*Ahmed Elfeky*
- 12:10-12:35 **A Wearable Intelligent System for Remote Foetal Monitoring During Pregnancy**  
*Giulia Matrone*
- 12:35-13.00 **A Portable Instrument for Multiparametric Analysis of Complex Biological and Chemical Samples Based on Surface Plasmon Resonance**  
*Sara Rampazzi*

## Session X

- 14:30-14:55 **Self-Adaptive Wire-bond Failure Classification for Process Integrated Wire-bond Quality Control**  
*Sebastian Hagenkötter*
- 14:55-15:20 **Ultrasonic Wire-bond Failure Classification by Means of Cytokine-Formal Immune Networks**  
*Norma Alicia Montealegre Agramont*
- 15:20-15:45 **An Inverse Problem in Multiobjective Optimization of Mechatronic Systems**  
*Natascha Esau*
- 15:45-16:10 **Analysis, Characterization and Modeling of the Pantograph-Catenary System for High-Speed Trains.**  
*Alberto Ramponi*
- 16:10-16:30 **Coffee break**
- 16:30-17:00 **Closing Address: PhD High Education School, Pavia**  
*G. Ranzani, Director, SAFD Scuola Alta Formazione Dottorale, Univ. Pavia*