

*International Workshop*  
**Mobile Networks  
For Biometric Data Analysis**

*Ancona, Italy, October 30-31, 2014*

**Program**

Inscription and info: [www.dii.univpm.it/mBiDA](http://www.dii.univpm.it/mBiDA)

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*International Workshop*  
**Mobile Networks for Biometric Data Analysis**  
**mBiDA 2014**

**October 30-31, 2014 Ancona, Italy**

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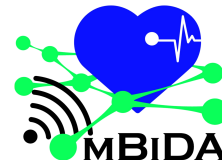
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**Co-Organization** : *PhD School in Engineering Sciences, Università Politecnica delle Marche*

**Local Organization**

**Web Design:** *M. Conti, F. Francescangeli*  
**Proceedings** *S. Orcioni*  
**Administrative Office:** *D. Boccoli*  
**Event Organization:** *Dipartimento di Ingegneria dell'Informazione, e-Living*

*International Workshop*  
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*Facoltà di Ingegneria, via Brecce Bianche, Ancona, Room 160/3*

## **Program**

### **October 30, 2014**

**Registration 8:30-9:15**

**Welcome 9:30-9:45**

**Round Table 9.45-11.00 “Service and Technologies for Active Ageing”**

Francesco Piazza, UnivPM

Anna Torelli, Regione Marche

Francesca Gaetini, A Tlc

Lorena Rossi, INRCA

Francesca Cesaroni, COOSS Marche

**Coffee break 11:10-11:30 (at Faculty Club, Facoltà di Ingegneria)**

**Session 1 11:40-12:40 “ICT for health care” (4 papers)**

**Lunch 12:50-14:20 (at Faculty Club, Facoltà di Ingegneria)**

**Poster session (5 papers)**

**Session 2 14:30-15:50 “Biometric data in automotive and home applications” (4 papers)**

**Coffee break 15:55-16:15 (at Faculty Club, Facoltà di Ingegneria)**

**Session 3 16:20-17:30 “Embedded systems for biometric data analysis” (4 papers)**

**19:30-20:30 Visit of wine farm “Cantine Moroder”**

**20:30-23:00 Conference dinner at “Azienda Agricola Moroder”, Via Montacuto, 121 Ancona**

### **October 31, 2014**

**Session 4 9:00-10:40 “Biometric data analysis: EMG and ECG” (5 papers)**

**Coffee break 10:45-11:00 (at Faculty Club, Facoltà di Ingegneria)**

**Session 5 11:10-12:50 “ICT for gait analysis” (5 papers)**

**Closing 12:50-13.00**

October 30, 2014



**Session 1, 11:50-12:50 “ICT for health care”**

**(Chairman Massimo Conti)**

- 1 Monica De Angelis, Rosita Pretaroli, Andrea Monteriù, Francesca Severini, Claudio Socci and Maurizio Ciaschini, "The ICT industry and the health care system"
- 2 Lorenza Lupini and Francesca Scocchera, "End-user organization and R&D of ICT projects: a non-intrusive model for the collection and analysis of data, feedback and needs"
- 3 (short) Christoph Dermati, Benedikt Martínez, Artur Kostka, Lars Pfeil, Ralf Lange, Matthias Hermann and Ralf Seepold, "Determining Health Status and Weather Conditions to Recommend Behavioral Activities"
- 4 (short) Thomas Walzer, Emre Yay and Martínez Madrid Natividad, "„eKlarA“ – A clothing cycle assistant system supporting functionally impaired people"

**Poster Session (Faculty club)**

- 1 Davide Ortenzi, Alessandro Freddi, Sauro Longhi, Andrea Monteriù and Mariorosario Prist, "A novel shelving system for nutrition habits measuring"
- 2 Massimo Conti, Mirko Carloni, Rocco D'Aparo, Pierpaolo Scorrano and Berardo Naticchia, "Battery Monitor for Wireless Sensor Networks"
- 3 Angela Agostinelli, Corrado Giuliani, Francesco Di Nardo, Sandro Fioretti and Laura Burattini, "Extraction of the fetal ECG in noninvasive recordings using a new method based on segmented-beat modulation"
- 4 Thomas Wegmann and Ralf Seepold, "Step detection and orientation sensing with a low-cost embedded sensor"

**Session 2, 14:30-15:50 “Biometric data in automotive and home applications”**

**(Chairman Ralf Seepold)**

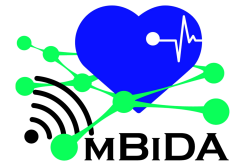
- 1 Emre Yay and Natividad Martínez Madrid, "Considering driver stress to increase the user acceptance while generating recommendations in an energy-efficiency and safety relevant driving system"
- 2 Patrick Datko, Natividad Martinez Madrid and Ralf Seepold, "Intelligent generation of navigation routes based on individual stress level"
- 3 Laura Montanini, Ennio Gambi and Susanna Spinsante, "Automatic Drowsiness Detection Through Visual Analysis for Mobile Android Devices "
- 4 Giorgio Biagetti, Paolo Crippa, Alessandro Curzi, Laura Falaschetti, Simone Orcioni and Claudio Turchetti, "A distributed speaker identification system for personalized home control"

**Session 3, 16:20-17:30 “Embedded systems for biometric data analysis”**

**(Chairman Simone Orcioni)**

- 1 (short) Jens Gansloser and Ralf Seepold, "A new Sensor for a Heart Rate Monitor based on Photoplethysmogram"
- 2 Giorgio Biagetti, Paolo Crippa, Simone Orcioni and Claudio Turchetti, "An inexpensive circuit solution for the acquisition of the ECG signal with wireless EMG sensors"
- 3 Enrico Camilloni, Giuseppe Demaso-Gentile, Cristiano Scavongelli and Massimo Conti, "Energy Harvesting for Body Area Networks"
- 4 Indrit Enesi and Blerina Zanaj, "Implementing Steganocryptography in Scanner Medical Images"

**October 31, 2014**



**Session 4, 9:00-10:40 “Biometric data analysis: EMG and ECG”**

**(Chairman Natividad Martinez)**

- 1 Giorgio Biagetti, Paolo Crippa, Simone Orcioni and Claudio Turchetti, "Parameter estimation of surface EMG MUAP by means of power cepstrum deconvolution"
- 2 Alessandro Mengarelli, Elvira Maranesi, Laura Burattini, Sandro Fioretti and Francesco Di Nardo, "A non-invasive assessment of variability in sEMG signals from lower limb muscles during gait "
- 3 Mohammed Rajab and Ralf Seepold, "Dynamic threshold calibration for RR interval detection in a QRS complex"
- 4 Wilhelm Daniel Scherz, Juan Ortega, Natividad Martinez Madrid and Ralf Seepold, "QRS complex detection, analysis and preprocessing to determine stress"
- 5 Elvira Maranesi, Micaela Morettini, Francesco Palmieri, Francesco Di Nardo and Laura Burattini, "Preventing sudden cardiac death in sports: a novel monitoring service of the heart-rate variability trough wearable sensors"

**Session 5, 11:10-12:50 “ICT for gait analysis”**

**(Chairman Sandro Fioretti)**

- 1 Vinicio Barone and Sandro Fioretti, "Integration of smartphones and webcam for the measure of spatial-temporal parameters of gait for treadmill use "
- 2 Elvira Maranesi, Sandro Fioretti, Laura Burattini and Francesco Di Nardo, "Functional Reach Test evaluated by wireless surface electromyography: a non-invasive assessment of fall risk in diabetic patients"
- 3 Elvira Maranesi, Marta Petrini, Giacomo G. Ghetti, Oriano Mercante, Laura Burattini, Francesco Di Nardo and Sandro Fioretti, "An innovative approach to compute the Functional Ambulation Profile (FAP) Score"
- 4 Giuseppe DeMaso-Gentile, Cristiano Scavongelli, Massimo Conti, Luca Basili, Stefano Pirani and Simone Orcioni, "Use of a smartphone into a fall detection system"
- 5 Lucia Pepa, Marco Rossini, Luca Spalazzi and Federica Verdini, "Step length estimation for freezing of gait monitoring in Parkinson’s disease"