

## **PERSONAL INFORMATION:**

### **BRUNO LEPRI**

Tel.

cell.

E-mail: lepri@fbk.eu

Citizenship:

Date and place of birth:

## **EMPLOYEMENTS:**

1 November 2008 – 31 December 2009: Research Consultant at I3 Group (FBK-Irst).  
Thematic: Automatic recognition of Activities of Daily Living (internal Pumalab Project and Netcarity EU-project) and design and implementation of services based on automatic behavior analysis (Netcarity EU-project)

20 October – 30 November 2006: Research Consultant at TCC division (FBK-Irst).  
Thematic: Data collection and implementation of machine learning algorithms for the analysis of small group participants' behaviour (CHIL EU-project).

17 August – 11 September 2007: Research Consultant at TCC division (FBK-Irst).  
Thematic: Descriptive statistical analysis of audio-visual features and psychometric traits collected in the Mission Survival Corpus 2 (CHIL EU-project).

## **EDUCATION:**

1 November 2005 – 15 December 2009: PhD degree in Information and Communication Technologies (major in computer science) at the University of Trento. Advisor: Dr. Fabio Pianesi. Title of thesis: *Multimodal Recognition of Personality Traits and Social Behaviours in Small Group Interaction*

May 2008 – December 2008 Visiting Student at House\_N research group, MIT Department of Architecture and Media Lab, under the supervision of Dr. Stephen Intille

19 October 2005: Master degree summa cum laude in Philosophy at the University of Bologna (major in logic). Master thesis in theory and systems of artificial intelligence. Title: *Learning and Motivation: Design of an Intelligent Chess Tutoring System*. Advisor: Prof. Maurizio Matteuzzi. Co-advisor: Dr. Oliviero Stock

April 2004 – September 2005: stage at TCC division (ITC-Irst) during my master thesis work

1999: Diploma in Classic Studies at Liceo Classico “G.Cesare”, Rimini.

## **RESEARCH INTERESTS:**

**Multimodal Analysis of Small Group Interactions:** Group Functional Roles, Personality Traits (Extraversion and Locus Of Control), and Individual and Group Performances

**Activity Recognition and Analysis for Pervasive Healthcare:** Automatic Recognition of Activities of Daily Living using Video, Audio, and other Sensors (RFIDs, Infrared sensors, on-body accelerometers)

**Machine Learning:** Support Vector Machines (SVMs), Kernel methods, Hidden-Markov Models, Influence Model

**Intelligent User Interfaces:** Multimodal Interfaces, Motivational User Interfaces, Affective User Interfaces

## **PUBLICATIONS**

*From On-going to Complete Activity Recognition Exploiting Related Activities.* C. Nicolini, B. Lepri, S. Teso, and A. Passerini. Accepted for publication in Human Behavior Understanding (HBU) Workshop of International Conference on Pattern Recognition 2010 (ICPR), Instabul, Turkey

*Honest Signals and their Contribution to the Automatic Analysis of Personality Traits – A Comparative Study.* B. Lepri, K. Kalimeri, and F. Pianesi. Accepted for publication in Human Behavior Understanding (HBU) Workshop of International Conference on Pattern Recognition 2010 (ICPR), Instabul, Turkey

*Modelling Group Discussion Dynamics.* W. Dong, A. Mani, B. Lepri, A. Pentland, and F. Pianesi. Submitted to IEEE Transactions on Autonomous Mental Development (TAMD).

*What Is Happening Now? - Detection of Activities of Daily Living from Simple Visual Features.* B. Lepri, N. Mana, A. Cappelletti, F. Pianesi, and M. Zancanaro. Accepted for publication in Journal of Personal and Ubiquitous Computing, Special Issue on Multimodal Systems, Services and Interfaces for Ubiquitous Computing

*Extracting Information from Human Behavior.* F. Pianesi, B. Lepri, N. Mana, A. Cappelletti, and M. Zancanaro. In M. Maybury (ed.) Multimedia Information Extraction (in press).

*Automatic Prediction of Individual Performance from Thin Slices of Behavior.* B. Lepri, N. Mana, A. Cappelletti, and F. Pianesi. In Proceedings of ACM International Conference on Multimedia 2009 (ACM-MM 2009).

*Modelling the Personality of Participants during Group Interactions.* B. Lepri, N. Mana, A. Cappelletti, F. Pianesi, and M. Zancanaro. In Proceedings of User Modelling, Adaptation, and Personalization 2009 (UMAP 2009).

*Netcarity Multimodal Data Collection.* A. Cappelletti, B. Lepri, N. Mana, F. Pianesi, and M. Zancanaro. In CHI Workshop on Developing Shared Home Behaviour Datasets to Advance HCI and Ubiquitous Computing Research, 2009.

*Honest Signals in the Recognition of Functional Relational Roles in Meetings.* B. Lepri, A. Mani, A. Pentland, and F. Pianesi. In Proceedings of AAAI Spring Symposium on Human Behavior Modelling 2009.

*Multimodal Recognition of Personality Traits in Social Interactions.* F. Pianesi, N. Mana, A. Cappelletti, B. Lepri, and M. Zancanaro. In Proceedings of Tenth International Conference on Multimodal Interfaces (ICMI 2008). Special Session on Social Signal Processing and Behavioural Analysis

*A Multimodal Data Collection of Daily Activities in a Real Instrumented Apartment.* A. Cappelletti, B. Lepri, N. Mana, F. Pianesi, and M. Zancanaro. In LREC Workshop on Multimodal Corpora, 2008.

*Automatic Relational Reporting to Support Group Dynamics.* F. Pianesi, M. Zancanaro, A. Cappelletti, B. Lepri, and E. Not. In A. Waibel and R. Stiefelhagen (eds.) Computers in the Human Interaction Loop. Springer-Verlag, 2008.

*Using the Influence Model to Recognize Functional Roles in Meetings.* W. Dong, B. Lepri, A. Cappelletti, A. Pentland, F. Pianesi, and M. Zancanaro. In Proceedings of Ninth International Conference on Multimodal Interfaces (ICMI 2007).

*Multimodal Corpus of Multi-party Meetings for Social Behavior Analysis and Personality Traits Detection.* N. Mana, B. Lepri, P. Chippendale, A. Cappelletti, F. Pianesi, P. Svaizer, and M. Zancanaro. In Proceedings of ICMI Workshop on Tagging, Mining and Retrieval of Human-Related Activity Information, 2007.

*Multimodal Annotated Corpora of Consensus Decision Making Meetings.* F. Pianesi, M. Zancanaro, B. Lepri, and A. Cappelletti. Journal of Language Resources and Evaluation, 2008.

*Multimodal Support to Group Dynamics.* F. Pianesi, M. Zancanaro, E. Not, C. Leonardi, V. Falcon, and B. Lepri. Personal and Ubiquitous Computing 2007.

*Automatic Generation of Relational Reports for Teamwork.* M. Zancanaro, B. Lepri, E. Not, and F. Pianesi. In Proceedings of Symposium on Affective Smart Environments (ASE07).

*Automatic Detection of Functional Group Roles in Face to Face Interactions.* M. Zancanaro, B. Lepri, and F. Pianesi. In Proceedings of Eight International Conference on Multimodal Interfaces (ICMI'06) 2006.

*Motivational Strategies for an Intelligent Chess Tutoring System.* B. Lepri, C. Rocchi, and M. Zancanaro. In Proceedings of Intelligent Technologies for Interactive Entertainment: First International Conference, INTETAIN 2005.

*Multimodalità.* B. Lepri. In F. Bianchini, A. Gliozzo, M. Matteuzzi (eds.) *Instrumentum Vocale: Intelligenza Artificiale e Linguaggio.* Bononia University Press, 2007.

### **INVITED TALKS:**

30 March 2007: Invited Talk “Relational Report: Supporting Group Dynamics” at “Human Dynamics Group” Media Lab, MIT, Cambridge, USA

09 July 2009: Invited Talk “Multimodal Recognition of Personality in Small Group Interaction” at Department of Computer Science, University of Verona, Italy

### **REVIEWING ACTIVITY**

9<sup>th</sup> International Conference on Multimodal Interfaces (ICMI 2007)

10<sup>th</sup> International Conference on Multimodal Interfaces (ICMI 2008)

IEEE Cybernetics and Systems Special Issue on “Social Awareness in Smart Spaces”

### **TEACHING ACTIVITY**

April 2010: Module on “Automatic Behavior Analysis” (Lecturers: B. Lepri and N. Mana) for the Computer-Human Interaction course (Lecturer: M. Zancanaro). Master In Human Language Technologies (HLT), Department of Computer Science, University of Trento

April 2009: Module on “Automatic Behavior Analysis” (Lecturers: B. Lepri and N. Mana) for the Computer-Human Interaction course (Lecturer: M. Zancanaro). Master In Human Language Technologies (HLT), Department of Computer Science, University of Trento

### **SUMMER SCHOOLS:**

2005: ESSLLI (European Summer School on Language, Logic and Information) at Edinburgh, Great Britain

3-7 July 2006: NN06 (Neural Networks for classification and data mining) at Porto, Portugal

2006: Workshop on machine learning, speech processing, information retrieval and computer vision at IDIAP research institute (Martigny, Switzerland)

23-27 October 2007: Summer School “The Analysis of Patterns” at Bertinoro, Italy

## **LANGUAGES**

- Italian: mother tongue
- English: fluent
- German: beginner

## **COMPUTER SCIENCE SKILLS:**

- Scientific tools:
  - Matlab
  - R
  - SPSS
- Operating systems:
  - Unix
  - Linux
  - Windows 1998/2000/Xp/Vista
- Programming languages:
  - Python
  - Java
  - C#
- Web programming:
  - Flash Mx/Flash Mx 2004

Ai sensi della legge 675/1996, autorizzo il trattamento dei dati personali.

F.TO IN  
ORIGINALE