

Short CV of the scientific and research activity

1 Personal Data

Name and Surname: Barbara Furletti

Place and date of Birth: Livorno (Italy), December 03, 1976

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2 Current Position

From June 2011, **Researcher** at KDD (Knowledge Discovery and Delivery) - Istituto di Scienza e Tecnologia dell'Informazione - CNR di Pisa. Research and development activities in: Knowledge discovery, Mobility data mining and privacy. Analysis and study of mobility behaviors using mobile phone, GPS and Social Networks data.

3 Education and training

- **16/12/2009: PH. D. in Computer Science and Engineering**, at the Institutions, Markets, Technologies - Institute for Advanced Studies of Lucca (Italy).
Title and subject of the thesis: *Ontology-Driven Knowledge Discovery*. Application of data mining and link analysis techniques for the extraction of influence rules out of Ontologies.
Supervisor: **Prof. Franco Turini**.
- **31/03/2003: Master Degree** in Computer Science at the University of Pisa (Italy).
Title and subject of the thesis: *Logic environment for Spatio-temporal clustering*. Feasibility study and realization of a logic environment for

the spatio-temporal reasoning. Implementation of a clustering algorithm for moving objects. Grading: 103/110.
Supervisor: **Prof. Franco Turini**.

- **26/02/2003: Degree** in Computer Science at the University of Pisa (Italy). Grading: 104/110.
- **07/1995: Diploma of “Ragioniere e Perito Commerciale”** at Istituto Tecnico Commerciale Statale “Carlo Cattaneo” di Cecina (LI). Grading: 60/60.

4 Professional qualification

- **06/09/2003.** Qualification as Information Engineer at the University of Pisa (Italy).

5 Certificates

- **November 2013.** Project Manager - ISIPM-Base Certificate, at Centro Stargate, Pontedera (Italy). November 2013.

6 Work Experiences

- **01/11/2003-31/08/2010:** Internship at Wind S.p.A. Activity of study and development of analysis methodologies on mobile phone data.
- **01/11/2003-31/08/2010:** Research fellow at the Department of Computer Science - University of Pisa (Italy). Research and development activity on data mining and knowledge discovery. Study and development of Ontologies.

7 Most recent research projects

- **[HII - October 2014 - October 2015]** Trusted Data Management with Service Ecosystem is a EIT ICT Lab project. **Objective:** To accelerate Trusted Cloud business and ecosystems by providing better tools and services for consumers and businesses to take greater control over the use of sensitive data.



- **[TagMyDay - May 2014 - October 2014]** Internal Research project in cooperation with the municipality of Pisa. **Objective:** The collection of mobility data from the citizens for the study of the human mobility at urban level.
- **[SEEK - 1 May 2011 - 28 February 2015]** European Marie Curie Project. **Objective:** To investigate methods for extracting knowledge from a huge amount of mobility data. **Contribution:** Visit period at UFC of Fortaleza - Brasil in May 2014.
- **[CDF4EM - 1 January 2014 - 31 December 2014]** City Data Fusion For Event Management is a EIT ICT Lab project. **Objective:** To create a new service for event Managers for monitoring events at city scale. **Contribution:** Implementation and experimentation of a new data mining method for the discovering the impact of big event in big cities using mobile phone data.
- **[DataSIM 2011-2014]** DataSIM is a FP7-ICT-2009-C project. **Objective:** To supply a new methodology of microsimulation for human mobility. **Contribution:** Mobility data analysis of GMS and GPS data. Implementation of a methodology for the semantic enrichment of GPS trajectories based on POI data.

Other projects are available at: <http://kdd.isti.cnr.it/people/furletti-barbara>

8 Languages

- **English.** Understanding: good; Speaking: good; Writing: good.
- **French.** Understanding: basic; Speaking: basic; Writing: basic.

9 Publications

9.1 Most recent publications

- [1] L. Gabrielli, B. Furletti, F. Giannotti, M. Nanni, S. Rinzivillo. *Use of mobile phone data to estimate visitors mobility flows.* To be appeared in the proceedings of MoKMaSD, 2014.

Date: February 2015

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Signature:



- [2] B. Furletti, L. Gabrielli, G. Garofalo, F. Giannotti, L. Milli, M. Nanni, D. Pedreschi, R. Vivio. *Use of mobile phone data to estimate mobility flows. Measuring urban population and inter-city mobility using big data in an integrated approach.* In the proceedings of SIS, 2014.
- [3] R. Trasarti, B. Furletti, L. Gabrielli, M. Nanni, D. Pedreschi. *Big data analytics for smart mobility: a case study.* In the Workshop Proceedings of the MUD, 2014.
- [4] M. Nanni, R. Trasarti, P. Cintia, B. Furletti, C. Renso, L. Gabrielli, S. Rinzivillo, F. Giannotti. *Mobility Profiling* In Data on Science and Simulation in Transportation Research. pp. 1–29. IGI Global publisher, 2014.
- [5] Trasarti R., Olteanu-Raimond A., Nanni M., Couronné T., Furletti B., Giannotti F., Smoreda Z., Ziemlicki C. *Discovering urban and country dynamics from mobile phone data withspatial correlation patterns.* In Telecommunications Policy Journal, Elsevier, 2014.
- [6] Mirco Nanni, Roberto Trasarti, Barbara Furletti, Lorenzo Gabrielli, Peter Van Der Mede, Joost De Bruijn, Erik De Romph and Gerard Bruil. *Transportation planning based on GSM traces: a case study on Ivory Coast* In the Proceedings of the CitiSen 2013 Workshop, pp. 15–25, 2013.
- [7] Barbara Furletti, Lorenzo Gabrielli, Chiara Renso, Salvatore Rinzivillo. *Analysis of GSM calls data for understanding user mobility behavior.* In the Proceedings of IEEE Big Data, 2013.
- [8] B. Furletti, P. Cintia, C. Renso, L. Spinsanti. *Inferring human activities from GPS tracks.* In the Proceedings of UrbComp, 2013.
- [9] Barbara Furletti, Lorenzo Gabrielli, Salvatore Rinzivillo, Chiara Renso. *Pisa Tourism Fluxes Observatory: deriving mobility indicators from GSM calls habits.* In the book of abstracts of NetMob, 2013.
- [10] Roberto Trasarti, Ana-Maria Olteanu-Raimond, Mirco Nanni, Thomas Couronné, Barbara Furletti, Fosca Giannotti, Zbigniew Smoreda, Cezary Ziemlicki. *Discovering urban and country dynamics from mobile phone data with spatial correlation patterns.* In the book of abstracts of NetMob, 2013.



- [11] Mirco Nanni, Roberto Trasarti, Barbara Furletti, Lorenzo Gabrielli, Peter Van Der Mede, Joost De Bruijn, Erik De Romph, Gerard Bruil. *MP4A Project: Mobility Planning For Africa*. In the D4D Book, 2013.
- [12] Balaji Rengarajan, Gianluca Rizzo, Marco Ajmone Marsan, Barbara Furletti. *QoS-Aware Greening of Interference-Limited Cellular Networks*. In the Proceedings of the WoWMoM, 2013.
- [13] B. Furletti, F. Turini. *What else can be extracted from ontologies? Influence Rules*. In Software and Data Technologies. Communication in Computer and Information Science Series. Vol. 303 - Springer Berlin Heidelberg, 2013.
- [14] B. Furletti, L. Gabrielli, S. Rinzivillo, C. Renso. *Identifying users profiles from mobile calls habits*. In the proceedings of UrbComp 2012.
- [15] B. Furletti, F. Turini. *Knowledge Discovery in Ontologies*. In Intelligent Data Analysis - An International Journal, Volume 16, Number 3 / 2012. IOS Press, 2012.

9.2 Technical reports

- [16] Barbara Furletti, Lorenzo Gabrielli, Anna Monreale, Mirco Nanni, Francesca Pratesi, Salvatore Rinzivillo, Fosca Giannotti, Dino Pedreschi. *Valutazione del rischio di privacy nel processo di costruzione dei modelli di call habit che sottostanno al Sociometro*. Technical Report. 2014.
- [17] Barbara Furletti, Roberto Trasarti, Lorenzo Gabrielli, Salvatore Rinzivillo, Luca Pappalardo, Fosca Giannotti. *Analisi di Mobilità con dati eterogenei*. Technical report. 2012.

9.3 Poster

- [18] Barbara Furletti, Lorenzo Gabrielli, Salvatore Rinzivillo, Chiara Renso. *Pisa Tourism Fluxes Observatory: deriving mobility indicators from GSM calls habits* Presented at NetMob 2013.



Other publications are available at: <http://www-kdd.isti.cnr.it/people/furletti-barbara>

10 Other skills

Languages: Java, HTML, SQL.

Good knowledge of MS Office XP package.

Design of User Interfaces, data bases and informative systems, Postgres-PostGis. Experiences in software design and implementation. Data mining and mobility data mining methods. Implementation of algorithms for semantic enrichment. Study and development of Ontologies. Privacy.

Tools and languages for Ontologies: OWL, SWRL, SeRQL, SPARQL, Jena, Sesame, Protégé.

Content Management System: Joomla!, Drupal, Wordpress. Design and realization of websites.

Under the Article nr. 13 of Legislative Decree 30 June 2003, nr. 196, I authorize the processing of personal data.

Date: February 10, 2015

