# Gabriele Pozzani

### Personal Data

CITIZENSHIP: Italian

Address: Via dell'Artigliere 8, 37129 Verona, Italy

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#### **EDUCATION**

Jan 2008 | Doctorate, University of Verona, Verona, Italy

DEC 2010 | PhD Program in Computer Science

Research area: Databases and information systems

Thesis: "Modeling and querying spatio-temporal clinical databases with

multiple granularities" Defence: May 6, 2011 Advisor: Prof. Carlo Combi

March 2007 | Master Degree in Computer Science, University of Verona, Verona,

Italy

Mark: 110/110 summa cum laude

Thesis: "Integration of Theorem Proving and Model Checking for the

mechanized verification of stochastic distributed algorithms"

Advisor: Prof. Roberto SEGALA

DECEMBER 2004 | Bachelor's degree in Computer Science, University of Verona, Verona,

Italy

Mark: 110/110 summa cum laude

Thesis: "The importance of linear factors"

Advisor: Prof. Roberto GIACOBAZZI

2001 | High School Diploma, Computer Science specialization, ITIS "G.

Silva", Legnago (Verona), Italy

Mark: 100/100

### Training and refresher courses

• CRUI Foundation. School of continuous learning on educational management - 4th module: Didactics and funding. Lucia Biondi PhD, May 24, 2018, Rome.

## Work experience

MAR 2018 | MedBrains s.r.l.i., Verona, Italy

CURRENT | Co-founder and working business partner

MedBrains is an innovative start-up and spin-off of the University of Verona (Italy). MedBrains aims at producing and providing services to support pharmacovigilance and

pharmacoepidemiology activities.

Jan 2018 | University of Verona, Verona, Italy

CURRENT | Main activity: technical staff

Design and developing of business intelligence solutions and data management to support monitoring activities and performances measuring done by the bureau of Reporting Systems and Data Storage and provided to University stakeholders.

Feb 2015 | University of Verona, Verona, Italy

DEC 2017 | Main activity: research associate

The project was a collaboration between the Section of Pharmacology (Dept. of Public Health and Community Medicine) of the University of Verona and the University Hospital of Verona. The project was about the design and implementation of a web application for the development of new data verifications on data reported by Health-care Services in Veneto about their drugs consumption, with the aim to detect syntactic and semantic errors.

Feb 2013 | University of Verona, Verona, Italy

Jan 2015 | Main activity: research associate

The work was part of the "Burundi project", a collaborative work between the Dept. of Computer Science of the University of Verona and the Foundation pro-Africa. The project was about the design and implementation of a telemedicine system connecting the hospitals in Verona with the hospital in Ngozi (Burundi).

Jan-Dec 2012 | University of Verona, Verona, Italy

Main activity: research associate

The work was part of the "MOBILE-CLINICAL-DW" project, a collaborative work between the Dept. of Computer Science of the University of Verona and the SOLINFO s.r.l. company. The project was about the design and implementation of a user interface, also suitable for mobile touch-screen devices, to access data warehouses on medical records and derived data for supporting administrative and clinical decision processes.

Mar-Dec 2011 | University of Verona, Verona, Italy

Main activity: research associate

The work was part of the REVIVAL project, funded by the Cariverona Foundation. The job provided to design a relational database and to develop a Web application helping in the cataloging of the audio, video, and bibliographic documents kept at the Historical Archive of the Verona Arena Foundation.

Jun-Dec 2007 | University of Verona, Verona, Italy

Main activity: research associate

I studied the literature about spatio-temporal granularities, their design, representation, and applications inside spatio-temporal databases and systems.

#### Mar-Apr 2006

Dept. of Computer Science, University of Verona, Verona, Italy

Main activity: programmer

Implementation by using MATLAB of a learning stochastic algorithm based on SOAP.

# TEACHING ACTIVITIES

| A.Y. 2017/18 | University of Verona, Verona, Italy  |
|--------------|--|
| A.Y. 2016/17 | Main activity: adjunct professor   |
| A.Y. 2015/16 | Lecturer of the "Systems for the information retrieval" course provided in the Master  |
| A.Y. 2014/15 | Degree in Publishing and Journalism, Dept. of Culture and Civilization. The course     |
| A.Y. 2013/14 | presented the main aspects of the systems for the information retrieval, in particular |
| A.Y. 2012/13 | about the text analysis and information retrieval in the Web. Moreover, the course     |
| A.Y. 2011/12 | presented an introduction to semistructured data and the use of XML in electronic      |
|              | publishing.  |

# Mar-Jul 2015

University of Verona, Verona, Italy

Mar-Nov 2013

Main activity: adjunct professor

Lecturer of "Information systems and security" during the "Tirocinio Formativo Attivo (TFA) in Informatica" course (i.e., Methods of Teaching Computer Science course). The course presented the main aspects of information systems, in particular DBMSs, and security, discussing both methodological and pedagogical aspects.

#### Mar-Nov 2013

University of Verona, Verona, Italy

Main activity: adjunct professor

Lecturer of "Information systems and security" during the "Percorso Abilitante Speciale (PAS) in Informatica (C300)" course (i.e., Methods of Teaching Computer Science course). The course presented the main aspects of using spreadsheets (in particular LibreOffice Calc) for data analysis, discussing both methodological and pedagogical aspects.

#### Feb 2012

University of Verona, Verona, Italy

Jan 2013

Main activity: adjunct professor

Professor of the "Documental Information Technology" course (Bachelor Degree in Communication Science, Faculty of Arts and Philosophy). The course presented the main aspect of relational DBMSs, their conceptual and logical design, and their querying by using SQL.

#### Jun 2011

University of Verona, Verona, Italy

Main activity: Pentaho presentation and demonstration

The work was part of a collaborative project between the Dept. of Computer Science of the University of Verona and the SOLINFO s.r.l. company.

The job provided to present and demonstrate to SOLINFO's employees the features of the Pentaho Business Analytics suite (a suite of web-based business intelligence, data integration, and data mining software).

Feb-Jun 2011 | University of Verona, Verona, Italy

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Databases for bioinformatics": Degree in Bioinformatics;
- "Databases": Degree in Computer Science.

May 2010 | Liceo Scientifico Statale "Girolamo Fracastoro", Verona, Italy

Main activity: Laboratory teacher for the course "A database for a Computer Science Museum"

The course, after an introduction about the theoretical basis of databases, pertained to the use of the DBMS "OOo Base", a software belonging to the OpenOffice.org suite.

Mar-Jun 2010 | University of Verona, Verona, Italy

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Databases for bioinformatics": Degree in Bioinformatics;
- "Databases": Degree in Computer Science.

May 2009 | Liceo Scientifico Statale "Girolamo Fracastoro", Verona, Italy

Main activity: Laboratory teacher for the course "A database for a Computer Science Museum"

The course, after an introduction about the theoretical basis of databases, pertained to the use of the DBMS "OOo Base", a software belonging to the OpenOffice.org suite.

#### Mar-Jun 2009

University of Verona, Verona, Italy

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Databases": Degree in Bioinformatics;
- "Databases and WEB": Degree in Computer Science;
- "Databases and Multimedia": Degree in Multimedia Information Technology.

#### Oct 2007

University of Verona, Verona, Italy

#### Mar 2008

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Introduction to Programming": Degree in Multimedia Information Technology;
- "Algorithms and Data Structures": Degree in Bioinformatics.

#### Nov-Dec 2007

University of Verona, Verona, Italy

Main activity: lecturer for the course "Databases laboratory"

The course (proposed by the Faculty of Arts and Philosophy) pertained to the use of the DBMS "MS Access".

# Mar-May 2007

University of Verona, Verona, Italy

Main activity: lecturer for the course "Databases laboratory"

The course (proposed by the Faculty of Arts and Philosophy) pertained to the use of the DBMS "MS Access".

Mar-Nov 2006 | University of Verona, Verona, Italy

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Databases and WEB": Degree in Computer Science;
- "Operating Systems": Degree in Computer Science.

Jan-Dec 2006

University of Verona, Verona, Italy

Main activity: laboratory assistant lecturer

I helped the lecturer, producing training aids and assisting students, during the laboratory class of the following courses:

- "Databases and WEB": Degree in Computer Science;
- "Operating Systems": Degree in Computer Science;
- "Introduction to Programming": Degree in Multimedia Information Technology;
- "Algorithms and Data Structures": Degree in Bioinformatics.

2003-2004

University of Verona, Verona, Italy

Main activity: lecturer for the laboratory class of the course "Basic Information Technology"

The course (proposed by the Faculty of Arts and Philosophy) pertained to the use of the software included in the Microsoft Office suite.

#### Advising

# Bachelor degrees

• "Metodologie e strategie di reporting aziendale", Dept. of Philology, Literature, and Linguistics, University of Verona. Bachelor degree course in Communication Studies, 2013. Candidate: Marco Fedeli.

Advisor: Dr. Gabriele Pozzani.

### Master degrees

• "TreeType: una classificazione di font ludicamente utile", Dept. of Philology, Literature, and Linguistics, University of Verona. Master degree course in Editing and Journalism, 2015.

Candidate: Luca Agliardi

Advisor: Dr. Gabriele Pozzani.

• "Dati di Insights a supporto del Facebook Marketing", Dept. of Philology, Literature, and Linguistics, University of Verona. Master degree course in Editing and Journalism, 2014. Candidate: Letizia Vallini

Advisor: Dr. Gabriele Pozzani.

• "Google e la ricerca personalizzata: opportunità e limiti tra consapevolezza e ignoranza", Dept. of Philology, Literature, and Linguistics, University of Verona. Master degree course in Editing and Journalism, 2013.

Candidate: Rachele Giorgetti. Advisor: Dr. Gabriele Pozzani. • "Estensione di una base di dati clinica con dimensioni spazio-temporali: modellazione e interrogazione di una base di dati psichiatrica", Dept. of Computer Science, University of Verona. Master degree in Computer Science, 2010.

Candidate: Giorgio Totola. Advisor: Prof. Carlo Combi.

Co-advisor: Dr. Gabriele Pozzani.

#### Research interests

The current research activity includes the following arguments:

- spatio-temporal databases;
- spatio-temporal data warehouses;
- representation of fuzzy and uncertain information in semi-structured documents;
- information retrieval and natural language processing in clinical information systems.

#### LANGUAGES

Italian: mother-tongue.

Other languages:

|         | Comprehension |              | Speaking     |              | Writing      |
|---------|---------------|--------------|--------------|--------------|--------------|
|         | Listening     | Reading      | Interaction  | Production   |              |
| English | B2 Upper      | B2 Upper     | B2 Upper     | B2 Upper     | B2 Upper     |
|         | intermediate  | intermediate | intermediate | intermediate | intermediate |

<sup>&</sup>lt;sup>†</sup> Self-evaluation with respect to the Common European Framework of Reference for Languages

#### **Publications**

#### Articles in international journals with referee:

- C. Combi, M. Zorzi, **G. Pozzani**, E. Arzenton, and U. Moretti. *Normalizing spontaneous reports into MedDRA: Some experiments with MagiCoder*. IEEE Journal of Biomedical and Health Informatics, volume 23, issue 1, 2019, pp. 95-102. ISSN: 21682194.
- C. Combi, M. Zorzi, G. Pozzani, U. Moretti, and E. Arzenton. From narrative descriptions to MedDRA: automagically encoding adverse drug reactions. Journal of Biomedical Informatics, volume 84, 2018, pp. 184-199. ISSN: 15320464.
- C. Combi, G. Pozzi, **G. Pozzani** (2016). *Telemedicine for Developing Countries*. Applied Clinical Informatics, volume 7, issue 4, 2016, pp. 1025-1050. ISSN 1869-0327.
- G. Pozzani, C. Combi. *ST4SQL*: a spatio-temporal query language dealing with granularities. Journal of Multimedia Processing and Technologies, volume 2, issue 3, September 2011, pp. 140-157. DLINE, Print ISSN 0976-4127, Online ISSN 0976-4135.

### Articles in international conferences with referee:

• M. Zorzi, G. Pozzani, C. Combi, U. Moretti. Mapping Free Text into MedDRA by Natural Language Processing: a Modular Approach in Designing and Evaluating Software Extensions. In Proceedings of 8th ACM International Conference on Bioinformatics, Computational Biology, and Health Informatics (BCB 2017). October 2-5, 2017. Boston, MA, USA.

- M. Zorzi, G. Pozzani, C. Combi, E. Arzenton, U. Moretti. A Co-occurrence Based Med-DRA Terminology Generation: Some Preliminary Results. 16th Conference on Artificial Intelligence in Medicine (AIME 2017), June 21-24, 2017. Vienna, Austria. Springer, pp. 215-220.
- C. Combi, G. Pozzani, G. Pozzi. Design, development, deployment of a telemedicine system in a developing country: dealing with organizational and social issues. IEEE International Conference on Healthcare Informatics 2015 (ICHI 2015). (International Workshop on Smart and Connected Health). October 21-23, 2015. Dallas, Texas USA. IEEE.
- G. Pozzani, C. Combi. On the semantics of ST4SQL, a multidimensional spatio-temporal query language. 16th International Database Engineering & Applications Symposium (IDEAS '12), August 8-10, 2012. Prague, Czech Republic. ACM.
- G. Pozzani, A. Belussi, C. Combi, F. Amaddeo, G. Rambaldelli, D. Salazzari. *Dealing with multigranular spatio-temporal databases to manage psychiatric epidemiology data*. Proceedings of the 25th IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012), 20-22 June, 2012. Rome, Italy. IEEE Computer Society Press.
- G. Pozzani, C. Combi. *ST4SQL: a spatio-temporal query language dealing with granularities*. Proceedings of the 27th Symposium On Applied Computing (SAC 2012). 25-29 March, 2012. Riva del Garda (Trento), Italy. ACM, pp. 23-25.
- C. Combi, **G. Pozzani**. An inference system for relationships between spatial granularities. Proceedings of the ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems 2011 (ACM SIGSPATIAL GIS 2011), 1-4 November, 2011. Chicago, IL, USA. ACM, pp. 429-432.
- G. Pozzani and E. Zimányi. Defining spatio-temporal granularities for raster data. Proceedings of the 27th International Information Systems Conference (BNCOD 2010), 29 June 1 July, 2010. Volume 6121 of Lecture Notes in Computer Science, Dundee, Scotland. Springer.
- A. Belussi, C. Combi, **G. Pozzani**. Formal and conceptual modeling of spatio-temporal granularities. Proceedings of the 13th International Database Engineering & Applications Symposium (IDEAS 2009), 16-18 September, 2009. Cetraro (CS), Italy, ACM, pp. 275-283
- B. Oliboni and **G. Pozzani**. Representing Fuzzy Information by using XML Schema. Proceedings of the 19th International Workshop on Database and Expert Systems Applications (DEXA 2008). (Third International Workshop on Flexible Database and Information System Technology). IEEE Computer Society Press, pp. 683-687, Turin (Italy), 1-5 September 2008
- A. Belussi, C. Combi, and **G. Pozzani**. Towards a formal framework for spatio-temporal granularities. Proceedings of the 15th International Symposium on Temporal Representation and Reasoning (TIME '08). IEEE Computer Society Press, pages 49–53, Montreal (Quebec, Canada), June 2008.

#### Book chapters:

• B. Oliboni and **G. Pozzani**. Z. Ma and L. Yan, editors. *Soft Computing in XML Data Management*, volume 255 of *Studies in Fuzziness and Soft Computing*, chapter "An XML Schema for Managing Fuzzy Documents". Springer Berlin / Heidelberg, 1st edition.

#### Technical reports:

- G. Pozzani, C. Combi. ST4SQL: a spatio-temporal query language dealing with granularities. Technical Report RR 83/2011, Department of Computer Science of the University of Verona, June 2011. http://www.di.univr.it/report
- C. Combi and G. Pozzani. An inference system for relationships between spatio-temporal granularities. Technical Report RR 80/2010, Department of Computer Science of the University of Verona, September 2010. http://www.di.univr.it/report
- B. Oliboni and **G. Pozzani**. An XML Schema for managing fuzzy documents. Technical Report RR 64/2008, Department of Computer Science of the University of Verona, May 2008. http://www.di.univr.it/report

#### Conference and seminar presentations

- On the semantics of ST4SQL, a multidimensional spatio-temporal query language. IDEAS '12. Prague, Czech Republic. August 10, 2012.
- Dealing with multigranular spatio-temporal databases to manage psychiatric epidemiology data. CBMS 2012. Rome, Italy. June 22, 2012.
- ST4SQL: a spatio-temporal query language dealing with granularities. SAC 2012. Riva del Garda (Trento), Italy. March 29, 2012.
- Defining spatio-temporal granularities for raster data. BNCOD 2010. Dundee, Scotland. 30th June, 2010
- Formal and conceptual modeling of spatio-temporal granularities. IDEAS 2009. Cetraro, Italy. 16 September, 2009.
- Spatio-temporal data modeling and querying. AIME'09. Verona, Italy. 18 July, 2009.
- Representing Fuzzy Information by using XML Schema. FlexDBIST'08. Turin, Italy, 5 September, 2008.
- Towards a formal framework for spatio-temporal granularities. TIME '08. Montreal, Canada.

#### OTHER ATTENDED CONFERENCES

- Workshop GRIN on "Computer Science and Didactics for the School". Verona, Italy. 18-19 October, 2013.
- 8th International Workshop on Teaching, Learning and Assessment of Databases (TLAD 2010). Dundee, Scotland. 28th June, 2010.
- 16th International Symposium on Temporal Representation and Reasoning (TIME 2009). Brixen-Bressanone (Bozen-Bolzano), Italy. 23-25 July, 2009.
- 12th Conference on Artificial Intelligence in Medicine (AIME'09). Verona, Italy. 18-22 July, 2009.

#### OTHERS EXPERIENCES

- Administrator of the laboratory belonging to the research group STARS (Semistructured Temporal clinicAl GeogRaphical Systems).
- Local organizer of the 12th Conference on Artificial Intelligence in Medicine (AIME'09) held in Verona (Italy) from 18th to 22nd July, 2009.

- Guest from November 2009 to February 2010 at the Department of Computer and Decision Engineering of the "Université Libre de Bruxelles" (Belgium), under the supervision of Professor Esteban Zimányi.
- Local organizer of the Workshop GRIN on "Computer Science and Didactics for the School" held in Verona (Italy) on 18th and 19th October, 2013.
- Short working periods at Ngozi (Burundi) in June 2013 and July 2014, in range of the "Burundi project".
- Help in local organization of the 21st International Symposium on Temporal Representation and Reasoning (TIME 2014), Verona (Italy), September 8 10, 2014.
- Help in local organization of the 5th International Symposium on Games, Automata, Logics and Formal Verification (GandALF 2014), Verona (Italy), September 10 12, 2014.
- Web Chair, Registration Chair, and help in local organization of the IEEE International Conference on Healthcare Informatics 2014 (ICHI 2014), Verona (Italy), September 15 17, 2014.
- Help in local organization of the 26th International Workshop on Combinatorial Algorithms (IWOCA 2015), Verona (Italy), October 5 7, 2015.
- Local organizer of the national conference "ePharmacovigilance 2016" held in Verona (Italy), September 23, 2016.

### Computer science knowledges

Knowledge of the following technologies:

- operating systems: Linux, Mac Os X, and Windows;
- office suites: "Microsoft Office" and "LibreOffice";
- languages: SQL, Java (for web-applications and standalone software programming), Javascript, C/C++, HTML, XML (XML Schema, XPath, XQuery), Ruby on Rails;
- database management systems: PostgreSQL (PostGIS, PostBio), MySQL;
- workflow languages and management systems: YAWL;
- data warehouses management systems: Pentaho BA Suite;
- other technologies: LDAP, Samba, LATEX.

Verona, February 13, 2019