

PERSONAL INFORMATION

Prof. Elena Baralis



[Redacted Address]
 [Redacted Phone Number] [Redacted Mobile Number]
 [Redacted Email Address]
 [Redacted Website]
 [Redacted Social Media]

| Enterprise | University | EPR |
|--|--|---|
| <input type="checkbox"/> Management Level | <input checked="" type="checkbox"/> Full professor | <input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist |
| <input type="checkbox"/> Mid-Management Level | <input type="checkbox"/> Associate Professor | <input type="checkbox"/> Level III Researcher and Technologist |
| <input type="checkbox"/> Employee / worker level | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator | <input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator |

WORK EXPERIENCE

01/01/2005 - present

Full Professor

Politecnico di Torino, Department of Control and Computer Engineering, www.polito.it

- Machine Learning, Data Science, Big Data, Database systems, LLM and Speech

Business or sector Education and research

18/04/2024 - present

Deputy Rector

Politecnico di Torino, www.polito.it

1/10/2019 – 30/09/2023

Director of the Control and Computer Engineering Department

Politecnico di Torino, Departments – www.dauin.polito.it

The Department of CONTROL AND COMPUTER ENGINEERING (DAUIN) is the point of reference in Politecnico di Torino for the area of Information and Communication Technologies (ICT) which studies the methodologies and technologies used for the management, processing and transmission of information. DAUIN promotes, coordinates and manages basic and applied research, training, technology transfer and services to the local community in the areas of systems and control engineering, computer science and computer engineering and operations research..

Business or sector Research and Technology Transfer

13/04/2017 - present

Member (socio corrispondente) of the Accademia delle scienze

- Machine Learning, Big Data, Data Science, Database systems, Text mining

Business or sector Education and research

01/11/2018 – 28/02/2019

Co-designer of the Data Science and Engineering MSc Degree

Politecnico di Torino, Electronics and Telecommunications Department, www.polito.it

The Data Science and Engineering MSc degree is now in its third year. It features approx. 300 total enrolled students for the current Academic Year. The degree aims to train multidisciplinary professionals (data scientists and data engineers) by providing strong methodological and engineering skills, high abstraction capabilities and an analytical approach to address data-driven problems. The MSc program aims to train engineers who will be able to manage the entire life cycle of the data analytics process, analyze the problem requirements, collect and store big amount of data, analyze data by means of mathematical and statistical models and machine learning algorithms, visualize information and finally use the extracted knowledge for decisional purposes. It prepares interdisciplinary professionals that will operate in all the scientific and humanistic disciplines strongly characterized by a massive use of digital data, mainly used in the analyses underlying the decision-making processes.

Business or sector Education and research

1/10/2012 – 30/09/2018

Chairman of the Computer Engineering Collegio

The Collegio of Computer Engineering manages all the bachelor and master degrees in the Computer Engineering, Media Engineering and Mechatronic Engineering areas. During the considered period, it included the following degrees: (a) Computer Engineering (BS and MS programs), (b) Media and Communication Engineering (BS and MS programs), (c) Mechatronic Engineering (MS program). The total number of enrolled students over an Academic Year was approx. 2100.

Business or sector Education and research

05/07/2012 – 20/08/2012

Visiting Professor

Narus Inc, Sunnyvale, California

- Collaboration on Cybersecurity topics to design novel solution based on Big Data solutions

Business or sector Machine Learning, Computer Network, Cybersecurity, Artificial Intelligence

01/04/2001 – 31/12/2004

Associate ProfessorPolitecnico di Torino, Control and Computer Engineering Department, www.polito.it

- Data mining, Big Data, Machine Learning, Text mining

Business or sector Education and research

15/01/1993 – 31/03/2001

Assistant ProfessorPolitecnico di Torino, Control and Computer Engineering Department, www.polito.it

- Database systems, Data analytics, Data mining

Business or sector Education and research

03/1993 – 02/1994

Visiting ProfessorStanford University (California), Computer Science Department, www.stanford.edu

- Collaboration on active database systems, heterogeneous databases and data warehouses

Business or sector Research, Database systems

01/1993 – 03/1993

Visiting ProfessorIBM Research, Almaden Research Lab (California), <https://research.ibm.com/labs/almaden/>

- Collaboration on active database systems

Business or sector Research, Database systems**EDUCATION AND TRAINING**

1/11/1990 - 20/09/1994

PhD in Computer and Systems Engineering

Politecnico di Torino

1/11/1980 - 19/12/1986

Laurea Electronics Engineering – 110 cum laude

Politecnico di Torino

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

English

| UNDERSTANDING | | SPEAKING | | WRITING |
|---------------|---------|--------------------|-------------------|---------|
| Listening | Reading | Spoken interaction | Spoken production | |
| C2 | C2 | C2 | C2 | C2 |

French

B2

B2

B1

B1

B1

Organisational / managerial skills

- Leadership –was director of the Control and Computer Engineering department www.dauin.polito.it with more than 80 professors and researchers.
- General Co-chair (with F. Bonchi) of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD) 2023 with more than 1400 registered attendees.
- Program Co-chair (with K. Zhang) of next year IEEE Int. Conf. Data Mining (ICDM 2024)

Job-related skills

- Excellent communication and teaching skills - currently responsible for 3 master classes

ADDITIONAL INFORMATION

Publications

All publications are available at

<https://iris.polito.it/cris/rp/rp14909?start=0&sortBy=2&order=DESC&type=all>

Her current research interests are in the field of data science and data analytics, more specifically on algorithms and methods for explainable AI and bias detection, also with a particular focus on speech tasks, and machine learning algorithms for big databases. Her research activity has been focusing on the study of algorithms for diverse data mining and machine learning tasks, including association rule mining to discover correlation among data at different abstraction levels, extraction of knowledge for performing predictions (classification), grouping of similar data (clustering) and extracting summaries from textual data (summarization). She has published over 200 papers in refereed international journals (e.g., IEEE TKDE, ACM TODS, ACM TOIS) and refereed international conference proceedings (e.g., ACM SIGMOD, IEEE ICDM, IEEE ICDE, VLDB, IEEE ICASSP). According to Google Scholar: Citations 6076, H index 41, i-10 index 131.