



Anna Monreale

Nationality: Italian

 (+39) 3282598905

 (+39) 0502213119

Date of birth: 15/01/1979

Gender: Female

 **Email address:** anna.monreale@unipi.it

 **Address:** Via Hermada 36 , IT-56127 Pisa (Italy)

WORK EXPERIENCE

Vice-Coordinator of Italian National PhD in Artificial Intelligence for Society

University of Pisa, Department of Computer Science [12/2021 – Current]

Delegate of the University of Pisa in the European Open Science Cloud Association

University of Pisa, Department of Computer Science [12/2021 – Current]

Member of the Board of the Italian National PhD in Artificial Intelligence for Society

University of Pisa, Department of Computer Science [06/2021 – Current]

Associate Professor

University of Pisa, Department of Computer Science [01/12/2020 – Current]

Vice-Director of Centro Interdipartimentale “Diritto e Tecnologie di Frontiera”

University of Pisa, Department of Computer Science [10/2020 – Current]

Director of Master in Big Data Analytics & Social Mining

University of Pisa, Department of Computer Science [12/2019 – Current]

Member of the Board of the PhD in Data Science

Scuola Normale Superiore [06/2017 – Current]

Assistant Professor - RTDB in Computer Science

University of Pisa, Department of Computer Science [01/12/2017 – 30/11/2020]

Research Associate at ISTI-CNR

[20/05/2008 – 30/11/2020]

Vice-Director of Master in Big Data Analytics & Social Mining

University of Pisa, Department of Computer Science [12/2014 – 11/2019]

Assistant Professor - RTDA in Computer Science

University of Pisa, Department of Computer Science [05/05/2014 – 30/11/2017]

Member of Commission High Level Expert Group “European Open Science Cloud”

EC – DIRECTORATE-GENERAL FOR RESEARCH and INNOVATION - Brussels [11/09/2015 – 31/12/2016]

Research fellow

University of Pisa, Department of Computer Science [01/04/2012 – 31/03/2014]

Modelling data mining algorithms and privacy requirements by constraints.

Research fellow

University of Pisa, Department of Computer Science [01/03/2011 – 31/03/2012]

Studying of privacy protection techniques in distributed systems.

EDUCATION AND TRAINING

PhD in Computer Science

University of Pisa [01/01/2008 – 21/06/2011]

Master Degree in Computer Science

Department of Computer Science, University of Pisa [12/2004 – 10/2007]

Bachelor Degree in Computer Science

Department of Computer Science, University of Pisa [09/2001 – 12/2004]

RESEARCH EXPERIENCE

Visiting Researcher

[22/06/2014 – 23/07/2014]

People in Motion Lab, Dr. Monica Wachowicz, Geodesy and Geomatics Engineering Department, University of New Brunswick, Fredericton, Canada.

Visiting PhD Student

[04/2010 – 07/2010]

Prof. Hui Wendy Wang, Department of Computer Science, Stevens Institute of Technology, New Jersey, USA

Visiting PhD Student

[08/10/2009 – 16/10/2009]

Prof. Yucel Saygin research Group, Faculty of Engineering and Natural Sciences, SABanci University, Turkey.

SCIENTIFIC HABILITATION

Full Professor in 09/H1 - SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI (13/11/2020 – 13/11/2029)

Associate Professor in 09/H1 - SISTEMI DI ELABORAZIONE DELLE INFORMAZIONI (04/04/2017 – 04/04/2023)

Associate Professor in 01/B1 - INFORMATICA (10/04/2017 – 10/04/2023)

PROJECTS

Tailor (2020-2023)

Trustworthy AI Integrating Learning, Optimization and Reasoning - H2020, ICT-2018-20: Research Innovation Action"

HumanE-AI-Net (2020-2023)

HumanE AI Network - H2020, ICT-2018-20: Research Innovation Action" (Grant Agreement n. 952026).

SoBigData++(2020-2023)

European Integrated Infrastructure for Social Mining and Big Data Analytics. Horizon 2020, INFRAIA-2018-2020, GA: 871042.

XAI (2019-2024)

Science and technology for the explanation of AI decision making. ERC Advanced Grants 2018.

Humane AI (2018-2019)

Toward AI Systems That Augment and Empower Humans by Understanding Us, our Society and the World Around Us. H2020 FET Flagship Prep. Action, GA: 820437.

SOBIGDATA (2015-2019)

Research Infrastructure on Social Mining and Big Data Analytics (H2020 EU Project <http://www.sobigdata.eu>)

PETRA (2013-2016)

Personal Transport Advisor: an integrated platform of mobility patterns for Smart Cities to enable demand-adaptive transportation systems (2013-2016, EU Project FP7, <http://www.petraproject.eu/>)

ICON (2012-2014)

Inductive Constraint Programming (2012-2014, EU Project FP7-ICT FET Open , <http://www.icon-fet.eu/>)

ENFORCE (2010-2014)

Computer science and legal method for enforcing the personal rights of non-discrimination and privacy in ICT systems. Italian project funded by MIUR FIRB "Futuro in Ricerca 2008" program.

LIFT (2009-2013)

Using Local Inference in Massively Distributed Systems (<http://lift-eu.org/>),

MODAP (2009-2012)

Mobility, Data Mining, and Privacy (FET Open Coordination Action)

RESEARCH INTERESTS

Privacy in Big Data & AI

Studying privacy risk assessment methodologies and privacy protection algorithms for Big Data and AI systems.

Explainability & Discrimination in AI

Studying methods for (a) explaining complex AI models and (b) avoiding their unfair behavior.

Personal Data Mining

Studying mining methods based on individual data extracted from sequential data such as mobility and purchasing data.

TOP 10 PUBLICATIONS

(2021) GLocalX - From Local to Global Explanations of Black Box AI Models.

Mattia Setzu, Riccardo Guidotti, Anna Monreale, Franco Turini, Dino Pedreschi, Fosca Giannotti.

Artificial Intelligence 294: 103457, 2021, Doi: 10.1016/j.artint.2021.103457

(2020) Modeling Adversarial Behavior Against Mobility Data Privacy.

Roberto Pellungrini, Luca Pappalardo, Filippo Simini, Anna Monreale

IEEE Transactions on Intelligent Transportation Systems, 23(2): 1145-1158, 2020 Doi: 10.1109/TITS.2020.3021911

(2020) PRIMULE: Privacy risk mitigation for user profiles.

Francesca Pratesi, Lorenzo Gabrielli, Paolo Cintia, Anna Monreale, Fosca Giannotti.

DATA & KNOWLEDGE ENGINEERING, 101786, ISSN: 0169-023X, doi: 10.1016/j.datak.2019.101786.

(2019) Factual and Counterfactual Explanations for Black Box Decision Making.

Riccardo Guidotti, Anna Monreale, Fosca Giannotti, Dino Pedreschi, Salvatore Ruggieri, Franco Turini

IEEE INTELLIGENT SYSTEMS, vol. 34, p. 14-23, ISSN: 1541-1672, Doi: 10.1109/MIS.2019.2957223.

(2017) Authenticated Outlier Mining for Outsourced Databases.

Boxiang Dong, Hui Wang, Anna Monreale, Dino Pedreschi, Fosca Giannotti, Wenge Guo.

IEEE Trans. Dependable Secur. Comput. 17(2): 222-235, 2017.

(2018) A Data Mining Approach to Assess Privacy Risk in Human Mobility Data.

Roberto Pellungrini, Luca Pappalardo, Francesca Pratesi, Anna Monreale

ACM TRANSACTIONS ON INTELLIGENT SYSTEMS AND TECHNOLOGY, vol. 9, p. 1-27, doi: 10.1145/3106774

(2018) A survey of methods for explaining black box models.

Guidotti, Riccardo, Monreale, Anna, Ruggieri, Salvatore, Turini, Franco, Giannotti, Fosca, Pedreschi, Dino.

ACM COMPUTING SURVEYS, vol. 51, p. 1-42, ISSN: 0360-0300, doi: 10.1145/3236009

(2018) PRUDENCE: A system for assessing privacy risk vs utility in data sharing ecosystems.

Pratesi, Francesca, Monreale, Anna, Trasarti, Roberto, Giannotti, Fosca, Pedreschi, Dino, Yanagihara, Tadashi.

TRANSACTIONS ON DATA PRIVACY, vol. 11, p. 139-167, ISSN: 1888-5063

(2014) Privacy-by-design in big data analytics and social mining.

Monreale, Anna, Rinzivillo, Salvatore, Pratesi, Francesca, Giannotti, Fosca, Pedreschi, Dino.

EPJ DATA SCIENCE, vol. 3, ISSN: 2193- 1127, doi: 10.1140/epjds/s13688-014-0010-4

(2014) Discrimination- and privacy-aware patterns.

Hajian, Sara, Domingo Ferrer, Josep, Monreale, Anna, Pedreschi, Dino, Giannotti, Fosca.

DATA MINING AND KNOWLEDGE DISCOVERY, vol. 29, p. 1733-1782, doi: 10.1007/s10618-014-0393-7

Complete List of Publications (more than 70 pubs) available in:

- DBLP: <https://dblp.uni-trier.de/pers/hd/m/Monreale:Anna>
- SCOPUS: <https://www.scopus.com/authid/detail.uri?authorId=35113703300>
- Google Scholar: <https://scholar.google.it/citations?user=bA-rXeUAAAAJ&hl>

H-index: 19 (Scopus), 26 (Google Scholar)

Total Num. of Citations: 2591 (Scopus) 5176 (Google Scholar)

DIGITAL SKILLS

Various programming languages and OS, AI, Data Mining, Data Privacy, Big Data Ethics

LANGUAGE SKILLS

Mother tongue(s): **Italian**

Other language(s): **English**