

Emanuele La Malfa

personal page

Work Experience

Post Doctoral Researcher

Benchmarking Large Language Models.

Jul. 2023 – Current
The Alan Turing Institute & University of Oxford, UK

- Principal Investigators: Prof. [Michael Wooldridge](#), [Nigel Shadbolt](#), and [Anthony Cohn](#).

Research Assistant

Enabling rapid adoption of artificial intelligence through an anonymized data protocol and explainable models.

Oct. 2019 – Mar. 2021
University of Oxford, UK

- Principal Investigator: Prof. [Marta Kwiatkowska](#).
- Collaboration with [GenieAI](#) and funded through the [InnovateUK](#) scheme.
- The collaboration led to a paper published at [EMNLP'20](#).

Consultant

IBM, Global Business Unit

Mar. 2018 – Aug. 2019
IBM, Milan, Italy

- Design, development, and deploy of a search engine for a public financial institution.
- Design, development, and deploy of a [cloud document management system](#) for a public financial institution.

Education

University of Oxford

PhD in Computer Science, supervised by Prof. [Marta Kwiatkowska](#).

Oct. 2019 – Nov. 2023
Oxford, UK

Polytechnic University of Milan

Master's Degree in Computer Science and Engineering.

Feb. 2015 – Sept. 2017
Milan, Italy

Polytechnic University of Milan

Bachelor's Degree in Computer Engineering.

Sept. 2011 – Sept. 2014
Milan, Italy

Selected Publications

[A Notion of Complexity for Theory of Mind via Discrete World Models](#)

EMNLP 2024 (long paper - findings)

X. Angelo Huang, **Emanuele La Malfa**, Samuele Marro, Andrea Asperti, Anthony Cohn and Michael Wooldridge

[Graph-enhanced Large Language Models in Asynchronous Plan Reasoning](#)

ICML 2024 (long paper, main track)

Fangru Lin, **Emanuele La Malfa**, Valentin Hofmann, Elle Michelle Yang, Anthony Cohn and Janet Pierrehumbert

[Deep Neural Networks via Complex Network Theory: a Perspective](#)

IJCAI 2024 (long paper, main track)

Emanuele La Malfa, Gabriele La Malfa, Giuseppe Nicosia, Vito Latora

[Code Simulation Challenges for Large Language Models](#)

Under-review (long paper)

Emanuele La Malfa, Christoph Weinhuber, Orazio Torre, Fangru Lin, Samuele Marro, Anthony Cohn, Nigel Shadbolt and Michael Wooldridge

[Language-Models-as-a-Service: Overview of a New Paradigm and its Challenges](#)

Journal of Artificial Intelligence Research (JAIR) - media coverage [here](#) and [here](#)

Emanuele La Malfa, Aleks Petrov, Frieder Simon, Christoph Weinhuber, Raza Nazar, Anthony Cohn, Nigel Shadbolt and Michael Wooldridge

[Language Models Tokenizers Introduce Unfairness Between Languages](#)

NeurIPS 2023 (long paper, main track) - [website](#)

Aleksandar Petrov, **Emanuele La Malfa**, Philip Torr, Adel Bibi

[The King is Naked: on the Notion of Robustness for Natural Language Processing](#)

AAAI 2022 (long paper, main track) – **oral presentation** –

Emanuele La Malfa, Marta Kwiatkowska

[On Guaranteed Optimal Robust Explanations for NLP Models](#)

IJCAI 2021 (long paper, main track)

Emanuele La Malfa, Rhiannon Micheltore, Agnieszka Zbrzeny, Nicola Paoletti, Marta Kwiatkowska

[Assessing Robustness of Text Classification through Maximal Safe Radius Computation](#)

EMNLP 2020 (long paper - findings)

Emanuele La Malfa, Min Wu, Luca Laurenti, Benjie Wang, Anthony Hartshorn, Marta Kwiatkowska

Teaching Experience

Deep Learning in Healthcare <i>Practical sessions</i>	2024 (HT) University of Oxford, UK
Machine Learning <i>Classes</i>	2023 (MT) University of Oxford, UK
Probabilistic Model Checking <i>Practical sessions</i>	2023 (MT) University of Oxford, UK
Ethical Computing in Practice <i>Practical sessions</i>	2023 (HT) University of Oxford, UK
Deep Learning in Healthcare <i>Practical sessions</i>	2023 (HT) University of Oxford, UK
Probabilistic Model Checking <i>Practical sessions</i>	2022 (MT) University of Oxford, UK
Machine Learning <i>Classes</i>	2021 (MT) University of Oxford, UK
Probabilistic Model Checking <i>Practical sessions</i>	2021 (MT) University of Oxford, UK
Fundamentals of Computer Science <i>Practical sessions</i>	2016 (Oct.-Dec.) Polytechnic University of Milan, Italy
Conferences and Workshops Organization	
Benchmarking Large Language Models <i>Workshop Organizer</i>	28/11/2023 The Alan Turing Institute, London, UK
LOD2020, LOD2021, LOD2022, LOD2023 <i>Conference Chair</i>	Lake District/Siena
Invited Lectures, Talks, and Presentations	
Code Simulation Challenges for Large Language Models <i>Group Talk</i>	02/02/24 Bocconi, Italy
On Robustness for Natural Language Processing <i>Group Talk</i>	19/04/2023 ICREA, Barcelona
On the Notion of Robustness for Natural Language Processing <i>Departmental Talk</i>	17/01/2023 King's College University of London, UK
Robustness for Natural Language Processing <i>Lecture – Deep Fridays</i>	22/04/2022 University of Bologna, Italy
Explainable AI <i>Lecture – Advanced Artificial Intelligence Course</i>	04/03/2022 Royal Holloway University of London, UK
Academic Revieweign and Volunteering	
The Alan Turing Institute - Reviewer <i>Reviewers for the Turing Fellow Program - Panel “Fundamental Research in Data Science and AI”</i>	October - December 2023
Ukrainian Global University - Interviewer <i>I interviewed Ukrainian students who want to study in a partner university abroad.</i>	April-June 2023
The Kharkiv and Przemyśl Project <i>I spent a week in Przemyśl (Poland) as a volunteer to help refugees who arrived (returned) from (to) Ukraine.</i>	August 2022
Ukrainian Global University - Interviewer <i>I interviewed a dozen of prospective undergraduate Ukrainian students who want to study in a partner university abroad.</i>	June-May 2022
Eutanasia Legale - Volunteer <i>I have collected signatures for a referendum to decriminalize euthanasia. The overall campaign gathered 1.2 million valid signatures.</i>	July 2021
Tutoring and Mentoring	
Williams-Exeter Exchange Programme <i>Tutoring Saad Waheed and Alisa Kanganis and Simon Socolow (Williams-Exeter Programme exchange students in machine learning).</i>	2023-2024
University of Oxford <i>Tutoring Edward Kusel and Aleksandar Radoslavov for their part-B projects (undergraduate in Computer Science).</i>	2022
Lead the Future - Mentor <i>Lead the Future helps Italian STEM talents find their path to brilliant careers. I am currently mentoring 5 students.</i>	2022-current

Mentoring and Students Supervision

Angelo Huang

Visiting research student at Oxford (June-August 2024) - He is a Master's student in Computer Science at ETH (2025-).

Lead The Future

Annalaura Pegoraro

Bachelor's student in math at the University of Padova and an exchange student at Berkeley (Summer 2024).

Lead The Future

Giovanni Monea

PhD student in Computer Science at Cornell University (2025-).

Lead The Future

Andrea Cerutti

Master's student in Computer Science and Engineering at the Polytechnic University of Milan.

Lead The Future

Orazio Torre

Bachelor's student in Computer Science at the University of Salerno.

Lead The Future

Riccardo Inghilleri

Master's student in Computer Science at the Polytechnic University of Milan.

Lead The Future

Christoph Weinhuber

Incoming PhD student at Oxford, Dept. of Computer Science (2024-).

Samuele Marro

Visiting research student at Oxford (April-June 2024) - Samuele is an incoming PhD student at Dept. of Engineering, Oxford (2024-).

Saad Waheed

I supervised Saad for two terms for the Williams-Exeter exchange program (2024) - Saad is a bachelor's student at Williams College (US).

Alisa Kanganis

I supervised Alisa for two terms for the Williams-Exeter exchange program (2024) - Alisa is a bachelor's student at Williams College (US).

Academic Service

Conference Reviewer: NeurIPS, ICLR, EMNLP (reviewer), AAAI, IJCAI, PNAS (sub-reviewer).