# FABRIZIO RUSSO

**Research Postgraduate**

## SUMMARY

Currently studying towards a PhD in Computer Science funded by the UKRI Centre for Doctoral Training in Safe and Trusted Artificial Intelligence (STAI CDT, 4 years program). My background is in Economics and Statistics and, as a consultant, I have led several modelling projects for financial institutions. Passionate about research and innovation, I am studying and developing techniques for explainable knowledge discovery, to the benefit of both academia and industry.

## EDUCATION

### PhD in Computer Science
**Imperial College London**

📅 Full-time: Oct 2020 – Present
📍 UK

- Supervisor: Prof. Francesca Toni
- Topic: Causality and Argumentation for Explainable AI
- Visiting PhD Student at King's College London

### MSc in Applied Statistics (Distinction)
**University of London - Birkbeck College**

📅 Part-time: Oct 2016 – Oct 2018
📍 UK

- Dissertation: Macroeconomic Modelling through VAR and VEC

### BSc in Economics of Financial Markets and Institutions (1:1)
**University of Rome - Tor Vergata**

📅 Full-time: Oct 2009 – Oct 2012
📍 Italy

- Dissertation: The Tobin Tax between Theoretical Wherewithal and Practical Feasibility

### Funded Exchange Program
**University of Madrid - Autonoma**

📅 Full-time: Oct 2011 – Jun 2012
📍 Spain

## EXPERIENCE

### Graduate Teaching Assistant
**Imperial College London**

📅 Part-time: Oct 2021 & 2022
📍 UK

- Teaching support for *Introduction to Machine Learning* course

### Freelance Consultant
**Imperial College Consultants (ICON)**

📅 Part-time: Mar 2022 – Sep 2022
📍 UK & USA

- Research on outlier identification and forecast for UK commercial properties index

### Doctoral Researcher
**Ernst & Young (in collaboration with STAI CDT)**

📅 Part-time: Jan 2021 – Apr 2021
📍 UK

- Research on back-door poisoning attacks identification for transformer-based language models

### Head of Data Science
**4most Europe Ltd**

📅 Full-time: Feb 2018 – Sep 2020
📍 UK

- Research Lead - Replicate Underwriter Behaviour using Machine Learning
- Research Lead - Commercial Credit Risk Scoring using Machine Learning
- Research Lead - Design, prototype and build an interactive monitoring tool (Tech of the Year - National Credit Awards '22)

## Managing Consultant
**4most Europe Ltd**

📅 Full-time: Jul 2016 – Jan 2018
📍 UK & Canada

- Project Lead - IFRS9 model design and build for three Credit Providers and a Challenger Bank

## Credit Risk Consultant
**4most Europe Ltd**

📅 Full-time: Jul 2015 – Jun 2016
📍 UK

- IAS39 model design and build for UK Credit Provider

## Credit Risk Analyst
**General Electric Capital - UK Home Lending**

📅 Full-time: May 2014 – Jun 2015
📍 UK

- Run impairment process for secured and unsecured portfolio

# PUBLICATIONS

### 👥 Conference Proceedings
- Rago, Antonio, **Fabrizio Russo**, Emanuele Albini, Pietro Baroni, and Francesca Toni (2021). "Forging Argumentative Explanations from Causal Models". In: *Proceedings of the 5th Workshop on Advances in Argumentation in Artificial Intelligence 2021 co-located with the 20th International Conference of the Italian Association for Artificial Intelligence (AIxIA 2021).* Volume 3086. CEUR Workshop Proceedings. CEUR-WS.org. URL: http://ceur-ws.org/Vol-3086/paper3.pdf.
- **Russo**, **Fabrizio** (2023). "Argumentation for Interactive Causal Discovery". In: *Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI23).*

### 📘 Journal Articles
- Rago, Antonio, **Fabrizio Russo**, Emanuele Albini, Pietro Baroni, and Francesca Toni (2023). "Explaining Classifiers' Output with Causal Models and Argumentation." In: *Journal of Applied Logics — IfCoLog Journal of Logics and their Applications, Special Issue: Advances in Argumentgation in AI* 10.3, pages 162–190. URL: http://www.collegepublications.co.uk/downloads/ifcolog00059.pdf.

### 📄 Working Papers
- **Russo**, **Fabrizio** and Francesca Toni (2022). *Causal Discovery and Injection for Feed-Forward Neural Networks.* arXiv: 2205.09787. URL: https://doi.org/10.48550/arXiv.2205.09787.

# TALKS

## Argumentative Causal Discovery
**Invited Speaker**

📅 Feb 2023
📍 STAI CDT Student Seminar Series, London UK

## From Credit Risk to Explainable AI Research
**Invited Speaker**

📅 Jun 2022
📍 MSc in Fintech - Politecnico di Milano & UCL, London UK

## Causal Injection into Neural Networks
**Oral Presentation**

📅 Nov 2021
📍 XAI in Finance Workshop - 2021 ACM International Conference on AI in Finance - Virtual Event

## Risk Scorecards with Machine Learning
**Poster Presentation**

📅 Nov 2019
📍 Joint Conference of Bank of England & King's College - London, UK

## Credit Risk Modelling: Data and Techniques Used in the UK Banking Industry
**Invited Speaker**

📅 Oct 2019
📍 Danmarks Nationalbank Conference 2019 - Copenhagen, DK

# SERVICE

- AISTATS '23 (Top-Reviewer Award)
- BSKY at AAMAS '23 (Reviewer)
- AISTATS '22 (Reviewer)
- ICML '22 (Reviewer)
- XAI-FIN at ICAIF '22 (Workshop co-organiser)
- XAI-FIN at ICAIF '21 (Reviewer)
- XAI Seminars Series @ Imperial (Co-organiser)