

Mateja Jamnik

Department: Computer Science and Technology, University of Cambridge
J.J. Thomson Avenue, Cambridge, CB3 0FD, UK
Nationality: Slovenia & UK
Email: Mateja.Jamnik@cl.cam.ac.uk
URL: <http://www.cl.cam.ac.uk/~mj201/>
Current position: **Professor of Artificial Intelligence** (since 1 October 2019)



Work Experience/Professional History

Jan. 2003–Oct. 2019: Lecturer, Senior Lecturer, Reader of Artificial Intelligence, University of Cambridge (UK). (*3 maternity leaves, part-time: 50% then 80%*).

Jul. 2017–Apr. 2018: Specialist Adviser to the House of Lords Select Committee on Artificial Intelligence, The House of Lords (UK).

Apr. 2002–Apr. 2012: EPSRC Advanced Research Fellow, University of Cambridge (UK).

Mar. 2002: Visiting Researcher, University of Saarland, Saarbrücken (Germany).

Dec. 1998–Feb. 2002: Research Fellow, University of Birmingham School of Computer Science (UK).

Education/Qualifications

1995 – 1998: University of Edinburgh (UK), Artificial Intelligence Department. (Awarded July 1999)
PhD. Research Project: *Automating Diagrammatic Proofs of Arithmetic Arguments*.
Supervisor: Prof. A. Bundy (CBE, FRS, FREng)

1994 – 1995: University of Cambridge (UK), Computer Laboratory, Wolfson College.
Postgraduate Diploma in Computer Science. Thesis: *Hypertext Browsing of Mathematical Theories*.
Supervisor: Prof. L. Paulson (FRS).

1991 – 1994: Trent University (Canada).
Joint Honours Bachelor of Science in Mathematics and Computer Studies.
(Grade: 90.1%, First Class; top of graduating generation).

Prizes, Awards, Scholarships and other Honours

2018–now: Associate Fellow at the Leverhulme Centre for the Future of Intelligence (UK).

2017–2018: Specialist Adviser to the House of Lords Select Committee on Artificial Intelligence (UK).

2016: The Royal Society Athena Runner-Up Prize for contribution to the advancement of women in science (UK).

2016: Invited to deliver TEDx Talk (Austria).

2002–2012: EPSRC Advanced Research Fellowship (UK).

2007: Nominated for Woman of the Year 2007 in Slovenia.

1995–1998: Department of Artificial Intelligence Studentship, University of Edinburgh (UK).

1994–1995: Cambridge Overseas Trust Scholarship, University of Cambridge (UK).

1994: President Symons Medal (top of the 1994/95 graduating class), Trent University (Canada).

Other Appointments and Peer Review Affiliations

- ERC Starting Grant Panel. Panel Chair for 2025 call, Panel Deputy Chair 2023, Member 2021, 2018.
- CHIA (Centre for Human Inspired Artificial Intelligence) Steering Committee. Member since 2023.
- NHS Cancer Programme Innovation Expert Advisory Group. Member since 2019.
- Mark Foundation Institute for Integrated Cancer Medicine Management Committee. Member 2018–2023.
- CPHC/BCS Distinguished Dissertation committee. Member 2016–2022.
- EPSRC Peer Review College. Member 2002–2012.
- women@CL national network project. Founder. Director 2003–2014.
- International Conference Series on the Theory and Application of Diagrams. Co-founder. 2000.

Service

Selected Conference and Workshop Organisation: (12 in total) Chair/Co-chair: HI-AI WS KDD 2024, AIMath WS ICML 2024, WiDL WS 2021, ARW 2018, UITP at FLOC 2018, Diagrams 2016, 2010, 2004, WS Tut Chair CADE/FLOC 2002.

Selected Membership in International Programme Committees: NeurIPS 2024, IJCAI-ECAI 2024, 2022, 2019, HHA1 2023, 2022, Diagrams 2000-2022, CICM 2007-2021.

Selected Keynote Talks: (15 since 2020) Diagrams 2024, HIM Bonn 2024, CHIA 2024, Cognitive Science 2023, CADE 2023, Royal Institution 2023.

Selected Research Management Roles:

- ERC Starting Grant Panel Chair 2025
- Responsible Research and Innovation Director for UKRI AI CDT in Decision Making for Complex Systems (Universities of Manchester and Cambridge)
- CHIA Steering Committee Member
- Innovation Expert Advisory Group Member of the NHS Cancer Programme
- Research Management Committee Member of the AI4ER (AI for Environmental Risk) Programme
- Management Committee Member of the University of Cambridge Centre for Gender Studies
- Co-Founder of a new research area of Diagrams with an international conference series since 2000, and was on its steering committee most of this time
- Founder of women@CL national network for women in computer science and director for 11 years

Selected Academic Administrative Roles:

- HoD Strategy Team Member. University of Cambridge Dept. of Computer Science and Technology. 2020 – now.
- Academic Career Pathways and Senior Researcher Promotions Committee Member. University of Cambridge Dept. of Computer Science and Technology. 2020 – now.
- CDT on AI4ER Research Management Committee Member. University of Cambridge Dept. of Computer Science and Technology. 2020 – now.
- Director of Postgraduate Education. University of Cambridge Dept. of Computer Science and Technology. 2020 – 2024.

Selected Grants

- 2024–2028: EluetherAI Studentship. **PhD Supervisor**. Type: Industrial donation. Value: £210,000.
- 2024–2032: UKRI CDT grant (EP/Y030826/1). **Co-investigator**. *UKRI AI Centre for Doctoral Training in Decision Making for Complex Systems*. Type: CDT between Universities of Manchester and Cambridge. Value: £7,827,198.
- 2023–2027: Dept. of Defence grant (G124369). **Co-investigator**. *Multi-modal data integration to develop predictors of treatment response, early relapse and survival and identify drivers of early micro-metastatic disease*. Type: Medical Research Programme. Value: US\$6.5M.
- 2020–2023: EPSRC grant (EP/T019603/1, EP/T019034/1). **Principal Investigator**. *Automating Representation Choice for AI Tools*. Type: Standard research. Value: £1,158,000.
- 2019–2023: Mark Foundation for Cancer Research. **Principal Investigator**. *AI for Integrative Cancer Medicine*. Type: Research grant. Value: £704,000.
- 2018–2019: EPSRC grant (EP/R030650/1, EP/R030642/1). **Principal Investigator**. *How to (Re)represent it?*. Type: Standard research. Value: £302,963.
- 2016–2019: Leverhulme Trust (RPG-2016-082). **Principal Investigator**. *ARD: Accessible Reasoning with Diagrams*. Type: Research grant. Value: £367,728.
- 2002–2012: EPSRC ARF (GR/R76783/01). **Principal Investigator**. *Automating Informal Human Mathematical Reasoning*. Type: Advanced fellowship. Value: £203,398.
- Total grants: **approx. £16.2M**

Teaching and Research Supervision

Lecture Courses:

- MPhil in Advanced Computer Science (ACS). Subject: *Explainable AI*. 16 contact hours of lectures and practicals. I designed and delivered this new course with my team. (since 2024)
- Second year undergraduate (Part IB). Subject: *Logic and proof*. 12 Lectures. (since 2022)
- First year undergraduate (Part IA). Subject: *Introduction to Probability*. 12 Lectures. I designed and delivered this course with a colleague. (since 2019)
- MPhil in ACS. Subject: *Advanced topics in machine learning*. 10 topics. I designed the innovative structure of this course consisting of different plug-in topics. I also wrote and delivered 3 topics: on SVMs, on Explainable AI, and on Multimodal Machine Learning. (since 2019)
- (in the past) MPhil: *Automated Reasoning* (16 Lectures), *Machine Learning Algorithms for Data Mining* (16 Lectures), UG: *Artificial Intelligence*.

PhD Students: Graduated 11 PhD students, currently supervising 12 PhD students (3 will submit imminently in autumn 2024).

MSc/MPhil/Part III Students: Supervised 38 Master students for their research projects.

Post-Docs: Have been PI to 9 Post-Docs.

PhD Examinations: External/internal examiner of 12 PhD theses.

Impact

Research and Innovation: ERC Starting Grant panel chair, organiser of 12 conferences and workshops; published 51 papers since 2021; founded the Diagrams international conference series in 2000; collaborate with interdisciplinary experts in mathematics, cognitive science, medicine, education, law.

Industry: Collaborate with Google Brain, Sony, EluetherAI, MistralAI; three of my students launched a startup based on novel explainable AI methods.

Mentoring and Training: Supervised 23 PhD students, 9 Post-Docs; founded women@cl (see below); Co-investigator for the new CDT with Manchester to train 70 PhD students in the next 9 years.

Society: Specialist Adviser to the House of Lords Select Committee on AI; numerous media and public engagements (see below).

Widening Participation and Outreach

women@CL: I founded (with Prof. Ursula Martin) women@CL in 2003, a pioneering national network that celebrates, informs and supports women in computing research and academic leadership. I secured funding from the EPSRC, Google, Facebook, Microsoft and IBM. We built a sustainable programme of activities that has been replicated by many UK universities and in part adopted by the British Computing Society. I won the 2016 Royal Society Athena Runner-Up Prize for this work.

Selected media and public activities:

- *Short film:* Connecting Europe Tour - GÉANT network film: interview about AI and society. May 2024.
- *Public panel discussion:* The Cambridge Union. Title: *Is AI a Threat?* 23 February 2021.
- *Public talk:* Cambridge Science Festival, AI and Society: the Thinking Machines, 9 March 2020.
- *Radio interview:* BBC World Service, interviewed about the impact of AI on society. 5 March 2020.
- *Public talk:* Berlin Science Festival: ETH Zürich event on “Man and Machine: The Emergence of Artificial Intelligence”, 6 November 2018.
- *Radio interview:* BBC Radio 4, Woman’s Hour, interviewed about the impact of AI on women’s work. 16 January 2018.
- *Radio interview:* BBC Radio 4, Today Programme, interviewed about the new Bladerunner 2049 film, the media and artificial intelligence. 6 October 2017.
- *Short film:* BBC Tomorrow’s World, a short feature film on AI and the game of Go “The day machines began to teach us”, June 2017.
- *Public talk:* TEDx Klagenfurt, Austria talk on “Can machine think like people?”. September 2016.