

**University of Cambridge
Department of Computer Science
and Technology**

**ANNUAL REPORT
2024-25**

www.cst.cam.ac.uk

**Annual Report of the Faculty of
Computer Science and Technology, 2024-2025**

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Introduction by the Head of Department

The Department of Computer Science and Technology, often known as the Computer Laboratory, was established in 1937 and is a world leader in the research and teaching of computer science. We take a broad, collaborative view of the subject in both our research work and taught programmes, making significant contributions not just to computer science, but also in cognate areas such as mathematics, engineering, natural sciences and linguistics.

The past year has been very successful: we continue to deliver world class research with real-world impact, advancing both the field and computing in the wider world. Many of our staff and students received prestigious honours, awards and appointments, many of which are detailed later in this report.

Despite our significant success, we know we can do more. Our department is currently the smallest computer science department in the Russell Group, as measured by the number of permanent academic staff, and we are exploring ways in which we can grow while maintaining both the quality of what we do as well as our friendly and collaborative ethos. Growth in computer science not only makes financial sense, but more importantly it will support the University's mission and respond to the increasing demand for computer scientists both nationally and internationally.

A well-managed expansion will allow us to enhance our already significant teaching and research collaborations across the University as computer science and artificial intelligence become ever more relevant to other disciplines. It will also support research in the department which sits in a funding landscape where research increasingly requires larger teams with multiple areas of expertise.

Last year we advertised two new permanent academic positions, and we are delighted to announce that Dr Katie Seaborn, Associate Professor in Human Computer Interaction, and Dr Dong Ma, Associate Professor in Wearable Computing, will be joining us in Lent 2026.

Professor Alastair Beresford
Head of Department
September 2025

Staffing

As of 30 September 2025, the Department of Computer Science and Technology consisted of 229 members of staff:

Academic staff	51
Professional services staff	60
Research staff	118

Promotions

Professorships (G12)

Professor Emily Shuckburgh
Professor Andreas Vlachos

Professorships (G11)

Professor Ian Wassell

Research Professorships (G12)

Dr Sue Sentance

Research Professorships (G11)

Dr Andrew Caines

Assistant Research Professorships

Dr Christian Cabrera-Jojoa
Dr Kayvan Memarian

Retirements

There were no retirements in 2024/25.

College Fellowships

The Department continues to strengthen its links with the Colleges. The following University Teaching Officers hold College Fellowships:

Professor Alastair Beresford, Q
Professor Alan Blackwell, DAR
Professor Paula Buttery, CAI
Professor Ann Copestake, W
Professor Jon Crowcroft, W
Professor Anuj Dawar, R
Dr Carl Henrik Ek, PEM
Professor Marcelo Fiore, CHR
Professor Hatice Gunes, TH

Dr David Greaves, CC
Professor Robert Harle, DOW
Dr Sean Holden, T
Professor Alice Hutchings, K
Professor Timothy Jones, CAI
Professor Srinivasan Keshav, F
Professor Neel Krishnaswami, T
Dr Markus Kuhn, W
Professor Nic Lane, JN

Professor Neil Lawrence, Q
Professor Pietro Lio, CLH
Professor Anil Madhavapeddy, PEM
Professor Cecilia Mascolo, JE
Professor Simon Moore, TH
Professor Richard Mortier, CHR
Professor Robert Mullins, JN
Professor Amanda Prorok, PEM
Professor Thomas Sauerwald, EM

Professor Peter Sewell, W
Professor Emily Shuckburgh, DAR
Professor Frank Stajano, T
Dr Jonathan Sterling, CL
Professor Jamie Vicary, K
Professor Andreas Vlachos, F
Dr Ian Wassell, CHU
Dr Damon Wischik, CHR
Dr Jeremy Yallop, R

* Fellowship taken up during 2024-25.

Honours, Awards, Achievements and Appointments

A Nobel Prize, a Royal Society Fellowship, a Royal Academy of Engineering Fellowship and two King's Birthday Honours were among the accolades awarded to staff, students and alumni this year (2024-5) in recognition of their achievements. Congratulations to them all.

The Nobel Prize

Our alumnus **Sir Demis Hassabis** was awarded the Nobel Prize in Chemistry 2024 jointly with his Google DeepMind colleague Dr John Jumper "for protein structure prediction". The award recognises the major advances made possible by their AI model AlphaFold2, with whose help they have been able to predict the structure of virtually all the 200 million proteins that researchers have identified.

<https://www.cst.cam.ac.uk/news/nobel-prize-our-alumnus-sir-demis-hassabis>



Demis is the first of our alumni to receive a Nobel Prize. He studied Computer Science here as an undergraduate from 1994-7 before completing a PhD in cognitive neuroscience at University College London. We were delighted to welcome Demis back to the Department in March 2025 to celebrate his achievement and to hear the talk he gave to students and alumni on 'Accelerating Scientific Discovery with AI'.

King's Birthday Honours 2025

Emily Shuckburgh, Professor of Environmental Data Science, received a CBE for services to Climate Science and to the Public Communication of Climate Science. She is the Director of Cambridge Zero, Cambridge University's major climate change initiative, and her primary research is focused on the application of artificial intelligence to climate science.

<https://www.cam.ac.uk/news/cambridge-university-academics-recognised-in-kings-birthday-honours-2025>

Prof Ursula Martin, Distinguished Honorary Fellow of the Department and co-founder of Women@CL, was appointed Dame Commander of the Order of the British Empire for services to Science and Education. Now Emeritus Professor in Oxford Mathematics, Ursula has been a steadfast advocate for women in computer science and mathematics. As a visitor here in the early 2000's, she led (with Prof Mateja Jamnik) the setting up of Women@CL, our network to support women and non-binary people in computing research in their careers and encourage them to aspire to leadership positions.



<https://www.cst.cam.ac.uk/news/kings-birthday-honours-two-department-members>

Royal Society Fellowship

Professor Andrew (Andy) Pitts was elected as a Fellow of the Royal Society in July 2025, an accolade awarded for recipients' "substantial contribution to the advancement of science". The Royal Society Directory cites Andrew's work on "the foundations of computer science through the application of logic and the mathematical theory of categories. His insight that properties of resources under permutations of their names can serve as the basis for a theory of structures involving locally scoped names has proved very fruitful, giving rise to a large body of work by many people, under the name 'nominal techniques' ". <https://www.cst.cam.ac.uk/news/royal-society-fellowship-honours-theoretical-computer-scientist>

Lovelace Medal

Dr Sue Sentance, Director of the Raspberry Pi Computing Education Research Centre here, was awarded the BCS Lovelace Medal 2024. This prestigious award is presented annually by BCS, The Chartered Institute for IT, for outstanding contributions to the advancement of computing.



Sue was honoured for her exceptional contributions and research in computing education, in particular her PRIMM ('Predict, Run, Investigate, Modify and Make') approach to teaching programming, which has been adopted by teachers globally. <https://www.cst.cam.ac.uk/news/lovelace-medal-dr-sue-sentance>

Sony Women in Technology Award

Prof Hatice Gunes was shortlisted for the Sony Women in Technology Award with Nature for spearheading technological breakthroughs for the betterment of society. This new award recognises outstanding early to mid-career researchers from the field of technology for their research and achievements that will drive positive impact in the world.

<https://womenintechnology.sony.com/news/shortlist-announcement>

ACM Distinguished Member

Prof Cecilia Mascolo was made a 2024 ACM Distinguished Member for “significant achievements in computing beyond the norm”. ACM Distinguished Members are chosen for their exceptional technical accomplishments and dedicated community service within the profession. In Cecilia's case, she was honoured for her “contributions to mobile wearable systems efficiency, and signal and data analysis enabling multidisciplinary applications”. <https://www.cst.cam.ac.uk/news/recognition-significant-achievements-computing>

ACM SIG on Energy Informatics Lifetime Achievement Award

This annual Achievement Award was created to recognise significant and lasting contributions by an individual to energy systems and informatics. For 2025, the award committee chose **Srinivasan Keshav**, Robert Sansom Professor of Computer Science here, for his “pioneering contributions to energy systems and informatics, including seminal research, capacity building, and for helping to create SIGENERGY and eEnergy”.

<https://energy.acm.org/sigenergy-achievement-award-2025-winner-announcement/>



IET Fellowship

Prof Timothy Jones was awarded a Fellowship of the Institution of Engineering and Technology (IET). These Fellowships are awarded to individuals who have demonstrated recent significant achievements sustained at high levels for a period of at least five years in engineering, technology or related disciplines.



IEEECH Research and Innovation Award

At the IEEE International Conference on Cyber Humanities 2025, **Prof Pietro Lio** was presented with the Research and Innovation Award, which recognises outstanding achievements in advancing research, creativity, and technological innovation at the intersection of cyber technologies and the humanities. The award honours researchers “whose pioneering work has significantly expanded knowledge, fostered interdisciplinary collaboration, or generated novel applications that bridge humanistic inquiry with digital, cyber, and computational methods”.

Royal Academy of Engineering Fellowship

Cecilia Mascolo, Professor of Mobile Systems, was elected as a Fellow of the Royal Academy of Engineering in September 2025. In its citation, the Academy says: “Cecilia has contributed fundamental building blocks critical to the successful functioning and adoption of wearable and mobile devices, which have also influenced the scientific methods of other disciplines. Her work on mobile systems for audio diagnostics has led to substantial contributions in the context of respiratory health and on hearable computing for health and fitness.”



Best Paper Awards

There were two significant awards made this year to the team of researchers behind the development of the **CHERI** cybersecurity technology.

In May 2025, the Institute of Electrical and Electronics Engineers – the IEEE – presented them with a **10-year 'Test of Time' award at the IEEE Symposium on Security and Privacy**. This was in recognition of the long-term success of their 2015 paper on: 'CHERI: A Hybrid Capability-System Architecture for Scalable Software Compartmentalization'. The team of current and former researchers comprises Prof Robert Watson, Jonathan Woodruff, Prof Simon Moore, David Chisnall, Khilan Gudka, Robert Norton, Michael Roe, Stacey Son and Munraj Vadera.

<https://www.cl.cam.ac.uk/research/security/ctsr/d/pdfs/201505-oakland2015-cheri-compartmentalization.pdf>



And in August 2025 the IEEE announced it was awarding its **2024 Best Paper Award in Security and Privacy** to the CHERI team for their paper on 'CHERI: Hardware-Enabled C/C++ Memory Protection at Scale'. The recipients were R. N. M. Watson, David Chisnall, Jessica Clarke, Brooks Davis, Nathaniel Wesley Filardo, Ben Laurie, Simon W. Moore, Peter G. Neumann, Alexander Richardson, Peter Sewell, Konrad Witaszczyk and Jonathan Woodruff.

<https://www.computer.org/csdl/magazine/sp/2024/04/10568212/1XXis8UKgUw>

At **IEEE Percom (the International Conference on Pervasive Computing and Communications)** in March 2025, our researchers won the **Best Paper Award** for repurposing the in-ear microphones in our earbuds to make them collect and analyse our breathing rates, a key vital sign. This demonstrates a new way for us to monitor our health. Congratulations to researchers Yang Liu, Kayla-Jade Butkow, Jake Stuchbury-Wass, Adam Pullin, Prof Cecilia Mascolo and Prof Dong Ma.

<https://www.linkedin.com/feed/update/urn:li:activity:7308450213436796928>



At the **International Joint Conference on Artificial Intelligence** in August 2025, Prof Fermín Moscoso del Prado Martín was among the research team that received the **Artificial Intelligence Journal 2025 Prominent Paper Award**. They won for their work on 'Using Ontologies to Enhance Human Understandability of Global Post-Hoc Explanations of Black-Box Models'. The AIJ Prominent Paper Award recognises outstanding papers published within the previous seven years that are, it says, "exceptional in their significance and impact".

There were plaudits in August 2025 for a paper on 'Robot-Led Vision Language Model Wellbeing Assessment of Children' which explores how robots powered by VLMs can help assess children's wellbeing, and the potential biases it might include. The paper was a **finalist for the Best Paper Award** and **won the KROS Interdisciplinary Research Award in Social Human-Robot Interaction at the IEEE International Conference on Robot and Human Interactive Communication**.

Congratulations to researchers Nida Abbasi, Fethiye Irmak Dogan, Guy Laban, and Prof Hatice Gunes and their collaborators from Cambridge University's Department of Psychiatry.

Best Artifact Award

At the **2025 Conference on Cryptographic Hardware and Embedded Systems (CHES)** in September, [Eric Chun-Yu Peng](#) and [Markus Kuhn](#) from the [Security Group](#) won the [Best Artifact Award](#). Their paper [Adaptive Template Attacks on the Kyber Binomial Sampler](#) demonstrates a new type of power-analysis side-channel eavesdropping risk that microcontroller implementations of the cryptographic key encapsulation mechanism ML-KEM/Kyber need to be protected against. [Kyber](#) is the first of a [new generation](#) of public-key encryption standards especially hardened against the threat of being broken by future quantum computers. Peng and Kuhn published, along with their open-access paper in the [IACR Transactions on Cryptographic Hardware and Embedded Systems](#), also their [experimental dataset](#) and the [Julia code](#) needed for independent researchers to reproduce the results. The award was given for the high standard of reproducibility of their work.

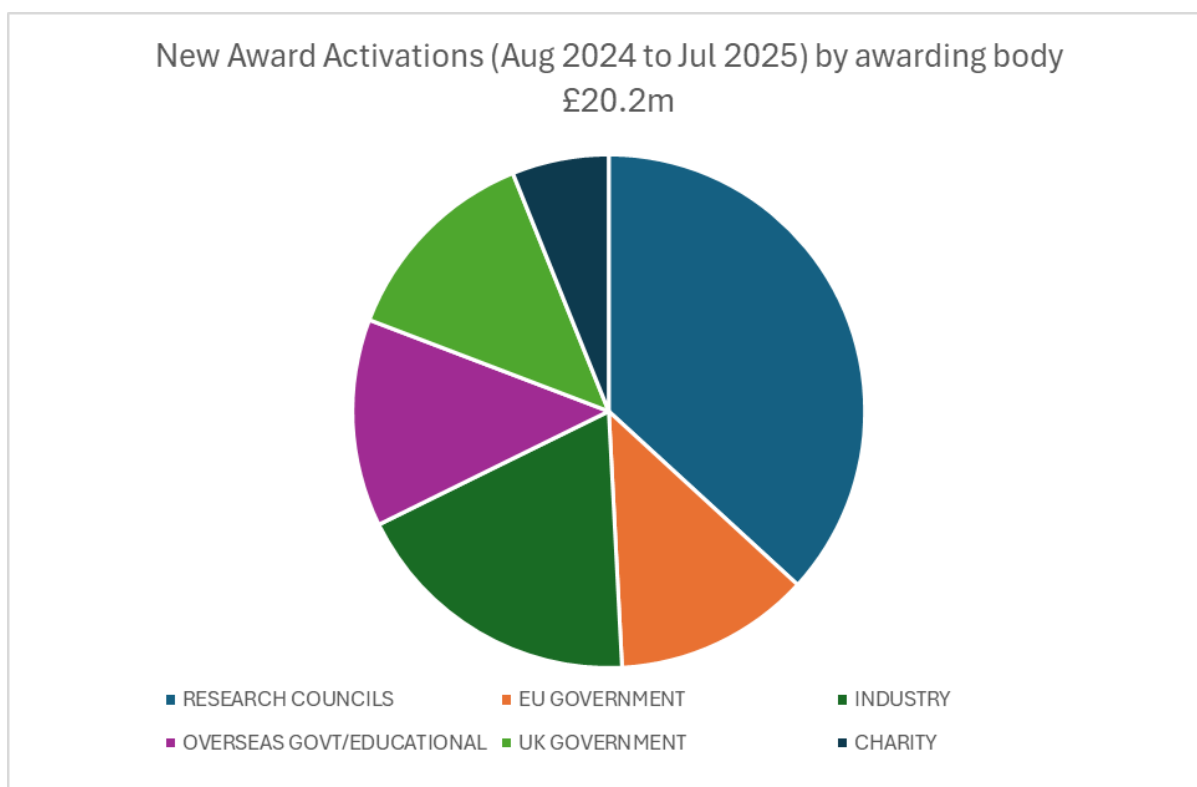
The Wiseman Prize

The Wiseman Prize recognizes students and research staff who make exceptional contributions to the work of the Department which are beyond their expected duties (for example, supervision, leadership, and mentoring; events, courses, programmes and projects; committees and groups; outreach; and other contributions around social activities, group cohesion, camaraderie, creating a positive environment, collaboration, and welfare support to fellow students).

Salomey Afua Addo
Davi Castro-Silva
Patrick Ferris
Jessica Man
Sam Nallaperuma-Herzberg
Carrie Anne Philbin
Jake Stuchbury-Wass

Research

This year the Department received over £14.4M in research funding, with new awards activated between August 2024 and July 2025 totaling in excess of £20.1M.



Funding Highlights

The Department received a range of industry donations for research, with several academics receiving awards from Google and Arm as well as from Jane Street and Bloomberg. Our fundraising efforts for the new Computer Architecture and Semiconductor Research Centre led to a significant donation of £3.5M from Arm to fund 15 PhDs and also the Department's first donation from AMD.

The list below highlights some of the grants received in the last financial year.

- The Department secured in £2.6M in funding from the new Advanced Research and Invention Agency (ARIA) from two awards:
 - Dr Rika Antonova was awarded £1.3M of funding for her project, *Ada-GO – Adaptive Global Optimisation for Co-Evolving Hardware and Policy Learning* which was funded as part of a £57M programme on Robert Dexterity.
 - Rika is also part of the team that secured funding through the Scaling Compute Programme. The project, *Breaking Down the Compute Graph Step by Step: A scalable and modular simulation* is led by Dr Aaron Zhao of Imperial College (a former PhD student in the Department) with colleagues from the University of Edinburgh and The University of Cambridge. The University of Cambridge team, which also includes Professor Robert Mullins and Professor Timothy Jones received £1.3M for their part in the project which focuses on the development of a scalable and modular performance simulation framework for future systems.
- The CaMLSys lab led by Professor Nic Lane and Hall of Fame Company, Flower Labs secured funding from the SPRIND Composite Learning Challenge to develop scalable, decentralized AI using the Flower framework.

- Professor Cengiz Oztireli was awarded a renewal to his UKRI Future Leaders Fellowship - *Scene Processing with Machine Learnable and Semantically Parametrized Scene Representations* which builds on his work to date to extend human-computer interaction systems for 3D scene creation and editing taking advantage of recent rapid advancements in generative AI and extended reality.
- Professor Oztireli's group are also continuing their work in Agri-tech following an award *PhenoEye: 4D Plant Modelling and Analysis with Neural Implicit Representations* through the EPSRC-funded Lincam Ceres-Agri-Tech Place Based Impact Accelerator Account, a fund to advance agricultural innovation from the Universities of Lincoln, Cambridge and East Anglia.
- Professor Amanda Prorok was awarded a Leverhulme Research Grant - *Foundational Learning for Collective Robotic Intelligence* which will challenges current solutions to AI and agent autonomy, which largely address problems with standalone models and instead consider collective intelligence.
- Professor Peter Sewell was awarded an ERC Proof of Concept Grant - *ELVER-CHECK Well-grounded Lightweight Assurance for Critical Systems Software*.
- Professor Robert Watson was awarded £1.99M funding from EPSRC for the first year of a *Memory Safety Centre of Excellence*, to support the adoption of CHERI technology.
- Professor Cecilia Mascolo was awarded over £2M for an EPSRC Open Fellowship. Her project, *HearFit: Hearable Sensing Systems and Machine Learning for Health and Fitness*, will lay the foundations for the next generation of affordable and efficient sensing devices and machine learning modelling for monitoring wearers' activity, fitness and health over time.
- Professor Hatice Gunes' Affective Intelligence and Robotics Laboratory (AFAR Lab) will be joined by Jin Huang following a successful MCSA Postdoctoral Fellowship application - *Intelligent Embodiment: Social Robots that Understand and Adapt Through Recommender Systems*. Professor Jon Crowcroft is also host to a MCSA Postdoctoral Fellow, Syed Waqas Haider Shah will be working on the project *6G-SCOUT: 6G Integrated Sensing and Communication for Ubiquitous Wireless NeTworks*.
- Professor Jamie Vicary and Professor Pietro Lio were successful in Renaissance Philanthropy's new AI for Math Fund, with their project, *New Categorical and Topological Foundations for AI and Machine Learning* which explores novel neural network architectures based on more bespoke mathematical representation spaces and structures, including sheaf theory and category theory.

Activities, Events and Updates

CASCADE – our Computer Architecture and Semiconductor Design Centre

The CASCADE Centre was launched in June 2024 with the aim of being a place where academia and industry could work together to address the grand challenges in computer architecture, design automation and semiconductors. A year on, that vision is becoming reality. The CASCADE Centre is now holding events where academic researchers and industry partners can meet to discuss research in the field. We've also attracted significant donations from industry to support the Centre's PhD students. "This is extremely valuable to us," says CASCADE Centre director Prof Timothy Jones, "as we work to make the Centre a destination for collaboration between companies, generating pre-competitive open-source artefacts and driving development of novel computer architectures."



Arm is donating £3.5 million to enable 15 PhD students over the next five years to study at CASCADE. The first three students to be supported by the Arm donation begin their studies in the autumn of 2025. They will be followed by another three students each year for the following four years. <https://www.cst.cam.ac.uk/news/arm-donation-funds-phd-students-new-computer-architecture-research-centre>

In July 2025, we were pleased to announce that a donation from AMD is allowing us to expand the size of the student cohort. "By helping develop the next generation of researchers in computer architecture and semiconductor design, we're proud to contribute to the innovations that will drive our industry forward and create broader societal impact," said Cathal McCabe, Director, AMD University Program, Americas, EMEA, and India. <https://www.cst.cam.ac.uk/news/amd-supports-cascade-centre-advance-phd-research-computer-architecture-and-semiconductor-design>

Human-Centred Computing & Human-Machine Interaction Research Showcase

Human-Centred Computing and Human-Machine Interaction were the topics in this year's Research Showcase. Taking place in January 2025, it comprised a series of short talks by early-career researchers here.

PhD student Nida Itrat Abbasi presented her work on **how robots can be used for assessing the mental wellbeing of children**. As part of her doctoral research, she designs child-robot interaction experiences aimed at assessing children's mental wellbeing. Using a combination of verbal responses to structured tasks and non-verbal cues – such as speech patterns and facial expressions – the study investigates how these interactions can reveal insights into the wellbeing of the future generation.

Justas Brazauskas discussed **the human-centred design of real-time digital twins**. Justas, who is creating a digital twin of the William Gates Building, highlighted the ways that tailored sensor deployments, real-time data integration and effective data visualisations can improve the functionality of digital twin buildings.

Dr Fethiye Irmak Dogan discussed her work on **how robots can use explainability to enhance human-robot interaction**, ensuring their ethical and transparent integration into human lives. She highlighted two specific use cases: using robot explanations to resolve ambiguities in user instructions and incorporating human explanations into a robot's decision-making process to generate socially appropriate behaviours.

In her talk on **Seeing Beyond: Modelling visual constraints for smarter tech**, Dr Maliha Ashraf outlined how understanding the limitations of human contrast vision can guide the design and optimisation of technology. By measuring and modelling contrast vision across multiple dimensions, she said, we gain insights into how the visual system processes (and sometimes fails to process) information. These findings drive advancements in tone mapping, image quality, and display design, aligning technology with human perception for more intuitive and effective human-machine interactions.

Videos of all the talks can be watched here: <https://www.cst.cam.ac.uk/news/january-showcase-highlights-importance-humans-computing>

Policy Event

Several of our academics actively contribute to policy discussions and provide expertise to government bodies. **Our partnership with CSaP** (Centre for Science and Policy) plays a crucial role in this with many CST academics establishing connections through CSaP-led initiatives. Notably, we hosted a **CSaP Professional Development Workshop in Michaelmas Term 2024**, strengthening our policy engagement and exposing younger researchers to the possibility of working policy impact in mind.

Postdoc Funding Masterclass

The Department is committed to supporting early career postdocs and late-stage PHD students in their career goals and personal development. We have identified a need for more specific support for this community, on top of what we already provide, particularly with regards to application support for Fellowships, grant funding, as well as future jobs. As already identified by the University, the postdoctoral career stage is a precarious one. It is also a stage when a lot of skills that might have begun being developed as PhD students really need honing for imminent applications. Over this last year the Department's Research Strategy Team has run two Postdoc Funding Masterclasses with Professor Jamie Vicary. A two-hour masterclass with refreshments was held for around 10 postdoc and late PhD students in January 2025 and June 2025. To provide tailored advice and support from academics on fellowship funding panels. Our very experienced UTO Professor Vicary ran the session. It not only informed attendees on how to write a good Fellowship proposal but encouraged them to meet and learn from their peers in a supportive and structured environment.

Supporters' Club

Companies enrolled in the Department's Supporters' Club pay a modest annual subscription in exchange for opportunities to interact with students, mostly for the purposes of recruitment. These organisations, ranging from start-ups to multinationals, give tech talks, offer Part 1B Group Design projects, advertise graduate roles, internships and events to students, and take part in the Department's Annual Recruitment Fair. Membership has reduced slightly in the last year, falling

from over 90 members to the current level of around 85 members.

Subscriptions were formerly paid by donation, but in early 2020 the payment model changed after it became apparent that subscriptions could no longer be considered donations, since members were receiving tangible benefits in return. As a result, the subscription was split into three parts: a basic membership, a fee for the Recruitment Fair, and a donation component for those able to contribute further. Despite donations now being optional, several companies still choose to give extra on top of their membership fee. As of 2024 the annual membership fee has increased from £300 to £400. The income is used for a range of purposes including supporting students who are facing hardship, offering additional skills training to early-stage researchers, supporting our growing outreach programme, and bridge-funding new research ideas.

Supporters' Club activities have continued as normal this academic year including in-person tech talks and the annual Supporters' Club dinner. The dinner was held at Selwyn College in March 2025 and was attended by over 30 companies. A successful in-person Recruitment Fair was held in the Department over two days in November 2024. 48 companies attended the event.

Cambridge Ring

The Ring is the Department's alumni association. Originally restricted to graduates of the Department, membership has been extended in the last few years to include current and former staff members and longer-term visitors, as well as graduates of other departments who were significantly involved with Computer Science while at Cambridge or who work in computer science now.

In the past, only a small fraction of those who were eligible to join actually signed up as members. But in 2019 the Ring was brought under the management of the Department's Research Strategy Team, which put more membership management structure in place and undertook a significant recruitment and data-gathering effort in conjunction with the University's Development and Alumni Relations office. The team also increased the frequency of communication with alumni and set up a Ring Forum at the end of 2020, an online discussion venue for peer-to-peer discussions, which has over 1,300 members. There is also a [Cambridge Computer Lab Ring](#) LinkedIn group with well over 750 members. Ring membership has more than doubled in the last few years. It continues to rise and now has over 2,400 members. The team is making efforts to recruit more graduating students to join the Ring.

The annual Ring Dinner was held in April 2025, attended by around 50 alumni plus Department members. It took place in Queens' College, preceded by two research talks from Department members, and the presentation of the Hall of Fame Awards (see below). This was followed by a drinks reception and dinner, with speeches from the Head of Department Professor Alastair Beresford and guest speaker Dr Raoul-Gabriel Urma, an alumnus who completed his PhD here thanks to a Qualcomm scholarship and is now himself donating funding to support a PhD student.

In-person Ringlets (small gatherings of Ring members) have been taking place every other month in London this year. A Ringlet event took place in San Francisco, coinciding with a visit from Professor Alastair Beresford in May. In addition, there was a Ringlet held in June in Melbourne, Australia.

In December 2024 a poster session and winter quiz was held for alumni and postgraduate students to help increase interactions between them. Alumni mingled with faculty and PhD students and enjoyed drinks, nibbles and a poster session before being placed in mixed teams for a quiz in two parts. The first required them to walk around and look at some of our historic artefacts for answers. The second half had questions taken from Ada Computer Science (the online learning platform we run in collaboration with Raspberry Pi).



In March 2025 a drinks reception was held for those alumni and staff who attended a lecture by Demis Hassabis.

The 'Hall of Fame' Awards

The Hall of Fame was set up to celebrate the success of the (350+) companies founded by Department of Computer Science and Technology graduates and staff.

To recognise their achievements, awards are given every year in four categories:

- Company of the year
- Product of the year
- Publication of the year
- The Better Future Award (to recognise those who have made significant contributions to humanity through technology)



The 2024 awards were presented at a ceremony held to coincide with the annual Ring Dinner.

<https://www.cst.cam.ac.uk/announcing-winners-our-hall-fame-awards>

Company of the Year 2024: Tractable

AI 'unicorn' Tractable was co-founded in 2014 by Alex Dalyac and our alumna Razvan Ranca. The company specialises in AI solutions for accident and disaster recovery. Its AI analyses images of vehicle and property damage to speed up insurance claims and assessments. Today, Tractable processes over \$7 billion in auto and home repairs across millions of claims and 10+ countries, collaborating with leading insurers such as GEICO in the US and Aviva in the UK. Co-founder and CTO Razvan Ranca collected the award.

Product of the Year 2024: lowRISC for OpenTitan

The Product of the Year award went to not-for-profit company lowRISC for OpenTitan. lowRISC has grown into a world-class centre of excellence for secure chip design and demonstrated the value of its novel collaborative engineering business model. In particular it has made significant contributions to OpenTitan, the world's most active open-source silicon project, which the company hosts. In 2024, OpenTitan's first silicon was successfully fabricated and Google confirmed that it would use it as the security chip in both its Chromebook laptop range and data centres. Rivos is also using it in its embedded form to secure their chiplets.

Better Future Award 2024: The GreenLens App

The Better Future Award went to the research team behind the GreenLens app – current PhD student Zhengpeng (Frank) Feng, former students Mingyue Xie and Amelia Holcomb, and Srinivasan Keshav, Robert Sansom Professor of Computer Science here.

The app uses AI to measure the diameter of tree trunks with a high degree of accuracy – yet it runs on nothing more sophisticated than a cheap, secondhand Android phone.



It's aimed at anyone with an interest in protecting and restoring forests, from governments and NGOs to landowners and environmental scientists. It was first released for Android phones in 2024, intended for use by ecologists monitoring forestation efforts in East Africa where high end smartphones are unaffordable. But enthusiasm for it gathered pace after the journal *Ecological Informatics* published the researchers' paper on it. By the end of 2024, the GreenLens team had received interest from countries including Brazil, Romania, Scotland, Tanzania and Vietnam.

Publication of the Year 2024: 'Causal Estimation of Memorisation Profiles', Pietro Lesci, Clara Meister, Thomas Hofmann, Andreas Vlachos & Tiago Pimentel.

After a Department-wide selection process in which 40 papers were submitted and considered, Publication of the Year was awarded to this paper for its significant contribution in an important area of research. It's important to understand how language models memorise information, for example to better understand how they learn or to avoid copyright issues. Existing work defines memorisation as the ability of a model to predict an instance when trained with that instance. Of course, this relies on the ability to observe what would have happened if the model had not seen the instance during training. Unfortunately, existing methods struggle to produce this counterfactual in an efficient and accurate way. This paper offers a better and faster way to measure memorisation by adopting a technique from economics called difference-in-differences. The selection committee felt this was a deserving winner. The paper also won a best long paper award at the 62nd Annual Meeting of the Association for Computational Linguistics (ACL) – the premier venue in the field. First author Pietro Lesci is a PhD student in this Department, as was fellow author Tiago Pimentel (now a postdoc at ETH Zurich). Andreas Vlachos is Professor of Natural Language Processing and Machine Learning here.

The Departmental Annual Garden Party

On Thursday 18th September, members of the Department gathered at Jesus College for our annual Garden Party. The event was very well attended and once again, we were fortunate to enjoy good weather. A highlight of the afternoon was a rounders match, which was enjoyed by the participants, and the spectators! The event concluded with our traditional group photograph, which serves as a nice reminder of the enjoyable afternoon.



Wheeler Lecture



Professor Yvonne Rogers, Director of the Interaction Centre at UCL, was our speaker for the 2024 Wheeler Lecture. 'Supercharging the human mind with AI' took place here in the William Gates Building on Wednesday 23 October.

"Since the early 2020s," she said, "there has been a call to arms for making AI systems more human-centred. What this means is widening the AI agenda from being largely technical in its aspirations to one that is concerned with humans and, more generally, with societal needs. A core part of this is a move towards responsible AI, that is reliable, competent and trustworthy. My vision is more radical: exploring how human-centred AI can empower us to achieve ever greater feats by developing new AI 'supertools' that don't just make our tasks more efficient but expand our minds, daring us to think differently."

Her Wheeler Lecture can be watched on YouTube:

<https://www.youtube.com/watch?v=DxvAh2stobg>

Teaching

Undergraduate Teaching

A total of 129 Part IA students were admitted in Michaelmas Term 2025. This is a decrease of 2 students on 2024 and above the Department’s numbers target of 120. The numbers break down into 49% home students, 14% EU students, and 37% international students. This is a decrease in home students and an increase in EU and international students. The percentage of female students is 18% which is a slight decrease from the figure of 19% for 2024.

The Part IA, IB and II 2025 Tripos examinations were held in person and were closed book. The classing boundaries were set at the percentages shown below. Class distribution reflects the expected boundaries as set out in the Department’s Marking and Classing document, allowing for examiner discretion.

Marking and Classing Expected Distribution		2022 Part II Results Final Distribution		2023 Part II Results Final Distribution		2024 Part II Results Final Distribution		2025 Part II Results Final Distribution	
I	40%	I	42%	I	39%	I	40.2%	I	38.9%
II.1	50%	II.1	48%	II.1	53%	II.1	50.0%	II.1	50.8%
II.2	7.5%	II.2	8%	II.2	6%	II.2	7.1%	II.2	7.9%
III	2.5%	III	2%	III	2%	III	2.7%	III	2.4%

Postgraduate Teaching

The MPhil in Advanced Computer Science continues to run smoothly. Students provided positive feedback on the offered modules and One-Minute-Madness sessions, and project presentations were popular live events in 2025. The Postgraduate Education Office is very grateful to the PhD students who assisted in running practice sessions and who were session chairs for the presentations.

Application numbers for the MPhil commencing October 2025 were the same as in 2024. We are expecting around 65 MPhil students and a further 22 Part III students. We also expect between 55-60 PhD admissions in 2025-26. In the academic year to 30 September 2025, the Degree Committee approved 41 Ph.D. degrees and 60 M.Phil degrees, including 55 with Distinction.

Outreach

Cambridge Festival

Taking a virtual tour of the Dawn supercomputer, chatting to a robot, and solving logic puzzles to unlock a pirate's treasure chest. These were among the activities visitors could try at our Cambridge Festival Open Day in March 2025.

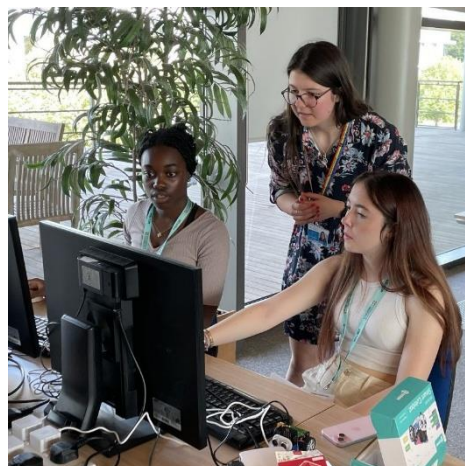


As a Department we want to engage the public, enthuse prospective students and encourage wider participation in Computer Science and Technology. As part of this, every year we open our doors during the Cambridge Festival and invite the public in. This year, visitors could see how a swarm of robots learns to work together and try out Pirate- and Hacker-themed Escape Rooms. They met researchers using AI to improve health care and support the environment. They were also able to make music with Sonic Pi software and hear a talk on "Bits With Soul: the joy, beauty, and creativity of computer science" by Simon Peyton Jones, Engineering Fellow at Epic Games (the makers of Fortnite) and a Distinguished Honorary Fellow here in the Department.

On the day, hundreds of visitors – including four school groups, one from Turkey – came through our doors and thoroughly enjoyed their visit. We look forward to doing it all again in March 2026.

Sutton Trust Summer School

A group of A Level students programmed robot cars, took practical classes in AI and computer graphics, and attended lectures on privacy and security in August 2025 to get a taste of what it's like studying Computer Science at university.



This was the annual Computer Science Summer School that we run with the Sutton Trust, a charity that works to ensure all young people can have access to life-changing educational opportunities. Participants are high-achieving A Level students at UK state schools. During their week with us they have talks, workshops and small-group teaching sessions and stay in a Cambridge college. This helps them gain experience of our Computer Science degree course and what it's like to be an undergraduate here.

Muataz from Liverpool took part "to explore areas of Computer Science I haven't seen before. I'm studying it at school but some of the activities here – like programming robot cars – are different and really interesting." Alice from Peterborough has been programming since she was eight and wants to study Computer Science at Oxford or Cambridge. "The algorithms lecture was really cool as it's completely new to me," she said.

Ali is originally from Pakistan but now lives in London. "We're all from state schools and Cambridge and Oxbridge are highly competitive universities," he explains. "The Sutton Trust is making the playing field fairer for us by giving us the chance to spend a week in Cambridge and learn from professors here who are giving us incredible lectures. Having those doors opened for us is a big opportunity."

University Open Days

We welcomed prospective undergraduate students at our Open Days on 10 and 11 July 2025. Prospective students visited the Department for tours, to attend a sample lecture, hear a presentation about our Computer Science degree course and chat to Directors of Studies in Computer Science about what it is like to study here. Current undergraduates and postgraduates were on hand to answer questions and run activities offering ways to explore Computer Science. These activities included a Security demo, where researchers invited visitors to try their hand at 'lock-picking' and learn how techniques in picking locks have parallels with the techniques hackers use to break into our computers and access our data, and an AI research demo showcasing how AI is being used to develop music therapies for people suffering from sleep disorders.

See <https://www.cst.cam.ac.uk/news/welcoming-prospective-students-our-2025-open-days>.

Women in Computer Science

Following a successful pilot in 2024, the Women in Computer Science programme returned in 2025 with some key changes. The programme aims to inspire students and give them an insight into what studying Computer Science at university is like. This year, the seminar series (delivered by female members of the Department) was open to all Year 12 students, regardless of gender or background. This led to a consistent turnout with at least 120 students attending all five sessions live.



Once the seminar series concluded, a group of students was selected to continue with the programme. Selection was based on our widening participation criteria as well as the students' engagement with the seminars.

The 20 chosen students were assigned a mentor, who is a current member of the Department, and attended monthly meetings. These sessions covered university life and supported students in

developing an independent research project on a topic in Computer Science that interested them. All students who submitted a completed project were invited to an end-of-programme residential in Cambridge in July.



During the residential, students enjoyed a range of activities including punting, a formal dinner, and a programming workshop. They also attended talks on university admissions and participated in a panel discussion featuring three female Computer Science graduates at different stages of their careers, who shared insights into their academic journeys and professional paths.

We hope the programme can run again in 2026. See: <https://www.cst.cam.ac.uk/outreach/women-in-cs-programme>

STEM SMART

The Department took part in STEM SMART for the second time this year. This 17-month programme is open to students at UK state schools who satisfy at least one widening participation criteria. Starting in Year 12, this scheme aims to raise attainment and prepare students to submit applications to competitive universities.

As part of the programme, students attended regular large teaching sessions led by the Raspberry Pi Foundation, and those who engaged most progressed to smaller group supervision sessions led by current PhD students and post docs in the Department. The most engaged students also had the opportunity to attend a week-long residential, which involved visiting the Department. During the visit, students heard a taster lecture, had a session on admissions and took part in an introduction to graphics practical session.

For more detail see <https://www.undergraduate.study.cam.ac.uk/stem-smart>.

Google DeepMind ‘Research Ready’ Internships

Building on a successful pilot in summer 2024, the Google DeepMind Research Ready scheme returned in 2025, continuing its aim to broaden access to AI research.

This initiative offers current undergraduate students and recent graduates from underrepresented backgrounds the opportunity to undertake a summer research project in our Department, focusing on topics related to Artificial Intelligence.



The 2025 Research placements were supported by Google DeepMind, the Hg Foundation and the Royal Academy of Engineering under the Google DeepMind Research Ready scheme. They have also been made possible by support from Hughes Hall, University of Cambridge.

The interns clearly relished the opportunity, saying that the experience helped to demystify Cambridge. For the first time, many could genuinely picture themselves studying here as postgraduates. Their view of research also shifted—what once felt out of reach now seemed much more approachable and something they could see themselves doing with confidence. For more information, see <https://www.cst.cam.ac.uk/outreach/deepmind-research-ready>