UKAIRS 2026

UKAIRS

APRIL AI Hub for Productive Research & Innovation in Electronics

John McIntyre Conference Centre,
Pollock Estate, University of Edinburgh
24 & 25 November 2026

THE UNIVERSITY of EDINBURGH
Generative AI Laboratory

Welcome from the 2026 Co-Chairs

UKAIRS 2026



APRIL AI Hub for Productive Research & Innovation in Electronics

Prof. Themis Prodromakis



THE UNIVERSITY of EDINBURGH Generative AI Laboratory

Centre for AI in Assistive Autonomy

Prof. Subramanian Ramamoorthy FRSE

Welcome to UKAIRS 2026, the unmissable gathering of the UK's research elite in Artificial Intelligence. Building on the success of the previous Festival of Ideas, this year's event provides the UK's premier platform for collaboration, hosted by the University of Edinburgh's APRIL AI Hub and Generative AI Lab. By bringing together leading minds from diverse fields, this conference serves as a catalyst for breakthrough ideas and advances our position in global AI. We are delighted to host you in our historic city and look forward to meeting you all in Edinburgh!



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Overview

The UK AI Research Symposium (UKAIRS) is the premier national gathering for the UK artificial intelligence research community. Founded in 2025, and organised in collaboration with UKRI, RAI UK, the national AI Hubs, and CDTs, UKAIRS purpose is to bring together researchers and stakeholders from across disciplines to showcase leading research, encourage collaboration, identify cross-fertilisation opportunities, and help shape the future direction of AI research in the UK.

UKAIRS hosts talent from a range of disciplines, including computer science, engineering, humanities, healthcare, and more. By bringing these broad range of subject matters together, participants are given the opportunity to discover overlap, network with specialists in connected fields, and discover up-and-coming talent rising in the community.

This annual symposium aims to give students, researchers, industry partners, policy makers, and everyone else working in the field of AI in the UK the opportunity to knowledge share and grow collectively as a community at the forefront of responsible innovation.



Programme Introduction

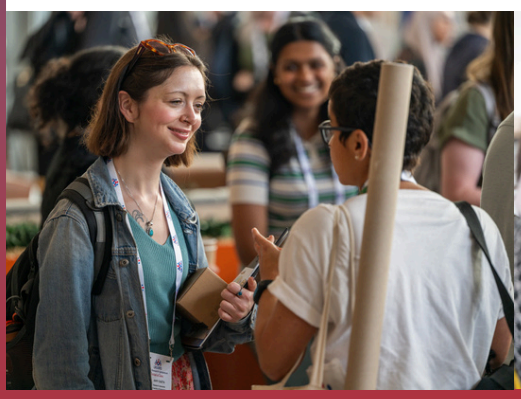
On behalf of the programme committee, it is our pleasure to present this years program — a celebration of the very best research from across the UK's AI community. The UK holds a distinctive place on the global stage, advancing the fundamentals of artificial intelligence while drawing on real strength in the interdisciplinary work that fuels new applications, new industries, and the shaping of responsible policy and regulation. UKAIRS brings that community together in one place: researchers and students of every discipline and career stage, united by shared challenges and a shared ambition to deliver AI that benefits society and the economy.

This year's programme maps the full landscape of UK AI research. At its foundation sits Algorithms, Agents & Theory, where advances in learning, inference, optimisation, and multi-agent systems supply the methods that power everything else. Those methods reach outward into the sciences — Natural & Physical Sciences applying AI across physics, chemistry, materials, and space, and Engineering & Manufacturing carrying it into advanced production and the emerging frontier of quantum devices and sensing. They reach into Life & Health, from drug discovery and genomics to clinical decision support and mental health. And they reach toward the defining challenges of our time in Sustainability & AI, spanning climate, energy, food systems, and the environmental footprint of computing itself. Binding these together is Synergistic Human-AI Collaboration, which keeps people, responsibility, and societal impact at the centre of how these technologies are built and used.

Taken as a whole, the themes trace a field that runs from first principles to real-world impact — theory feeding application, and application posing new questions back to theory. It is a landscape defined as much by the connections between tracks as by the depth within them, and it is exactly these cross-fertilisation opportunities that UKAIRS exists to spark.

Across our six tracks you'll find published, world-class work alongside the emerging ideas that will define what comes next — and we are especially glad to welcome the many early career researchers whose contributions are the future of the field. We hope you leave with new collaborators, new questions, and fresh inspiration for what this remarkable community can achieve together.

With warm wishes,
Prof. Enrico Gerding and Prof. Aldo Faisal
The Programme Chairs on behalf of the Programme Committee





Programme
Tuesday, 24 November 2026

09:00 - 10:00	**Registration**	John McIntyre Conference Centre, 1st Floor registration desk
10:00 - 10:30	**Welcome Remarks & UKRI Address**	Pentland & Overflow in South Hall
10:30 - 11:15	**Prof. Sir Bashir Al-Hashimi** **The Future of Scientific Research: Intentionally Designed Human–AI Collaboration — A Personal Perspective**	Pentland & Overflow in South Hall
11:15 - 11:35	**Coffee Break Sponsored by** tensorwave **& Networking**	Concourse & Centro | Kirkland
11:35 - 12:00	**TensorWave Industry Talk**	Pentland & Overflow in South Hall
12:00 - 13:00	**AI & Entrepreneurship**	Pentland & Overflow in South Hall
13:00 - 14:30	**Lunch | Poster Session 1**	Ground Floor JMCC | Posters in Prestonfield
14:30 - 15:30	**Life & Health - AI for Biomedical Analysis and Clinical Prediction**	Pentland West
	Natural & Physical Sciences	Pentland East
	Synergistic Human-AI Collaboration - Responsible AI, Ethics and Governance	South Hall
15:30 - 15:45	**Refeshments & Comfort Break**	Concourse & Centro | Kirkland
15:45 -16:30	**Life & Health - Human-Centred and Agentic AI in Society**	Pentland West
	Algorithms, Agents & Theory - Causality, Counterfactuals and Explainable AI	Pentland East
	Synergistic Human-AI Collaboration - Human-Centred Design, Creativity and AI in Society	South Hall
16:30 - 16:45	**Day One Closing Remarks**	Pentland East | Pentland West | South Hall

~ Gala Dinner at the National Museum of Scotland - 19:00 ~

Programme
Wednesday, 25 November 2026

09:00 - 09:30	**Registration**	John McIntyre Conference Centre, 1st Floor registration desk
09:30 - 10:15	**UK AI Research Labs Panel**	Pentland & Overflow in South Hall
10:15 - 11:15	**Coffee & Networking | Poster Session 2**	Concourse & Centro | Kirkland | Posters in Prestonfield
11:15 - 12:00	**Algorithms, Agents & Theory - Probabilistic Inference, Geometry and Dataset Structure**	Pentland West
	Algorithms, Agents & Theory - Reasoning, Collaboration and Robustness in Foundation Models	Pentland East
	Sustainability & AI	South Hall
	tensorwave **Developers Roundtable**	Holyrood
12:00 - 12:15	**Comfort Break**	
12:15 - 13:15	**Engineering & Manufacturing**	Pentland West
	Algorithms, Agents & Theory - Optimisation, Learning Dynamics and Neural Architectures	Pentland East
	Synergistic Human-AI Collaboration - Trustworthy, Explainable and Multimodal AI Systems	South Hall
	tensorwave **Developers Roundtable**	Holyrood
13:15 - 14:15	**Lunch | Poster Session 3**	Ground Floor JMCC | Posters in Prestonfield
14:15 - 15:15	**Community Panel**	Pentland & Overflow in South Hall
15:15 - 16:00	**To Be Announced Keynote**	Pentland & Overflow in South Hall
16:00 - 16:30	**Closing Remarks**	Pentland & Overflow in South Hall

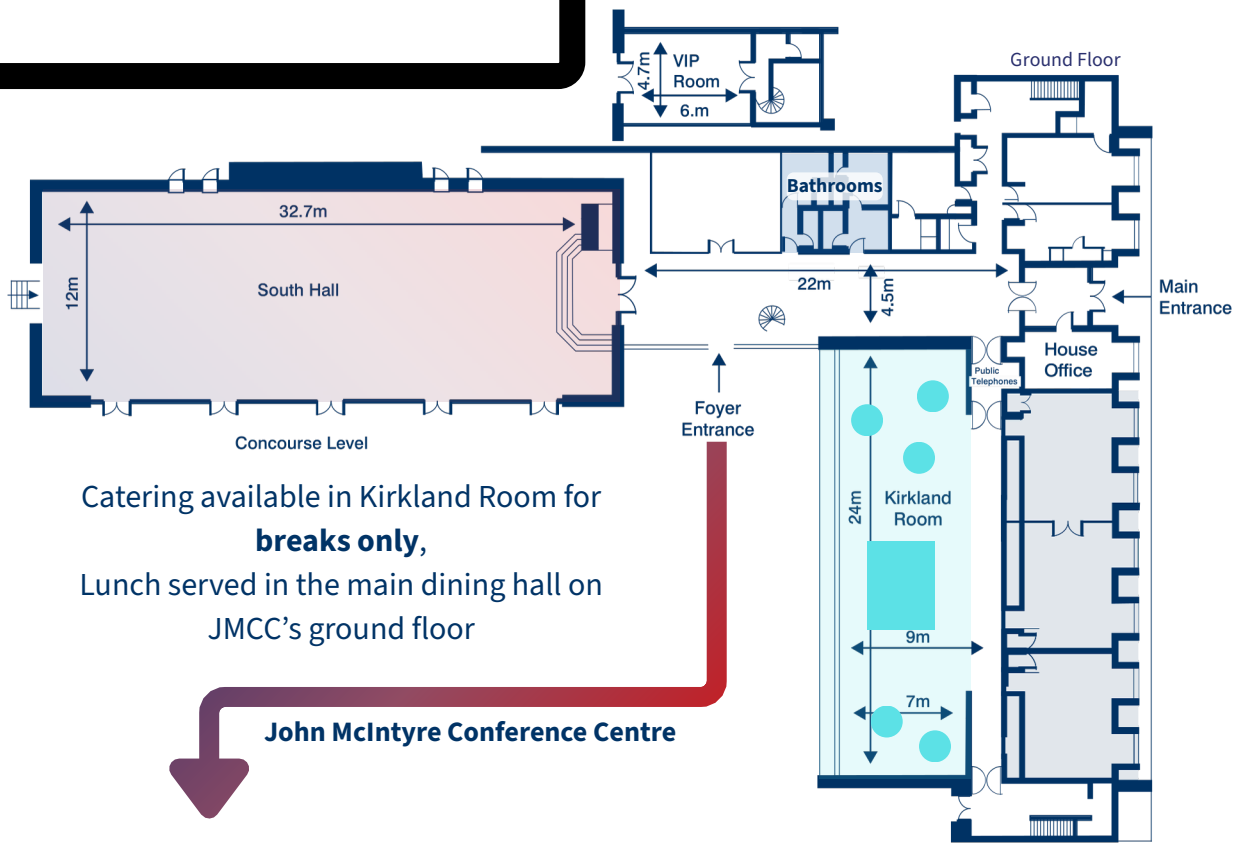
John McIntyre Conference Centre

Key

Roller Banners
Registration Desk
Catering Area
Catering Table
Coat Racks
Poster Boards
Display Table



South Hall Complex



Catering available in Kirkland Room for **breaks only**,
Lunch served in the main dining hall on JMCC's ground floor

John McIntyre Conference Centre

Tuesday, 24 November 2026 - 14:30 - 15:30

Life & Health - AI for Biomedical Analysis and Clinical Prediction
Pentland West

Dr. Anatoliy Gorbenko Leeds Beckett University	Prediction of the Infecting Organism in Peritoneal Dialysis Patients with Acute Peritonitis using Interpretable Tsetlin Machines
Dr. Konstantin Georgiev The University of Edinburgh	Machine Learning-based Predictions of Healthcare Contacts Following Emergency Hospitalisation using Electronic Health Records
Miss. Linda Bryant King's College London	Structural Imaging Predictors of Ketamine Response in Treatment-resistant Depression: A Machine Learning Approach
Dr. Rufus Daw University of Manchester	CellTypeAI: Cell Annotation for scRNA-seq using Local Generative-AI
Dr. Saeed Farzi University of Southampton	HeartBERT: A self-supervised ECG Embedding Model for Efficient and Effective Medical Signal Analysis

Natural & Physical Sciences
Pentland East

Dr. Alperen Dalkiran The University of Edinburgh	Signatures of Electron–Hole Hopping in Myoglobin Peroxidase Activity Revealed by Deep Mutational Learning
Dr. Ben Rowlinson The University of Edinburgh	Band Gap Prediction of Two-Dimensional Materials Using a Gradient-Boosted Feature Selection Approach
Dr. Francesco Tudisco The University of Edinburgh	Neural-HSS: Hierarchical Semi-Separable Neural PDE Solver
Dr. Shashank Mishra The University of Edinburgh	PhyTENG: A Physics-informed Machine Learning Framework for Modelling Contact-separation Triboelectric Nanogenerators
Dr. Michael Gutmann The University of Edinburgh	Risk-averse Optimization of Genetic Circuits under Uncertainty

Synergistic Human-AI Collaboration - Responsible AI, Ethics and Governance
South Hall

Dr. Shaun Feakins, University of York	Clear, Compelling Arguments: Rethinking the Foundations of Frontier AI Safety Cases
Dr. Dilara Kekulluoglu Sabanci University	Understanding User Trust and Expectations in Answerable Sociotechnical Systems
Wm. Matthew Kennedy King's College London	Toward Human Rights Benchmarking for LLMs: A Pilot Methodology
Dr. Paula Westenberger Brunel University of London	Artificial Intelligence for Cultural Heritage Research: the Challenges in UK Copyright Law and Policy
Prof. Steve Benford University of Nottingham	In the Moment of Glitch: Engaging with Misalignments in Ethical Practice

Tuesday, 24 November 2026 - 15:45 - 16:30

Life & Health - Human-Centred and Agentic AI in Society
Pentland West

Dr. Basuraj Bhowmik University of Strathclyde	Autonomous Agentic AI with Policy Adaptation for Physics-informed Spectral Learning in Structural Health Monitoring
Dr. Athina Georgara University of Southampton	Supporting "Stop and Watch" in Elderly Care with Socially Assistive Robots: Insights from a Participatory Design Workshop
Prof. Jennifer Pearson Swansea University	The ORBIT India Dataset: Understanding the Challenges of Collecting a Disability-First AI Dataset in Low-Resource Environments
Dr. Adriana Wilde University of Southampton	Social Educational Robotics and Learning Analytics: A Scoping Review of an Emerging Field
Yve Smiith Northumbria University	Exploring Children's Visions for an AI-enabled Education

Algorithms, Agents & Theory - Causality, Counterfactuals and Explainable AI
Pentland East

Dr. Damian Machlanski The University of Edinburgh	Causal Ordering for Structure Learning from Time Series
Dr. Kurt Butler The University of Edinburgh	Higher-Order Feature Attribution: Bridging Statistics, Explainable AI, and Topological Signal Processing
Dr. Sander Beckers University College London	Large Language Models as Nondeterministic Causal Models
Dr. Tom Yaacov King's College London	Explaining Failures of Cyber-Physical Systems with Actual Causality
Dr. Zhihua Liu The University of Edinburgh	Causal-Adapter: Taming Text-to-Image Diffusion for Faithful Counterfactual Generation

Synergistic Human-AI Collaboration - Human-Centred Design, Creativity and AI in Society
South Hall

Dr. Gavin Bailey Swansea University	Street Scenes: Public Appliances for GenAI Video in Informal Settlements
Prof. Helen Kennedy University of Nottingham	Worlding Otherwise: Virtual Production as a Participatory Method for Imagining Safer Digital Futures
Prof. Amel Bennaceur The Open University	The IDEA of Us: An Identity-Aware Architecture for Autonomous Systems
Prof. Simon Robinson Swansea University	Less Redraw, More Explore: Suggestion and Completion for Sketch-to-Image
Dr. Matt Roach Swansea University	The Six Elements of the Design Space

Wednesday, 25 November 2026 - 11:15 - 12:00

Algorithms, Agents & Theory - Probabilistic Inference, Geometry and Dataset Structure
Pentland West

Dr. Michael Gutmann The University of Edinburgh	Fast and Robust Simulation-Based Inference With Optimization Monte Carlo
Ms. Sahel Torkamani The University of Edinburgh	Magnitude Distance: A Geometric Measure of Dataset Similarity
Mr. Xiaoyu Jiang University of Manchester	Transformed Latent Variable Multi-Output Gaussian Processes
Dr. Yuanbang Liang Cardiff University	Geometric Decoupling: Diagnosing the Structural Instability of Latent

Algorithms, Agents & Theory - Reasoning, Collaboration and Robustness in Foundation Models
Pentland East

Prof. Des Higham The University of Edinburgh	Vulnerability Analysis of Transformer-based Optical Character Recognition to Adversarial Attacks
Dr. Catherine Higham Univeristy of Glasgow	A Diffusion Prior for Active Inference
Ms. Sania Waheed University of Southampton	VLM-Guided Visual Place Recognition for Planet-Scale Geo-Localization
Dr. Xingwei Tan University of Sheffield	Fundamental Reasoning Paradigms Induce Out-of-Domain Generalization in Language Models

Sustainability & AI
South Hall

Dr. Arshdeep Singh King's College London	Compressing Quaternion Convolutional Neural Networks for Audio Classification
Dr. Mahdis Tourian University of Exeter	Automated Classification of Natural Habitats using Ground-level Imagery
Ms. Anna Pramod University of Leeds	Designing Inclusive and Sustainable Multilingual AI through Small Language Models
Dr. Yue Jin University of Northampton	Achieving Collective Welfare in Multi-agent Reinforcement Learning via Suggestion Sharing

Wednesday, 25 November 2026 - 12:15 - 13:15

Engineering & Manufacturing
Pentland West

Miss. Chang Liu The University of Edinburgh	EEsizer: LLM-Based AI Agent for Sizing of Analog and Mixed Signal Circuit
Miss. Emily Miller University of Southampton	Through the Lens of Doubt: Robust and Efficient Uncertainty Estimation for Visual Place Recognition
Mr. Emmanuel Olowe The University of Edinburgh	Policy-Governed LLM Routing with Intent Matching for Instrument Laboratories
Dr. Qian Zhang Durham University	AI in Smart Buildings and Construction 4.0: Implementation areas and influencing factors in construction organizations
Mr. Shengkai Hu University of Southampton	Pack defender: proactive defense against packet attacks in NoCs using an XGBoost-RNN model

Algorithms, Agents & Theory - Optimisation, Learning Dynamics and Neural Architectures
Pentland East

Mr. Damian Smith University of Southampton	Functional Alignment Can Mislead: Examining Model Stitching
Mr. Denis Zorba The University of Edinburgh	Convergence of an actor critic gradient flow for entropy regularised MDPs in general spaces
Dr. Francesco Tudisco The University of Edinburgh	Stuart-Landau Oscillatory Graph Neural Network
Dr. Kate Wenqi Zhu University of Oxford	Beyond Second-Order: Cubic-Quartic Regularization Methods for Nonconvex Optimization in Machine Learning
Dr. Yue Jin University of Northampton	Partial Action Replacement: Tackling Distribution Shift in Offline MARL

Synergistic Human-AI Collaboration - Trustworthy, Explainable and Multimodal AI Systems
South Hall

Dr. Adam Jenkins King's College London	'It literally feeds on data': Co-designing Privacy Conscious and Trustworthy LLM Dialogues with End Users
Mahmud Elahi Akhter Queen Mary University of London	The Alignment Bottleneck in Decomposition-Based Claim Verification
Prof. Robert Procter University of Warwick	A rapid evidence review of evaluation techniques for large language models in legal use cases: trends, gaps, and recommendations for future research
Ms. Sabrina Henry Heriot-Watt University	Self-Guided Integrated Gradient Method for Attribution
Dr. Tan Viet Tuyen Nguyen University of Southampton	SHAF: Small Language Model Integrated with Motion Modality for Multimodal Interaction

Poster Sessions

Prestonfield Room

Tuesday, 24 November 2026, 13:00 - 14:30 - Lunch & Poster Session 1

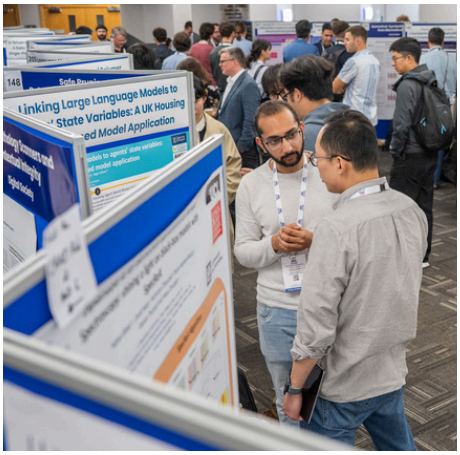
Wednesday, 25 November 2026, 10:15 - 11:15 - Coffee & Poster Session 2

Wednesday, 25 November 2026, 13:15 - 14:15 - Lunch & Poster Session 3

https://ukairs2026.eventsadmin.com/i/PosterSessions













Gala Dinner

& The National Public Engagement Challenge Grand Final

The UKAIRS 2026 Gala dinner will take place on 24th November 2026 from **7pm until midnight** at the National Museum of Scotland.

The dress code is formal, but black tie is not required. Please make sure to bring your badge and lanyard to be granted entrance.

The National Public Engagement Challenge Grand Final will be held during the dinner.

Travel

If travelling by bus directly from Pollock Estate, the Number 2 bus runs from outside the Commonwealth Pool which stops at Forrest Road. It is then a 1-2 minute walk to the Museum. The total journey is around 12-15 minutes.
By taxi it should only take around 10 minutes.

CENTRAL TAXIS 0131 229 2468

Night buses run throughout Edinburgh, local taxi numbers listed on the right, and Uber is also available.

CITY CABS 0131 228 1211

National Museum of Scotland
Chambers Street, Edinburgh, EH1 1JF







Sponsored by Lenovo

AI Hubs National Public Engagement Challenge 2026

Earlier this year, the AI Hub Managers came together to develop a new initiative to showcase the breadth of AI research being conducted across the UK: the AI Hubs National Public Engagement Challenge.

This challenge offered PhD students and Postdoctoral Researchers across the UKRI AI community a chance to present their work in a compelling three-minute video presentation designed for a public audience. The challenge was designed to develop the public engagement skills of those taking part, while at the same time producing a set of videos showcasing the breadth and diversity of UK AI research.

Following an initial expression of interest stage, 19 applicants were selected to go forward to take part in public engagement training and to develop their videos. The submitted videos were first reviewed by a panel of EPSRC colleagues who selected their top five to go through to the Grand Final.

A grand final judging panel, including public engagement specialists, were tasked with deciding the overall winners of the challenge. The final five videos will be presented at the UKAIRS conference dinner, where the winners will be announced.

We wish to thank all the students and researchers who took part in the challenge and helped us to share the broad range of AI research taking place across the UK. Special thanks go to Prof. Keeley Crockett of Manchester Metropolitan University for leading on the public engagement training, and to all those who have given their time as part of the judging process. We also thank Lenovo for sponsoring the prizes.

Dr. Chris Mellor, AIchemy Hub Manager
On behalf of the AI Hub Managers

AI for the Natural & Physical Sciences

This track explores how artificial intelligence is reshaping scientific discovery across the natural and physical sciences, including astronomy, chemistry, physics, earth and planetary science, materials science, and laboratory automation. As these disciplines increasingly generate vast, high-dimensional, and complex datasets, conventional analytical approaches are often no longer sufficient to fully exploit the scientific value embedded within them. The AI for the Natural & Physical Sciences session will highlight the growing convergence between AI and foundational scientific research, fostering interdisciplinary collaboration among AI researchers, domain scientists, engineers, and industry practitioners.

Dr. Xenofon Evangelopoulos
Dr. José Miguel Hernández-Lobato
Dr. Gabriella Pizzuto
Dr. Cavin Tsay

AI for Life & Health

The AI for Life & Health track focuses on the transformative role of artificial intelligence across healthcare, biomedical research, and population health. It brings together interdisciplinary advances spanning AI for independent living, assistive technologies and accessibility, health and disease monitoring across the lifespan, clinical decision support, mental health and wellbeing, and community healthcare. The track also covers emerging areas such as digital health and remote monitoring, drug discovery, genomics, and healthcare robotics, alongside methods for analysing multimodal health data. The track aims to showcase how AI can enhance both scientific discovery and healthcare delivery, from improving diagnostic accuracy and enabling personalised medicine to supporting proactive, data-driven care pathways across diverse populations.

Prof. Miguel Bernabeu Llinares
Dr. Indu Bodala
Prof. Gabriela Czanner
Dr. Javier Escudero
Prof. Ian Simpson
Dr. Shelly Vishwakarma

Algorithms, Agents, & Theory

The Algorithms, Agents, & Theory sessions will focus on the mathematical and algorithmic foundations that underpin modern AI systems, spanning topics including approximate inference, generative models, information theory, probability and statistics for AI, reinforcement learning, game theory and multi-agent systems, and optimisation. Game-theoretic approaches are increasingly vital for designing robust AI systems that operate in competitive or collaborative multi-stakeholder environments, from automated trading to spectrum allocation. The theoretical advances that ultimately determine the capability, reliability, and scalability of every AI product and service deployed in the real world. This track offers a unique opportunity to engage with the UK's leading minds in foundational AI research, identify collaboration and recruitment opportunities, and help steer the fundamental science that will define the competitive landscape of AI-enabled industries for years to come.

Dr. Mauricio Alvarez Lopez
Prof. David Barber
Dr. Yali Du
Prof. Paul Fearnhead
Prof. Jeff Giansiracusa
Dr. Sidharth Jaggi

AI for Engineering & Advanced Manufacturing

The AI for Engineering & Advanced Manufacturing session will explore the transformative role of artificial intelligence in reshaping engineering practices and advanced manufacturing systems, enabling a new generation of intelligent, adaptive, and highly efficient industrial processes. Central themes include the integration of AI with digital twins, advanced simulation, and data-driven design, allowing engineers to explore complex design spaces, optimise performance, and significantly reduce development cycles. AI techniques such as machine learning, computer vision, and reinforcement learning are increasingly applied to real-time monitoring, predictive maintenance, and autonomous control of manufacturing operations, ensuring higher precision, improved quality, and reduced downtime.

Prof. Vihar Georgiev
Prof. Ibrahim Habli
Dr. Paul Harvey
Prof. Kai Xu

Sustainability & AI

This track focuses on the growing role of artificial intelligence in addressing sustainability challenges across environmental, economic, and social systems. As pressures on climate, resources, and ecosystems increase, AI is opening up new ways to analyse complex data, improve efficiency, and support more informed and timely decision-making. At the same time, the environmental impact of AI itself (including energy use, material demands, and lifecycle effects) needs careful consideration as these technologies continue to scale. We invite contributions that explore both the use of AI in supporting sustainability goals and the sustainability of AI technologies in practice.

Prof. Margaret Graham
Dr. Loïc Lannelongue
Dr. Oisin Mac Aodha
Mrs Sydnee O'Brien
Prof. Simon Parsons
Dr. Sohan Seth

Synergistic Human-AI Collaboration

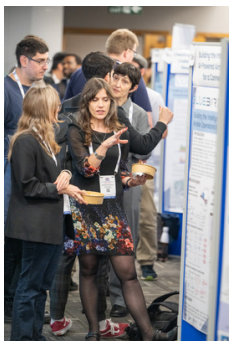
The Synergistic Human-AI Collaboration track explores the transformative potential of synergistic human–AI collaboration across research, practice, and organisational contexts. As AI becomes increasingly embedded in everyday decision-making and workflows, understanding how humans and intelligent systems can effectively work together is critical. This theme brings together interdisciplinary perspectives on designing, deploying, and governing AI in ways that enhance human capabilities while ensuring responsible and ethical outcomes.

The track also emphasises human-centred and responsible AI, encouraging critical reflection on ethics, accountability, inclusivity, and societal impact. Topics may include transparency, fairness, and governance frameworks, as well as practical approaches to embedding ethical principles into system design and implementation.

Dr. Ruba Abu-Salma
Asst. Prof. Nadin Kokciyan
Dr. Matt Roach
Prof. John Vines

UKAIRS 2025





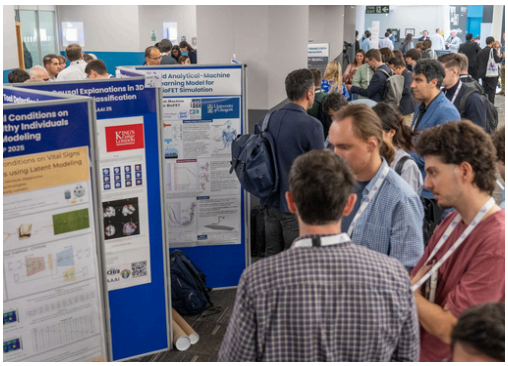














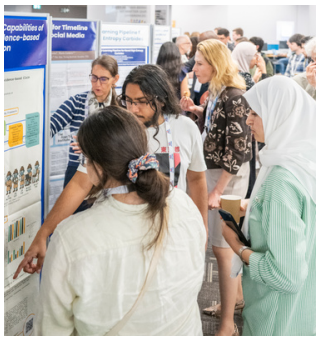












@Responsible Ai UK/ UKAIRS2025

Keynote Speakers



Professor Sir Bashir M. Al-Hashimi CBE FREng FRS
Senior Vice President (Research & Special Initiatives)
King's College London
ARM Professor of Computer Engineering

The Future of Scientific Research: Intentionally Designed Human–AI Collaboration — A Personal Perspective

Sir Bashir M. Al-Hashimi is a distinguished Professor of Engineering, academic leader and entrepreneur. He is currently Senior Vice President for Research and Special Initiatives at King's College London, holds the Arm Professorship of Computer Engineering (since 2007) and is Co-Director of the King's Institute for Artificial Intelligence. His work into hardware–software co-design and energy-efficient computing has shaped modern digital technologies, with innovations used in billions of smartphones worldwide.

He was knighted by HM King Charles III in 2025 for exceptional leadership in Engineering and Education and was appointed Commander of the Order of the British Empire (CBE) by HM Queen Elizabeth II in 2018 for his contributions to research and innovation. Elected Fellow of the Royal Society (FRS), the Royal Academy of Engineering (FREng), the European Academy of Sciences and Arts and the Academia Europaea, Sir Bashir is a highly cited researcher with 400 publications, eight books and 52 supervised PhDs. His honours include the IET Faraday Medal (2020) and the IEEE–HKN Asad M. Madni Outstanding Technical Achievement and Excellence Award (2025). In November 2025, Sir Bashir launched at the House of Lords the final report and recommendations of the UK Future Engineering Skills national project (Engineers 2030) to help shape the future of UK engineering education and skills, which he led on behalf of the Royal Academy of Engineering. He chairs the Academy's International Committee, representing the UK engineering profession amongst other national engineering academies. Previously, he has served as the Executive Dean of three Engineering and Physical Sciences faculties (2014-2020) at both University of Southampton and King's College London.

He remains committed more widely to advancing skills, higher education and the responsible use of Artificial Intelligence in research and learning, contributing to national and international debates on the future of scientific discovery and the role of AI.



Vivek Natarajan
Research Lead
Google DeepMind

Vivek is a Research Scientist at Google DeepMind leading research at the intersection of AI, science and medicine. He is the lead researcher behind Med-PaLM (Nature, 2023) and Med-PaLM 2 (Nature Medicine, 2025), the first AI systems to obtain passing and expert level scores on US Medical License exam questions, respectively.

Vivek also co-leads Project AMIE, a research program aiming to build and democratize medical superintelligence. Over the past year, AMIE has shown promising potential in controlled settings, including primary care, specialty care, and complex diagnostic challenges, as both a standalone (Nature, 2025) and assistive tool for clinicians (Nature 2025) and culminating in a landmark real world trial published in the Lancet. Finally, Vivek recently co-led the development of the Co-Scientist (Nature 2026) - a virtual AI collaborator designed to augment scientists, help uncover new original knowledge and accelerate the clock speed of scientific discoveries.

Prior to Google, Vivek worked on multimodal assistant systems at Facebook AI Research. He is also part of the faculty for executive education at Harvard T.H. Chan School of Public Health in a part-time capacity.

This talk introduces general-purpose AI systems from Google DeepMind designed to accelerate scientific discovery and democratize medical expertise.

First, the Co-Scientist (Nature 2026), a multi-agent Gemini-based system, assists researchers by systematically generating and refining novel hypotheses for complex scientific challenges. This approach has yielded promising, lab-validated results, including identifying drugs for repurposing against acute myeloid leukemia, discovering new therapeutic targets for liver fibrosis (Advanced Science), and recapitulating a novel gene transfer mechanism for bacterial resistance (Cell). While early, the co-scientist represents a promising step toward a true collaborative AI partner for scientist.

Secondly, the AI co-clinician, aims to give doctors superpowers and make medical expertise universally accessible. In simulated settings, the AI outperformed primary care physicians across multiple clinical evaluation axes (Nature) and is showing promise as an assistive tool in ongoing real-world validations (Nature).

Together, these initiatives demonstrate AI's potential to transform scientific research and care delivery.

AI & Entrepreneurship



Chaired by Emma Loedel
Senior Enterprise Manager - Scotland
Royal Academy of Engineering Enterprise Hub

Emma is Senior Enterprise Manager at the Royal Academy of Engineering, supporting founders to build and scale innovative ventures. Originally trained as a Biomedical Engineer, her entrepreneurial journey began while working with a prosthetics clinic in Colombia. Drawing on experience across startups, scaleups, and ecosystem support organisations in Scotland, she helps ambitious founders navigate the journey from idea to impact.



Ben Clark
Director
Future Worlds

Ben helps the next generation of startup founders change the world with their ideas as Director of Future Worlds, the university startup accelerator. He is a serial startup leader across bootstrapped, angel and VC funded startups in the UK, US and Africa leading to 2x successful exits and 2x profitable companies. He is also Associate Dean for Knowledge Exchange and Enterprise within the Faculty of Engineering and Physical Sciences, University of Southampton



Emre Kazim
Co-Founder
Holistic AI

Emre is the co-founder and co-CEO of Holistic AI, creators of the industry-leading AI Governance Platform that empowers enterprises to adopt and scale AI with confidence. He has a tenured background in AI ethics and governance, publishing peer-reviewed articles and working with state and industry leaders. Emre is also involved with Forbes, NIST and OECD, and holds an MSci in Chemistry, MA, and Ph.D. in Philosophy from UCL and King's College London.



Lizzie Withington
Director of Venture Creation
Edinburgh Innovations

Lizzie Withington is Director of Venture Creation at Edinburgh Innovations, bringing entrepreneurial, academic and corporate experience to helping research become impactful ventures. A founder, educator and innovation leader, she is passionate about fostering entrepreneurship and building the next generation of high-growth spinouts and start-ups.

UK AI Research Labs Panel



Chaired by Lisa Coles

Deputy Director for AI , UK Research & Innovation Engineering and Physical Sciences Research Council

Lisa is Deputy Director for AI and Data at EPSRC, UK Research and Innovation (UKRI), where she leads strategic programmes and partnerships that support the UK's engineering and physical sciences research landscape. She has previously held roles across the council including Head of AI and Robotics and Joint Head of Circular Economy. Before joining EPSRC Lisa did a PhD in Engineering at the University of Bath.

Panellists:



Prof. David Barber

Science of Fundamental AI Research (SOFAIR) Lab

David is Professor of Machine Learning at Univesity College London and Director of the Science of Fundamental AI Research Lab (SOFAIR) that aims to create new Frontier Model capabilities. He has BA in Mathematics from Cambridge University and a PhD in theoretical physics from Edinburgh University.



Prof. Anisoara Calinescu

British Open-ended Learning and Discovery (BOLD) Lab

Ani Calinescu is Associate Professor of Computer Science at the University of Oxford, and the BOLD Co-Director for Training Environments, also driving BOLD's agent-training infrastructure and simulation platforms. She is also a Co-Investigator on the UKRI Turing Award Fellowship on Robust Large-Scale Agent-Based Modelling. Her research is problem-driven and highly interdisciplinary, and has been extensively funded by UKRI and JP Morgan AI Research Fellowships.

Community Panel



Chaired by Dawn Greenberg

Head of AI and Digital – Arts and Humanities Research Council UKRI

Dawn is head of the AI and Digital team at the Arts and Humanities Research Council, part of UKRI. The AI&D team connect and convene AHRC's AI and digital research, lead AHRC's strategic approach to responsible AI, while championing arts and humanities contributions to AI and digital research within UKRI and beyond.

Panellists:



Dr. Christopher Burr

Principal Research Scientist and Theme Lead for Trustworthy and Assured AI

Chris is a Principal Research Scientist at the Alan Turing Institute, where he leads the institute's Trustworthy and Assured AI theme. His work focuses on the assurance of AI systems — exploring the evidence, methods, and tools that let teams and organisations demonstrate that an AI system is safe, secure, explainable, fair, and fit for the decisions it informs.



Dr. Natasha McCarthy

Associate Director for Policy at the Royal Academy of Engineering

Natasha leads the National Engineering Policy Centre, which applies engineering expertise from across the UK's professional engineering organisations to policy challenges of national and global importance.



Prof. David Leslie

Professor of Ethics, Technology and Society, Queen Mary University of London

David's research focuses are currenlty on digital ethics, algorithmic accountability, explainability, and the social and ethical impacts of machine learning and data-driven innovations.



Dr. Nayha Sethi

Senior Lecturer at the Usher Institute, University of Edinburgh

Nayha's background is in law and ethics and her research focusses on developing responsible approaches to the regulation of technologies informed by stakeholder perspectives. She is a co-I on the AHRC funded BRAID project where she leads on community.



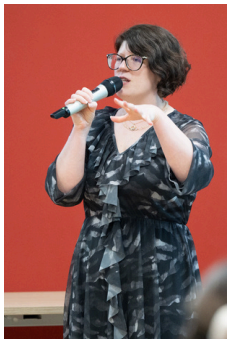
Octavia Field Reid

Associate Director (Public Participation & Research Practice), Ada Lovelace Institute

Leading Ada's Public Participation Research and Research Practice teams, Octavia directs and co-creates all Ada's quantitative and qualitative research, to ensure that the voices of people are heard in processes and decision-making across policy, industry and public services.

UKAIRS 2025 - Early Careers Researcher Day














@Responsible Ai UK/ UKAIRS2025

AI Hubs

AIchemy is a UK hub transforming the chemistry–AI interface through world leading research and real-world impact. It fosters collaboration between chemists and AI researchers, delivers tailored training, tools and datasets, and bridges academia and industry. Through events, funding, and outreach, it accelerates discovery, supports skills development, and enables adoption of AI in experimental and computational chemistry across diverse sectors.

The APRIL AI Hub is the UK national centre at the forefront of integrating Artificial Intelligence (AI) into the vital semiconductor and electronics industries. We develop purpose-built AI tools that optimise design cycles, reduce costs, and accelerate time-to-market. As a collaborative ecosystem, we bridge industry, academia, and policy makers to turn breakthrough research into production-ready solutions.

The AI for Collective Intelligence (AI4CI) Hub is a UKRI National AI Research Hub uniting universities across all four UK nations with partners from academia, government, charities and industry. We pioneer interdisciplinary research to develop AI for collective intelligence at national scale, addressing key societal challenges while building research capacity, capability and community across the UK.

The CHAI (Causality in Healthcare AI) Hub is the UK national network leading the way in integrating causal Artificial Intelligence (AI) into healthcare systems. We develop purpose-built AI tools that improve diagnostic accuracy, optimise treatment pathways, and enhance patient outcomes. As a collaborative ecosystem, we bridge healthcare providers, academics, and policymakers to turn breakthrough research into reliable, production-ready clinical solutions.

ERLANGEN AI HUB
MATHEMATICAL FOUNDATIONS OF INTELLIGENCE

The Erlangen AI Hub uses powerful tools from mathematical and algorithmic fields, including geometry, topology, and category theory, to deepen our understanding of AI systems and advance the development of safer, more reliable next-generation AI. Inspired by Felix Klein's Erlangen Programme, which formalised geometry through the notions of symmetry and invariance expressed through group theory, we pursue foundational approaches to modern AI research.

gen ai
The AI Hub in Generative Models

The AI Hub in Generative Models brings together generative AI experts, from industry and academia, to collaborate on impactful projects and enterprises in a way no single organisation could on its own. Our aim is to make generative models more customisable, reliable and trustworthy. We will help to realise the benefits of these technologies for society, science and the economy.

informedAI

INFORMED-AI Hub bases its research around Information Theory: the mathematical framework that aims to understand the fundamental limits of information transmission and transformation. The Hub develops principles for learning across connected networks of diverse agents, even with limited communication. The research focuses on privacy, security, resilience, and scalability, helping build trustworthy AI systems for complex, real-world environments.

National Edge AI Hub

The National Edge AI Hub brings together academia, industry and innovators to accelerate the development and deployment of edge artificial intelligence across the UK. By fostering collaboration, supporting cutting-edge research and enabling real-world applications, the Hub drives smarter, faster and more efficient AI solutions that transform sectors, boost productivity and create meaningful economic and societal impact nationwide for future growth.

Prob_AI

Prob AI is an EPSRC funded Hub in the Mathematical and Computational Foundations of AI. Probabilistic AI involves embedding probabilistic models, probabilistic reasoning, and measures of uncertainty within AI methods. The Prob_AI Hub brings together researchers in Applied Mathematics, Probability, and Statistics to tackle challenges in probabilistic AI. Many fundamental problems in AI could benefit from expertise in these disciplines.

UKRI Centres for Doctoral Training

UKAIRS is proud to host some of the AI Centres for Doctoral Training. You can learn more about them here: https://www.ukri.org/who-we-are/our-vision-and-strategy/tomorrows-technologies/how-we-work-in-ai/ukri-artificial-intelligence-centres-for-doctoral-training/ (QR code bottom left.)

AI4Bi
UKRI AI Centre for Doctoral Training in Biomedical Innovation

UKRI AI CDT in Dependable and Deployable AI for Robotics (CDT-D2AIR)

EDINBURGH CENTRE FOR ROBOTICS Innovation Ready | HERIOT WATT UNIVERSITY | THE UNIVERSITY of EDINBURGH

CCAI
UKRI AI CENTRE FOR DOCTORAL TRAINING IN CITIZEN-CENTRED AI

Designing Responsible Natural Language Processing

INTERACTIVEAI
Centre for Doctoral Training

UKRI
AI IN DECISION MAKING FOR COMPLEX SYSTEMS
CENTRE FOR DOCTORAL TRAINING

SAINTS
UKRI AI Centre for Doctoral Training in Safe AI Systems

HiHealth
UKRI CDT in AI for Healthcare • UKRI AI CDT in Digital Health

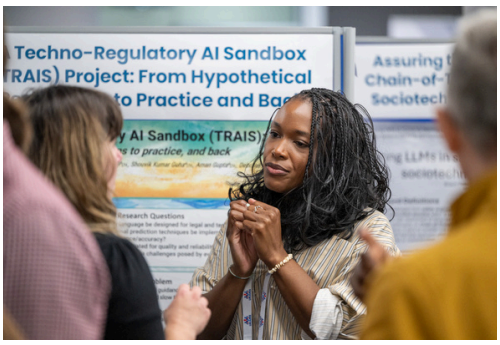
PrO·AI
Centre for Doctoral Training in Practice-Oriented Artificial Intelligence

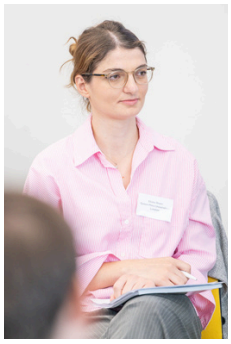
UKRI AI Centre for Doctoral Training in AI for Sustainability

MLSYSTEMS
EPSRC Centre for Doctoral Training in Machine Learning Systems

UKAIRS 2025





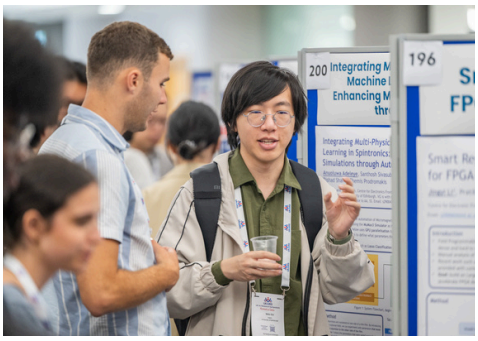














@Responsible Ai UK/ UKAIRS2025

Responsible AI UK (RAI UK) is the £33m UKRI-funded national programme building the UK's capability in responsible artificial intelligence. Since 2023 we have brought together researchers from over 30 universities and more than 150 partner organisations across the four nations, funding interdisciplinary research that addresses the country's hardest AI challenges in healthcare, national security, and social justice, while translating it into evidence for policymakers, regulators, and industry.

Convening the community is central to that mission. RAI UK worked with the UKRI AI Hubs to found UKAIRS in 2025, hosting the first symposium in Newcastle, where around 380 researchers from every discipline and career stage came together to share work and find collaborators. The response confirmed what the community had been missing: a single national gathering where UK AI research meets across its boundaries.

We are delighted to have handed the symposium to the APRIL AI Hub for UKAIRS 2026, and we continue to support the event as part of the steering committee. Our congratulations to the Edinburgh team, and our thanks to everyone who has helped UKAIRS become a fixture of the UK AI research calendar.

Aled Lloyd Owen (Chair)
Gopal Ramchurn (Deputy Chair)
UKAIRS Steering Committee





Steering Committee

Aled Lloyd Owen (Chair)

Gopal Ramchurn (Deputy Chair)

Themis Prodromakis

Subramanian Ramamoorthy

Christina Triantafillou

Elizabeth Bent

Lisa Coles

Allison Eberz

Seth Bullock

Andy Cooper

Kim Jelfs

Chris Mellor

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University of Southampton



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Dr. Shelly Vishwakarma - University of Southampton
Prof. Kai Xu - King's College London



Acknowledgements

Building on the success from UKAIRS 2025, the APRIL AI Hub and the Generative AI Lab are proud to host UKAIRS 2026 at the University of Edinburgh. Last year's Festival of Ideas was a fantastic gathering of minds which created myriad opportunities for connection and collaboration for all in attendance. We aim to continue bringing together Postgraduate Researchers, Early Career Researchers, Academics, and other experts across multiple disciplines to share knowledge and inspire the next generation of AI researchers.

UKAIRS could not happen without the AI Hubs and CDTs' funders, the UK Research & Innovation's Engineering and Physical Sciences Reseach Council. A special thank you to Lisa Coles and Samantha Francis for participating in our programme.

We would like to offer thanks to the amazing team at Responsible Ai UK for their handover, and the generous support they offered to make this symposium happen. We would also like to thank the various committee members (members listed on pages 30 - 32) and our many hardworking reviewers for all their essential contributions to this event.

Last but not least, thank you all for attending UKAIRS 2026, we have loved hosting you!

We are delighted to hand over to Swansea University for UKAIRS 2027, led by Dr. Matt Roach.

APRIL AI Hub for Productive Research & Innovation in Electronics

THE UNIVERSITY of EDINBURGH Generative AI Laboratory

UKRI Engineering and Physical Sciences Research Council

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