



# GLASGOW COMPUTING SCIENCE INNOVATION LAB

world changing innovation in computing science

## Foreword: Jill Dykes, GLAC SIL Director

These last few months, we have come to know some of our member companies much better. Working closely with the **Nokia Bell Labs** team on their STEM **scholarship initiative**, and learning more about research culture from their (and our) Professor Fahim Kawsar has been a pleasure.

We've been exploring research priorities with our **Thales** colleagues which has led us to our first **company-focused sandpit event**. This will take place over the winter, bringing Thales innovators together with Glasgow Computing Science researchers to explore research challenges, and devise joint projects.

A recurring theme across our events and conversations with partners has been research skills and culture and the role they play in innovation. We've explored how to build and create a culture of innovation. One takeaway from these discussions is that research skills and training, as well as a **clear career pathway of incentives and rewards for research and innovation staff, is crucial to success in this area**.

Our events have also drawn attention to the challenges that research-led, innovative companies and universities are currently facing in attracting students to undertake PhDs and pursue a research career. Some companies are required to recruit within a narrow bandwidth of nationalities due to the nature of their business. Others are focused on achieving diversity within their workforce. Universities are multi-cultural and diverse organisations by nature, with a strong focus on international recruitment and education. Yet our graduates so often return to their home countries, taking their skills, knowledge, and appetite for innovation with them.

With market conditions so favourable for graduates with a bachelors or masters degree to enter the workforce and attract generous salaries and benefits, it can be challenging for universities and innovation-driven companies to draw graduates into years of further study and research, and consider a career around the lower TRL levels of innovation. Conversations about how to overcome some of these challenges will feature in GLAC SIL's plans for the coming year.

One initiative that may help with this challenge is the new **Partnership PhD** programme launched by the university earlier this year.



There's lots going on, as always, with **grants awarded** in exciting new areas of research, **research conferences** successfully hosted and coming up in some of our favourite domains, along with a lively programme of **research seminars** open to our partners. Check out our **events page**.

**We look forward to seeing you and your colleagues at our festive gathering on 3rd December.**



## Partnership PhDs—Building Skills for Innovation in Industry

The University of Glasgow has recently launched a new initiative which will provide PhDs in partnership with employers; enabling existing skilled and valued employees the opportunity to conduct research with and for their employer that leads to a PhD qualification, all while maintaining their existing role and salary.

### The initiative offers companies:

- an opportunity to retain, reward, and support staff who are pursuing a career in research and innovation,
- world-class training and support with research skills, methods, and communication for staff engaged in innovation,
- a chance to develop and embed highly specialist skills and knowledge and technologies in their business through applied research,
- meaningful collaboration with the University academic experts who supervise and support the PhD student
- a greater range of choice in models of collaboration with the university,
- a model that enables companies to retain ownership of IP generated by their employees during the studentship.



The traditional route to a PhD is for an individual to spend 3-4 years in full-time (or 7-8 years part-time) study. Students are typically supported by highly competitive bursaries and grants, or they pay fees and financially support themselves.

The economic pull of the workplace along with limited funding options for studentships can make the PhD route less appealing. **Partnership PhDs allow the student / employee to retain their paid position and earnings.** The employer pays the university's annual tuition fees for postdoctoral research at the UK (home) rate, regardless of the location of the business and the student in the world. Rather than immersing themselves fully in the University environment, Partnership PhD students continue to work in their current business location, with visits to our campus required only once or twice per year. **This allows businesses based in any location, and their staff, an opportunity to participate in this programme.**

Of course, all this requires agreement between the employee and the business over time spent on research versus other duties, the nature of the research to be undertaken, and the payment of fees. It's crucial too that agreement is reached with the University and a lead academic supervisor to ensure the proposed research fits within our areas of expertise, and is likely to result in the award of a PhD.

**The University is now recruiting companies keen to offer this form of training and career development to their employees.** Individual employee applicants are welcome to get in touch too for help with finding an appropriate academic supervisor, and support through the application process.

For further details please see our [website](#), or for an exploratory discussion, please contact:

**Jill Dykes**

**Director, Glasgow Computing Science Innovation Lab**

**Email: [jill.dykes@glasgow.ac.uk](mailto:jill.dykes@glasgow.ac.uk)**

## Nokia Bell Labs Scholarships

The School of Computing Science is delighted to be included in a global initiative within Nokia Bell Labs to support under-represented groups pursuing careers in STEM subjects. Reflecting their previous investment in studentships and research, Nokia Bell Labs have generously donated £32,000 to the School, currently intended to be offered to 4 new PhD applicants.

With mainstream sources of funding for postgraduate research degrees in decline, the cost of doing a PhD can be prohibitive for many. These scholarships are aimed at making this level of study within our School of Computing Science more achievable to those that our data shows are less likely to access PhDs in our discipline.

The goal of creating the Bell Labs Scholarship program is to establish financial support for women and underrepresented minorities to support their postgraduate studies (Master's/PhD). The company aims to effect fundamental change by increasing diversity in key STEM disciplines of relevance to Bell Labs, such as AI/ML, computer science, engineering, networking and communications, and identify top talent early and attract them to Bell Labs.



The Bell Labs Scholarship program is being implemented across the main Bell Labs locations. In all, they have established 33 scholarships in 7 locations this year (US (9), Finland (4), France, UK (4), Belgium (4), Germany (4), Hungary (4)) totalling more than 200k Euros in grants.

President of Bell Labs Solution Research, Thierry Klein, says, "Nokia Bell Labs is excited to work with Glasgow University to harness a diverse set of perspectives and ideas and develop technologies that will transform the way we live, work, and communicate with each other and in the future with devices and machines. This partnership is a great opportunity to support the next-generation of researchers and innovators".

The School's Research Student Committee will award the scholarships in accordance with Nokia Bell Labs' criteria.

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## Glasgow Hosts ACII 2024

The 12th International Conference on Affective Computing & Intelligent Interaction (ACII 2024) was held in Glasgow from 15-18 September, chaired by our Dr Marwa Mahmoud. ACII is the premier international forum for research on affective and multimodal human-machine interaction and systems. It is organized by the Association for the Advancement of Affective Computing ([AAAC](#), formerly known as “Humaine”).

Following the success of previous editions at the University of Cambridge and MIT Media Lab, ACII 2024 was a great success attracting over 220 attendees from more than 25 countries from academia and industry with participating industry delegates from Sony, Apple, Microsoft.

This year’s conference stood out for its strong focus on Equity, Diversity, and Inclusion (EDI). For the first time, ACII had an all-female General Chair team, with a remarkable gender balance in the rest of the organizing committee as well. The conference introduced its first EDI Chair, ensuring inclusivity throughout the program.

Many members of the School of Computing Science contributed significantly to the conference in various organizing roles: Alessandro Vinciarelli as program chair, Tanaya Guha as workshop chair, Mathieu Chollet as Demo chair, Mary Ellen Foster and Shaun Macdonald as Local chairs. The conference was sponsored by Apple and the Social AI Centre for Doctoral Training at University of Glasgow.



**Program Highlights:** we had an outstanding program this year, including 7 workshops, 3 tutorials, and the Doctoral Consortium. Special thanks to our amazing keynote speakers: Gabriel Skantze, Antonio Camurri, and Nadia Berthouze and Virginia Dignum, whose keynote "Beyond the AI Hype: Balancing Innovation and Social Responsibility" is shared on the conference website ACII 2024 website. The panel on the EU AI Act & Affective Computing was another highlight and truly inspiring. We will also share the panel slides presented by Deniz Iren on the website soon as well.

Finally, thank you to everyone who contributed to making ACII2024 a success. Last but not least, a big shoutout to everyone who joined in the ceilidh dancing during banquet night — the energy and vibes were amazing!

More details about the event can be found at [ACII 2024 website](#). X: [@acii\\_conf](#)

# Making a Difference—World Leading Research at Glasgow

## Glasgow Researchers Key to New Hub for Digital Twinning to Decarbonise Transport

A new national hub focused on rapidly decarbonising transport in the UK, including road, rail, air and maritime, has secured £46 million from the UK government and 67 partners.

The TransiT Digital Twinning for Transport Decarbonisation Hub, a collaboration of eight universities and 67 partners jointly led by Prof David Flynn of University of Glasgow and Prof Philip Greening of Heriot-Watt University, has secured £20 million in funding from UK Research and Innovation EPSRC, the main funding body for engineering and physical sciences research in the UK.

Another £26 million in support is being provided by stakeholders across the digital, energy and transport sectors, including transport operators, regulators, vehicle makers, technology companies and energy suppliers. The collaboration is thought to be one of the largest transport consortiums of its kind.

TransiT will identify the lowest cost, least risky and most energy-efficient way to decarbonise transport by developing a digital twinning approach.

The School of Computing Science plays a significant role in TransiT, and has 5 Co-Investigators on the project: Blair Archibald, Muffy Calder, Paul Harvey, Dimitrios Pezaros, and Michele Sevegnani.

All members will contribute to a set of challenge-led demonstrator projects, grounded in real world applications such as rail-to-road logistics that show the new twinning approaches are feasible. Expertise from the school will also develop specific packages of work. Paul Harvey is leading a work package on knowledge graphs and ontologies that will shape data governance and database models across transport twins; Dimitrios Pezaros is considering the Cyber-Physical Security/Resilience/Connectivity challenges that a new digital twinning approach to transport can bring; and Blair Archibald, Muffy Calder, and Michele Sevegnani are asking fundamental questions about the design of twins: how can we verify/validate their operation, how should twins interoperate, how should twins be written and can twins automatically adapt to changing requirements?

By the end of the project, the digital twinning approach will be put into practice, with the challenge-led demonstrators deployed, and frameworks in place to allow others to provide their own decarbonising digital twinning. While grounded in transport, we expect the fundamental research to extend to other cyber-physical systems such as energy networks. There are opportunities to work with TransiT, including scope for hosting PhD candidates within the group. Please get in touch to find out more: <https://transit.ac.uk/>



# School Brings 45th IEEE International Conference to Glasgow

Congratulations to **Prof Iadh Ounis** and **Dr Christos Anagnostopoulos**, School of Computing Science, who beat 10 other candidate cities and institutions in their bid to bring the **45<sup>th</sup> IEEE International Conference on Distributed Computing Systems (ICDCS) 2025** to Glasgow. Professor Ounis and Dr Anagnostopoulos are serving as co-chairs of this prestigious event, with programme and sponsorship planning well underway.

The conference will be held in Radisson Blu Glasgow from **20-23 July 2025** and expects to attract around 400 delegates from around the world. First launched in 1979, IEEE ICDCS is the oldest, as well as the leading, and premier international conference focusing on distributed computing systems. **It provides a research and social venue for researchers, academics, and industry professionals to present and discuss the latest research in the field.**

As the world is increasingly moving towards the adoption and integration of AI across various sectors, it is important to host conferences in the field. These events play a significant role in advancing the field and fostering collaboration among researchers, practitioners, and industry professionals. This will also serve as a platform to highlight the strength and vision of the University of Glasgow and the city of Glasgow.



Prof Iadh Ounis and Dr Christos Anagnostopoulos



## The topics addressed by the conference include:

- Distributed AI/ML
- Distributed Systems for AI/ML
- AI/ML for Distributed Systems
- Distributed LLM Inference
- Federated Learning, LLMs and RAG deployments
- Big Data, Big Models and Systems
- Mobile, Edge and Cloud Computing
- Distributed Data Management
- Distributed Operating Systems and Middleware
- Internet of Things and Cyber-Physical Systems
- Trustworthy AI, Security and Privacy in Distributed AI
- Deployment Mechanisms for Distributed Systems
- Computing Power in AI-oriented Distributed Systems
- Novel Infrastructure and Emerging Applications
- Industry and Interdisciplinary Studies of Distributed Systems and Applications

## INDUSTRY ENGAGEMENT

**GLACSIL and IAB partners** can benefit from and participate in the conference **by attendance, sponsorship, exhibition and presentation**. Notably, IEEE ICDCS 2025 will feature an **Industry Event Track** in conjunction with the conference. This aims to bring together practitioners and researchers in the Distributed Computing Systems and Distributed Artificial Intelligence domain to promote knowledge sharing and innovation across academia and industry. The theme of the IEEE ICDCS 2025 Industry Event track will be: "Where Distributed Computing meets Artificial Intelligence".

<https://icdcs2025.icdcs.org>

# HOLD THE DATE—Upcoming Events

GLACSIL events, and School research seminars are **open to research and innovation staff of member partners**, and by request from other industry friends and colleagues. In person attendance is encouraged to aid discussion and networking. Some events have remote participation options. Please Visit and **subscribe to all upcoming events and seminars** in the School of Computing Science at <https://samoa.dcs.gla.ac.uk>.

Please contact [compsci-innovation@glasgow.ac.uk](mailto:compsci-innovation@glasgow.ac.uk) for further information about finding and joining our events, or to suggest event topics.



## GLACSIL Festive Celebration

**3<sup>rd</sup> December, 3pm – 5pm**

We'll complete the year with a celebration of the working together successfully with our GLACSIL, Industry Advisory Board, and other partners. We'll enjoy some demonstrations and poster presentations from our PhD students over festive drinks and nibbles in the Mazumdar Shaw Advanced Research Centre (ARC). Invitations have gone out to all key industry partner contacts. Colleagues are welcome too.

## SoCS Research Seminars & Events

22nd November, 2pm—3pm

Computing Technologies for Healthcare Theme

Title: [Grounded Radiology Report Generation with Large Multimodal Models](#)

Speaker: [Stephanie Hyland, Microsoft](#)

29th November, 11am –12pm

Computing Technologies for Healthcare Theme

Title: [Collaborative Opportunities with Singapore Institute of Technology](#)

Speaker: [Ng Pai Chet, Singapore Institute of Technology](#)

2nd December, 3pm—4pm

Information Retrieval Group

Title: [TBC](#)

Speaker: [Jianling Wang, Google Deepmind](#)

2nd—4th December

Title: [ACI 2024— The Eleventh International Conference on Animal-Computer Interaction](#)

Speakers: Various

3rd December, 9am—6pm

Low Carbon Computing Theme

Title: [1st International Workshop on Low Carbon Computing](#)

Speaker: Various

9th December, 3pm—4pm

Information Retrieval Group

Title: [TBC](#)

Speaker: Xinghai Hu, Tiktok

16th December, 3pm—4pm

Information Retrieval Group

Title: [TBC](#)

Speaker: [Yougang Lyu, University of Amsterdam](#)

6th January, 3pm—4pm

Information Retrieval Group

Title: [TBC](#)

Speaker: Xiaoyu Zhang, Shandong University

13th January, 3pm—4pm

Information Retrieval Group

Title: [TBC](#)

Speaker: [Francesco L. De Faveri, University of Padua](#)

## How to Join GLACSIL

Glasgow Computing Science Innovation Lab is a hybrid venture that brings together that brings the School's research community together with our committed research-led industry partners.

Further information on benefits, how to join, news and events is available at [www.gla.ac.uk/schools/computing/industry/innovationlab/](http://www.gla.ac.uk/schools/computing/industry/innovationlab/).



## Share Your News with GLACSIL Partners and the School

GLACSIL industrial partners, colleagues, and friends of the School are invited to share their news in the next edition of this newsletter. The deadline for submissions is 14th February, 2025 for publication in March 2025.

News stories for social media distribution can be submitted at any time.

Please email [compsci-innovation@glasgow.ac.uk](mailto:compsci-innovation@glasgow.ac.uk) with approved text, images and links.



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