



Conference & AGM 2021

Welcome

We will be starting at 2:00pm

Please setup and make sure your connection is working



Agenda

- 2:00pm Welcome**
Professor Edmund Robinson, CPHC Chair, Professor of Computer Science, Queen Mary University of London
- 2:0pm State of the Discipline: A Personal View**
Professor Edmund Robinson
- 2:20pm Keynote: The AI Council Roadmap**
Professor Dame Wendy Hall, Regius Professor of Computer Science, University of Southampton
- 2:50pm Panel: What have we learnt from Covid: an Industry and Academic Perspective**
Dr Darren Dancy: Head of Department (Computing and Mathematics), Manchester Metropolitan University

Darren Earnshaw: Technology Director, Barclays Ventures

Katie Gallagher: CEO, Manchester Digital
- 3:40pm CPHC Annual General Meeting**
Accounts & Elections (Chair, Vice Chair, Treasurer, Secretary & Committee Members)
- 3:55pm Summary and Close**

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Please check your Teams connection and mute your microphone

Feel free to put questions and comments in the Teams Chat



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- 2:0pm **State of the Discipline: A Personal View**
Professor Edmund Robinson
- 2:20pm **Keynote: The AI Council Roadmap**
Professor Dame Wendy Hall, Regius Professor of Computer Science, University of Southampton
- 2:50pm **Panel: What have we learnt from Covid: an Industry and Academic Perspective**
Dr Darren Dancy: Head of Department (Computing and Mathematics), Manchester Metropolitan University

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- 3:40pm **CPHC Annual General Meeting**
Accounts & Elections (Chair, Vice Chair, Treasurer, Secretary & Committee Members)
- 3:55pm **Summary and Close**

Welcome

We will be starting in 5 minutes

Last chance to get a coffee

Feel free to put questions and comments in the Teams Chat

Welcome

Professor Edmund Robinson, CPHC Chair, Professor of Computer Science, Queen Mary University of London

State of the Discipline: a personal view

Professor Edmund Robinson, CPHC Chair, Professor of Computer Science, Queen Mary University of London

State of the Discipline: a personal view

Edmund Robinson

Research is (almost) fixed



Research

- REF is in
- UKRI has £9.1bn a year in a 3-year settlement
- We have access to European research programmes again (though not all and not clear which budget the subs are coming from).
- EPSRC provides regular updates to UKCRC and CPHC which we publish



Research

- But any university can recruit staff with a good research record
- And every region needs access to the R&D boost from universities
- And specialized training for their local industries
- There is a huge potential win from exploiting the critical mass in regions (cf collaborations in Manchester and the North East)
- This goes beyond single institutions, but we aren't there yet.

Teaching did not fall apart

Teaching

- The students turned up (they had nowhere else to go)
- Staff put delivered huge amounts of learning on line
- The students seem to be fairly happy and have made progress
- Not all subjects can say the same
- University managements now keen to get people back on campus
 - But nobody else seems to be that enthusiastic
- Things seem to be going back to normal
- But will they ever be the same?

Is our business model broken?

On-line learning

- Universities across the world have just demonstrated their capacity to deliver remote on-line learning
- They are now doing something other than teaching multi-year very expensive degree courses
- The genie is not going back in the bottle



Branding

- While we were locked down we broke the idea of local teaching
- So now we are delivering internationally
- Many other industries are dominated by a few international brands
- Will universities go the same way?

Our business model

- Why sell education in an expensive multi-year package, to be taken at a particular point in your life?
 - PGT (Home) Manchester: 12.5k
 - PGT (Home) Imperial: 16.5k
- Why use old-style resource-intensive teaching methods?
- Why so many lecture theatres?

A government view:

- BEIS (Business, Energy and Industrial Strategy):
 - £9.1 bn to UKRI (including Innovate UK) (2020-21)
- DfE (Department for Education)
 - £37.9 bn to HEFE (Higher and Further Education)(2019-20)
 - Of which £17.6 bn in student loans to 1.3m HE students
 - Compare to £35 bn, basic cost of school system

What do they want?

- BEIS (Business, Energy and Industrial Strategy):
 - Maintain UK strategic position
- DfE (Department for Education)
 - Value for money from spend on student support
 - Levelling up
 - Financial sustainability of system
 - Firm focus on employability
 - Flexible provision

A student view

- Average student loan:
 - 48 k
 - Break even points: income required to stop loan rising, what percentile point this is on the national income scale: an average student loan of 48k will keep increasing unless you earn over 51.3k, top 12% of national earners.

Loan	Interest	Income required	Percentile
30k	1350	42295	20
48k	2160	51295	12
60k	2700	57295	9

A student view: repayment rates

- Repayment rate is 9% after tax for income above threshold
 - Or 15% for both UG and MSc.
- So someone earning 52k would pay on each extra £100 pre-tax:
 - £40 marginal income tax
 - £2 marginal National Insurance
 - £5 (minimum) pension
 - £9 (or £15) student loan repayment
 - Totalling £56 (or £61)
 - More than half of any extra income goes in tax, etc and student loan repayments



Where the pressure might come from:

- Government:
 - universities not really providing a service that meets our needs
 - And it's too expensive
- Students:
 - We are saddled with debt for life
 - How can we buy houses and pay for our pensions as well as pay off these debts?

So where is the UK gov't?

- Flexibility was a core tenet of the Augar Report.
- We will move towards modularisation of higher education in order to provide a truly flexible system that provides more opportunity for upskilling throughout people's careers, as recommended by the Augar Report. We will consult widely about the changes that are needed to enable universities and colleges to provide a modular offer.
- It is vital that education and training undertaken by our students benefits them and the labour market, and the Augar Report was clear on this.

So where is the UK gov't?

- See the recent MSc in Artificial Intelligence and Data Analytics:
 - Focused on employer engagement and employability
 - Strong diversity element
- See also recent bootcamps spec.
- In contrast to UKRI:
 - DfE has a current 1-year financial settlement.
 - UKRI funding comes from “current account” (AME: Annually managed expenditure), but student loans come from “agreed overdraft” (DEL: Department expenditure limit)

Keynote: The AI Council Roadmap

Professor Dame Wendy Hall, Regius Professor of Computer Science, University of Southampton

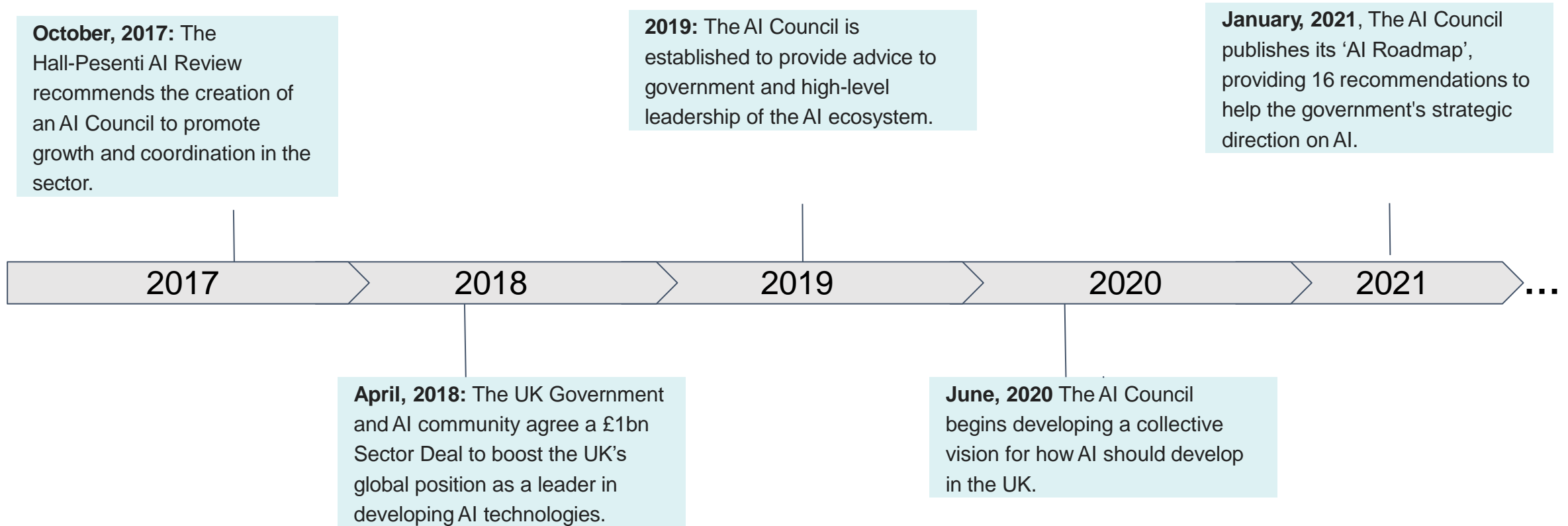
UK AI COUNCIL

AI Roadmap

February 2021

The AI Council is an independent expert committee. It provides advice to the UK Government, as well as high-level leadership of the Artificial Intelligence (AI) ecosystem.

AI Council: A Brief History



AI Council: Background

The AI Council was established in 2019 to provide independent, expert advice to the UK Government and high-level leadership of the Artificial Intelligence (AI) ecosystem.

It works to support the growth of AI in the UK, promote its adoption and use in businesses and society, and encourage experts to focus on priority topics in AI. Its aims are to:

- 1 Provide an open dialogue and exchange of ideas between industry, academia and government.
- 2 Advise the Office for AI and broader government on its current priorities, opportunities and challenges for AI policy.
- 3 Share research and development expertise and horizon scan for new AI technologies, applications and their impact
- 4 Work on public perception of AI, and on raising the profile of the AI and Data Grand Challenge.

AI Council: Membership

The Council includes members from across industry, the public sector and academia and covers a broad range of backgrounds and expertise to contribute to leadership of the AI ecosystem.



AI Council: Background

In January 2021, the AI Council published its 'AI Roadmap', setting out 16 recommendations to help the government develop a **UK National AI Strategy**.

This report has two underlying messages:

- 1 we must “double down” on recent investment the UK has made in AI.
- 2 we must look to the horizon and remain adaptable to disruption, responding to the rapid pace and evolution of science and technology and its applications.



AI Roadmap: Pillars

The AI Roadmap set out suggested directions across the following four pillars:

1

Research,
Development
and Innovation

2

Skills and
Diversity

3

Data,
Infrastructure
and Public
Trust

4

National,
Cross-sector
Adoption

AI Roadmap: Recommendations (1)

Research, Development and Innovation

- 1** **Scale up and make sustainable public sector investment in AI; ensure consistent access to top talent from around the world; and find new ways to bring researchers, disciplines and sectors together.** Build on the commitments in the government's R&D Roadmap and suggestions in the soon to be published UKRI AI review.
- 2** **Cement The Alan Turing Institute as a truly national institute, with a set of regional investments that draw on strengths from across the UK.** Provide assured long term public sector funding that will give the Turing and others the confidence to plan and invest in strategic leadership for the UK in AI research, development and innovation.
- 3** **Ensure moonshots, as described in the R&D Roadmap as challenge-led, high-risk, scalable programmes, are both advancing and leveraging AI.** These could tackle fundamental challenges such as creating “explainable AI”, or important goals in any area where AI can contribute strongly, such as the UK Digital Twin program or developing smart materials for energy storage in the move towards Net Zero carbon emissions

AI Roadmap: Recommendations (2)

Skills and Diversity

- 4** **Scale up and commit to an ongoing 10 year programme of high level AI skillbuilding.** This would include research fellowships, AI-relevant PhDs across disciplines, industry-led Masters and level 7 apprenticeships
- 5** **Make diversity and inclusion a priority.** We suggest benchmarking and forensically tracking levels of diversity to make data-led decisions about where to invest and ensure that underrepresented groups are given equal opportunity and included in all programs
- 6** **Commit to achieving AI and data literacy for everyone.** The public needs to understand the risks and rewards of AI so they can be confident and informed users. An online academy for understanding AI, with trusted materials and initiatives would support teachers, school students and lifelong learning

AI Roadmap: Recommendations (3)

Data, Infrastructure and Public Trust

- 7 Consolidate and accelerate the infrastructure needed to increase access to data for AI.** Invest in the relevant organisations, link general principles to specific applications, and pursue initiatives for pump priming innovation and enabling safe data sharing for valuable uses.
- 8 Lead the development of data governance options and its uses.** The UK should lead in developing appropriate standards to frame the future governance of data.
- 9 Ensure public trust through public scrutiny.** The UK must lead in finding ways to enable public scrutiny of, and input to, automated decision-making and help ensure that the public can trust AI.
- 10 Thoughtfully position the UK with respect to other major AI nations.** Building on its strengths, the UK has a crucial opportunity to become a global lead in good governance, standards and frameworks for AI and enhance bilateral cooperation with key actors.

AI Roadmap: Recommendations (4)

National, Cross-sector Adoption

- 11 Increase buyer confidence and AI capability across all sectors and all sizes of company.** Support investment for local initiatives to enable safe value-creating innovation and improve the data maturity needed for AI innovation.
- 12 Support the UK's AI startup vendor community.** Enable greater access to data, infrastructure, skills, compute, specialist knowledge and funds.
- 13 Enable robust public sector investments in AI,** building capability in the use of data, analytics and AI to ensure intelligent procurement of AI as part of projects for public benefit.
- 14 Use AI to meet the challenges of Net Zero carbon emissions.** Work on access to data, governance, to develop cleaner systems, products and services.
- 15 Use AI to help keep the country safe and secure.** Work with government departments/agencies and defence and security companies to ensure AI is available to assess and respond to modern defence and security threats and opportunities.
- 16 Build on the work of NHSX and others to lead the way in using AI to improve outcomes and create value in healthcare.** The UK's comparative advantage will depend on smart strategies for data sharing, new partnership models with SMEs and skill-building.

Panel: What have we learnt from Covid: an Industry and Academic Perspective

Dr Darren Dancy: Head of Department (Computing and Mathematics), Manchester Metropolitan University

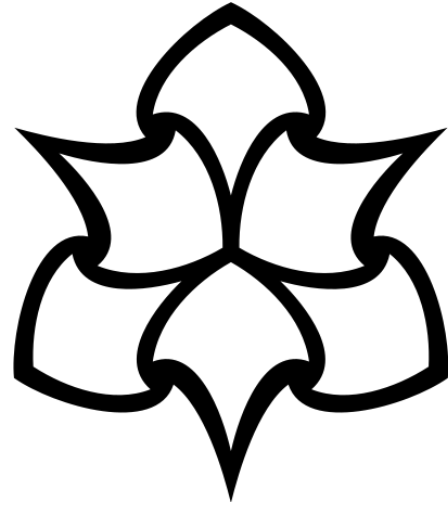
Darren Earnshaw: Technology Director, Barclays Ventures

Katie Gallagher: CEO, Manchester Digital



Darren Earnshaw

Technology Director, Barclays Ventures



**Manchester
Metropolitan
University**

Dr Darren Dancy

Head of Department (Computing and Mathematics), Manchester Metropolitan University



Katie Gallagher

CEO, Manchester Digital

Questions for the Panel

Please raise a hand, or comment in the chat

Annual General Meeting



Agenda

1. APOLOGIES FOR ABSENCE
2. MINUTES OF THE LAST ANNUAL GENERAL MEETING CPHC/AGM/20/08
Approve and digitally sign the minutes of the Annual General Meeting held on Wednesday 22 April 2020
 1. Matters Arising from the Minutes
3. REPORTS
 1. Chair's Report (Edmund Robinson) To follow
 2. Secretary's Report (Atif Waraich) CPHC/AGM21/03
 3. Treasurer's Report (Ray Farmer) CPHC/AGM21/04
 4. Workshop Activity (Committee Members) CPHC/AGM21/05
 5. CPHC Devolved Nations Reports CPHC/AGM21/06
 - Scotland – Carron Shankland
 - Wales – Mark Griffiths
 - Northern Ireland – Liam Maguire
 6. UKCRC Report (Edmund Robinson) To follow
4. APPROVE THE APPOINTMENT OF INDEPENDENT AUDITORS
RSM UK Tax and Accounting Limited
5. ELECTIONS TO COMMITTEE
6. ANY OTHER BUSINESS

COUNCIL OF PROFESSORS AND HEADS OF COMPUTING
c/o BCS, 3 Newbridge Square, Swindon SN1 1BY

Thursday 29 April 2021
Online meeting

CPHC ANNUAL GENERAL MEETING 2021
SECRETARY'S REPORT

1. The current membership of the Council is over 780 members drawn from 106 institutions.
2. The Committee has met on 5 occasions since the last AGM with most of meetings held online due to the covid pandemic. Pertinent items of business are reported elsewhere on the agenda.
3. The Council has charitable status for England, Wales and Scotland. Due to covid, the Charity Commission (for England and Wales) and OSCR (Scottish Charity Regulator) have granted extensions for the submission of accounts.
4. Administrative support to the Council's affairs continues to be ably supplied by the BCS Secretariat.
5. Many thanks to the BCS Secretariat for organising this year's AGM as a virtual event.

Atif Waraich
23 April 2021

COUNCIL OF PROFESSORS AND HEADS OF COMPUTING
c/o BCS, 3 Newbridge Square, Swindon SN1 1BY

Thursday 29 April 2021
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CPHC ANNUAL GENERAL MEETING 2021
Treasurers REPORT

Summary: CPHC finances remain healthy. Unfortunately, due to the pandemic and the limitations regarding travel and office access it has not been possible to have the 19/20 accounts fully audited and approved. As lockdown eases and colleagues will be able to access office files the accounts will be fully audited and made available to the membership. The details below are taken from draft accounts.

More detail:

Our annual income consists of about:

- 49.2k subscriptions from departments

Our annual expenditure is approximately:

- 31.5k on operational support from the BCS (covering secretarial and financial support, provision of meeting rooms, etc)
- 5.6k memberships of other bodies
- 3.2k on committee-sponsored activity (mainly travel, but also website and survey tools)
- A variable amount on a number of workshops but significantly reduced by impact of the pandemic so only 1.3k

Ray Farmer
25/04/2021



COUNCIL OF PROFESSORS AND HEADS OF COMPUTING
c/o BCS, 3 Newbridge Square, Swindon SN1 1BY

Thursday 29 April 2021
Online meeting

CPHC ANNUAL GENERAL MEETING 2021
Workshop Activity

CPHC/AGM21/05
Agenda Item 3.4

Chair in 10 Years report

The Chair in 10 years event was originally scheduled as a physical event in Cardiff in June 2020. This was cancelled and it was decided to run a virtual event in September. This event proved popular and other events were also scheduled in October and November (with the November event only for BAME staff). The selection process was originally an Eventbrite link that sold out quickly (effectively limiting access on a first come first served basis and resulted in staff from individual institutions dominating the delegate list). Following events were allocated based on nominations (and nomination priority) from Heads. The aim of the selection process was to ensure a mix of institutions at the event.

9th September 2020 Event

Support for the event was provided by Prof Simon Thompson (Kent) and Prof Daniel Dresner (Manchester). There were 15 delegates from KCL (3), Newcastle (2), Northumbria (3), Southampton (2), Northampton, Lancaster, Aberdeen, Dundee and Warwick. Feedback indicated a desire to have an informal networking opportunity.

14th October 2020 Event

Support for the event was provided by Prof Simon Thompson (Kent), Prof Tim Norman (Southampton), Prof Robert Stevens (Manchester) and Prof Neil Ghani (Strathclyde). There were 12 delegates from Glasgow, Lancaster (2), Southampton, Aberdeen, Leicester, Cardiff, Liverpool, St Andrews (2), Open University and Portsmouth.

11th November 2020 Event

Support for the event was provided by Prof Neil Ghani (Strathclyde). There were 8 delegates from Lancaster, Cardiff, Huddersfield, Warwick, De Montfort (2), Manchester and Derby.

In preparation for the event delegates were asked to send their institution's promotion criteria, a short bio and a one-page grant proposal. The broad schedule for the event was:

1. Introduction
2. review institutional promotion criteria
3. Individual promotion timelines and milestones
4. EPSRC talk and Q&A
5. Mock panel

After the first event we received feedback regarding a need to have an informal networking opportunity and in the latter two events this was added as an informal gathering during lunch.

Each event was run using Zoom and used Zoom breakout rooms. It is felt that running this event virtually in the future will enable it to be more accessible. The proposal is to run two events in 2021 (in late June and early September).

Nick Savage, April 2021

Engage Seminar Series report

This past fall (2020) CPHC co-hosted with UKCRC and with partners EPSRC and BCS a 6 week seminar series on Building the Intake of Women into UK Computer Science Undergraduate programs to explore how to redress the current dismal 15% average enrolment of women into CS programs in the UK.

The series included leaders from at home and abroad who have successfully developed proactive strategies towards success.

We hosted the following sessions, with session chairing including Wendy Hall and Sue Black.

The sessions are all available online at <https://cphc.ac.uk/cphc-seminar-series-the-women-into-computer-science-experience/>

#	Date [all 16:30-18:00]	Session	Panel Leads
1	Wed 14 Oct	How CS department leaders can increase the gender diversity of their departments	<i>Maria Klawe Ed Lazowska & Hank Levy</i>
2	Wed 21 Oct	Funding research and implementation of best practices initiatives for broadening participation in computing WHERE Equity and Diversity Meet	<i>Carla Brodley & Jeff Forbes</i>
3	Wed 28 Oct	What is happening in UK Schools for CS and how can you get involved?	<i>Carrie Anne Philbin & Colleen Lewis</i>
4	Wed 4 Nov	What can be learned from the research? findings from a U.S. initiative to broaden participation in computing	<i>Linda Sax & Kathleen Lehman</i>
5	Wed 11 Nov	Increasing diversity in the face of enrolment booms in Computer Science - or Computer Science is too important to be left to men	<i>Jane Hillston Hannes Werthner & Ignatios Vakalis</i>
6	Wed 18 Nov	Round Table and Wrap Up: real actions for women in CS undergraduates and beyond	<i>Speakers above</i>

The series was advertised on the CPHC and UKCRC lists. Across the series, there was a total number of 297 sign-ups and participants were consistently strong across the series.

CPHC/AGM21/05
Agenda Item 3.4

Outcomes from the series include:

- 1) a Chair's Engagement Group – to meet quarterly. Currently the group is chaired by Adrian Friday of Computer Science at Lancaster. The first meeting was held early this year with a follow up proposed for June.
- 2) An Engage mailing list – as requested by seminar participants to be able to share resources and announcements
- 3) An ENGAGE medal to recognise work being carried out by staff towards building pathways for women to come into and engage with computer science programs – this work is currently under discussion as a co-design activity with the ENGAGE list/community. It will be more formalised over the summer, post exams etc.

An action item going forward may be – beyond these activities – how else might we build on the outcomes from this series to support a national program/strategy?

m.c. schraefel, April 2021

CPHC ANNUAL GENERAL MEETING 2021
DEVOLVED NATIONS REPORTS

Wales

It will come as no surprise that this year has been dominated by COVID-19 and its impact. An early response to the pandemic was Welsh government's launch of its programme to ensure that Year-13 pupils were prepared for higher education. Welsh government asked all universities in Wales to develop innovative and subject specific online material to motivate pupils to remain engaged with their studies. All universities rose to this challenge, and in particular, the response from computing departments was exceptional, both individually and via Technocamps. See Welsh Government's Continuation of Learning Programme <https://hwb.gov.wales/distance-learning/resources/post-16/>.

An initial £27M of funding was made available by the Welsh government to maintain research and teaching during the COVID-19 crisis. This was later increased to over £40M and included over £10M towards student hardship, mental health support and student unions. There was also specific funding for research related to COVID-19, including test development and data analysis. In January 2021, Welsh government announced a further £40M of funding.

Computing departments across Wales moved to a mixture of synchronous and asynchronous online delivery with some on campus delivery, with the exact mix depending on individual university policy and Welsh government guidelines, which have varied over time in response to the level of the pandemic. Heads of computing departments in Wales met and discussed the impact of COVID-19; one outcome of this was that a seminar for staff from computing departments was organised to share the lessons learned in the shift to online learning.

Mark Griffiths (April 2021)

Northern Ireland

The two universities and HE sector in Northern Ireland have worked with our local Department for the Economy to deliver a range of short skills courses to those adversely affected by covid. Conversion masters programmes and standalone modules have worked really well across the region. Northern Ireland has been successful in increasing the digital sector over the last few years and to sustain such growth requires an increase in the number of graduates locally. Our Department for the Economy have also initiated a review of the future skills needs for the devolved region. We have also witnessed an increased interest and enrolments in HLAs, conversion masters and part-time advanced masters courses.

A main focus in research is collaboration between the two universities to establish a Northern Ireland Centre of Excellence in AI following the recommendations of Turing. The business case has been submitted by Digital Catapult with consultation from industry and we are hoping to secure approval in Q2. In addition, a number of the City Deal projects in both Derry and Belfast are led by or have a significant input from Computing. There has been increased

engagement with industry to address skills and discuss research partnerships which is very welcome.

Liam Maguire
23 April 2021

Scotland

To follow.

Summary and Close

Look after yourselves and have a good summer