

Research Overview

A new agency

The key national focus for the research system in Ireland in 2023 has been the development of legislation that will provide for a new agency, whose name was announced as *Taighde Éireann – Research Ireland* by Minister Simon Harris TD in November. Drafting of the legislation has continued apace in the second half of the year after publication of the Heads of Bill in May. At the time of writing, the bill is being finalised for cabinet approval.

There is considerable anticipation in the research system of the possibilities for the future that the new agency presents, and this has been reflected in the initial stages of consultation. There is a notable sense of ambition among stakeholders and a desire for Ireland to build on the foundations and successes achieved to date and boldly progress to the next level. This drive is fuelled both from a perspective of the talent in the system across disciplines and its potential, and also from the perspective of the research system as a strategic national resource in the face of uncertainty and enormous global challenges.

The Irish Research Council (IRC) looks forward to the opportunity for our elected representatives in the Houses of the Oireachtas to consider the legislation in detail and engage with key stakeholders in the research and innovation community. While the scope of the Higher Education Authority Act 2022 includes research, recognising the full spectrum of the HEA's activity, the legislation to establish *Taighde Éireann – Research Ireland* is the first for some time in which research takes centre stage.

The period ahead will, I hope, be an opportunity for our TDs and senators, in addition to their legislative role, to reflect more broadly on the strategic value and contribution of our national research and innovation system. Landmark social and economic policies and decisions taken decades ago have been critical to shaping



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With the Irish Research Council and Science Foundation Ireland soon to merge to become Research Ireland, the research sector in the country is at a critical and exciting juncture. This overview article takes stock of the work and achievements leading up to this point and looks ahead to a collaborative future in research activity both nationally and internationally.

the Ireland of today. In the same way, public investment in research across disciplines today has the potential to have a profoundly positive impact on the Ireland of tomorrow and its place in the world.

Research summit

The possibilities now and into the future were at the core of a research summit jointly hosted by Science Foundation Ireland (SFI) and the IRC in Cork in late November 2023. The IRC was very pleased to collaborate with SFI on the summit this year, particularly in advance of the two agencies merging to form Research Ireland. Delegates heard from a range of inspiring speakers, and both agencies used the event to make their annual awards to researchers who are making an exceptional contribution in their respective fields.

This year, it was particularly welcome to see the summit coalesce around all disciplines, including the arts, humanities, and social sciences (AHSS). Where the disciplines intersect – that is, interdisciplinary and transdisciplinary research (ITDR), a truly exciting field of endeavour – was the topic of a keynote from Professor Jennifer Richards of the University of Cambridge. How Research Ireland builds on current support and further develops this area will be a very interesting agenda in the years ahead.

The STEAM agenda has seeded many exciting projects, typically where artists or designers have ‘added value’ to a science-led project; less attention has been paid to projects where this dynamic is flipped: where scientists work collaboratively within an AHSS-led project. It was fascinating to hear Professor Richards’ perspective on the impact of this project on the skills and knowledge of participating scientists and the collaborative dynamic more broadly. The IRC encourages this potential in a systematic way, in particular through its COALESCE scheme, which includes a strand dedicated to interdisciplinary research led by AHSS with STEM collaboration.

One of a number of excellent panel discussions at the summit focused on artificial intelligence (AI) and its impact on academia. Professor Barry O’Sullivan and Dr James Cuffe of University College Cork joined Professor John Kelleher of Maynooth University and Dr Abeba Birhane of Mozilla Foundation and adjunct assistant professor in Trinity College Dublin. Delegates also heard a ‘research short’ presentation from IRC laureate Professor Taha Yasserli, of the School of Sociology and the Geary Institute in University College Dublin, on the sociology of humans and machines in the digital age. Key topics in the ‘AI and academia’ agenda were covered in the panel discussion, providing a really useful opportunity for reflection and stock-taking, not least for the funding agencies in the room.

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Accountability and responsibility are central to academic integrity, and among the highly problematic aspects of AI highlighted during the panel discussion was the practice of academic journal article submissions attributing co-authorship to generative AI models such as ChatGPT. Accountability or responsibility cannot be enforced against a large language model (LLM) tool, and it is therefore no surprise that journals (such as *Nature*) have started to take action to rule out LLM tools in authorship. The risks of the use of generative AI in peer review were also highlighted, not least the need to protect the confidentiality of applicants' research proposals.

A funders' network has been formed, chaired by the Sustainable Energy Authority of Ireland, to consider AI in research and to develop common approaches. The network is agreed that the use of generative AI in peer review is not appropriate, and the IRC has already taken action to update its peer reviewer guidelines. More broadly, and as noted in the panel discussion, it is clear that research on AI in society will require a variety of disciplinary perspectives and interdisciplinary approaches.

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Collaboration

Consultation on the new agency commenced in the last quarter of 2023 and is led by the CEO-designate, Professor Philip Nolan, with representation from SFI and IRC. It has included discussion with a range of institutions and bodies. There is a desire among stakeholders for opportunities for interdepartmental and interagency collaboration to be further developed and exploited. This will be an area where Research Ireland can make a real difference, and the opportunities also extend beyond our borders into the international domain.

The IRC will be bringing to the new agency a range of very successful national and international partnerships comprising fellow funding agencies, government departments, and UK Research and Innovation (UKRI). These partnerships address a spectrum of differing but complementary priorities, including capacity-building (boosting the early-career pipeline), developing the evidence base for policy, and exploiting particular strengths. The SFI-IRC Pathway Programme, designed to bridge the gap between the postdoctoral and early principal investigator (PI) stages, has opened its third call, and SFI have a range of national and international partnerships integrated into its suite of programmes.

In this regard, a major additional strand of collaboration is the two recently announced north-south research centres, in which UKRI is a partner. The IRC's collaboration with UKRI on digital humanities, an area of strength and great potential across the two jurisdictions, is another example of the kind of international partnership which Research Ireland can usefully explore. Given the bilateral links, it is very positive that the UK has joined Horizon Europe. IRC,

SFI, and UKRI, with the support of additional agencies such as the Health Research Board and Enterprise Ireland, convened a very successful ‘funders’ forum’ in 2018. The potential for another such bilateral initiative in the near future is worthy of consideration. Looking to the wider international arena, the IRC looks forward to the launch in January 2024 of the government’s Global Citizens 2030, the international talent and innovation strategy.

For 2023–2024, this edition of *Ireland’s Education Yearbook* from Education Matters sees a very full and diverse range of articles from researchers in education, which speaks to a vibrant landscape for research at present. The articles will be of interest to policymakers and practitioners across our education system, including those outside the mainstream. The articles remind us of education as fundamentally a shared space, with students and staff at the core. Myriad relationships and dynamics of power, trust, and care characterise the education system across the life cycle, topics which are ripe for ongoing exploration and study. I would like to thank all the authors who contributed to the research chapter this year.

Concluding thoughts

I conclude this overview with a look back over another busy year in the Irish Research Council, in which much was achieved. As has been the case since its establishment, and indeed for its forbears, the Irish Research Council for Humanities and Social Sciences (IRCHSS) and the Irish Research Council for Science Engineering and Technology (IRCSET), the IRC places a strong emphasis on early-career researchers, making over 340 such awards in 2023 across government and enterprise programmes.

Together with the chairperson, Professor Daniel Carey, and a number of Council members, I had the pleasure of meeting the recipients of the IRC’s government of Ireland (GOI) postgraduate and postdoctoral Medal of Excellence winners in December. These are the top-ranked STEM and AHSS awardees under each of the GOI streams. It was very welcome to see the technological university sector reflected in the award of medals this year, with Aaron Maloney of the Technological University of the Shannon winning the Professor Jane Grimson Medal of Excellence for STEM (postgraduate).

Investment in PI-led research is also core to the IRC’s mission, and making prestigious laureate awards for frontier basic research was a key aspect of the portfolio this year. Sixteen advanced laureate awards were made in 2023, which follows the allocation of 48 starting/consolidator laureate awards in 2022. Together, these 64 awards represent a total investment of some €40m in driving forward the boundaries of knowledge across all disciplines.

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The awards will support the further development of world-class researchers at the respective career stage and enhance their track record for success in further funding opportunities, in particular the European Research Council. Supporting researchers to exploit the quality of their work to lead progress in their disciplines, make new breakthroughs, and collectively enhance Ireland's intellectual and innovative capacity will be core to the agenda of work for Research Ireland in the years ahead.

The aforementioned programmes are part of a much broader suite of activities in the Irish Research Council, grounded in partnership and wide engagement, nationally and internationally. In closing I want to acknowledge the committed work of Professor Carey and all Council members during 2023, including in their contribution to shaping the agenda for the next phase of development of research in Ireland in the years ahead. Finally, I want to pay particular thanks to the Irish Research Council staff team, who have worked so diligently and with such good grace over the course of the year.



Call for EU to support young researchers across medicine, science and tech

Seán Kelly MEP has called on the EU to provide more financial and other support to young researchers, those working across vital medical, science and technology fields. MEP Kelly stressed the importance of their work for sustaining innovation in Europe and medical preparedness.

“In the ever-changing landscape of global challenges, it is the young researchers who will lead the march towards ground-breaking solutions. They are the innovators of the future. We will depend on them to find answers to the vast economic and societal issues that lie ahead”, MEP Kelly said.

“Despite their undoubted contribution, young researchers often find themselves undervalued - a trend evident in Ireland. A recent report, released last summer, shed light on the disheartening reality that PhD researchers in Ireland receive a mere €18,000 to €19,000 per year. Given the prevailing cost-of-living crisis in Ireland and in Europe, the report stated that this stipend falls well short of meeting the essential needs of these young researchers. Unfortunately, this is a common trend across Europe”, Kelly warned.