

Yearbook 2015-2016

Education Matters

Shaping Ireland's Education Landscape



Edited by Brian Mooney

European Research Council grants: a game changer for Irish research

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Established in 2007, the European Research Council (ERC) was a response to intense pressure from European scientists to create a fund for excellent research across Europe, and to promote mobility of researchers between institutions.

Prior to the ERC, European funding for science came mainly through large collaborative projects involving consortia of researchers from at least three, but often many more, European countries. The ERC, on the other hand, funds individual scientists – Principal Investigators (PIs) – to pursue research where the excellence of the science, as opposed to the industrial application, is of the foremost importance.

The ERC forms part of the EU Research and Innovation programme called “Horizon 2020”. It provides an excellent opportunity for researchers based in Ireland to win significant multi-million euro grants to pursue fundamental research. The research does not have to have immediate industrial applications. Also important is that researchers can get international recognition for their work at a variety of stages in their academic careers.

Trinity currently has 19 active ERC awards across all categories (See Table 1 on the next page).

In 2015, Trinity was awarded €14.5 million from the 2014 ERC grants round, representing some 46% of the Irish total. Examples of the research projects being funded are:

- » Professor Poul Holm was the recipient of the only **Advanced Grant** awarded in Ireland in 2015. Valued at €2.5 million it represents the maximum amount of funding for an individual. The award will see Professor Holm and his team at the School of Histories and Humanities conduct world-leading humanities research into marine environmental history, assessing and synthesising the dynamics and significance of the North Atlantic ‘fish revolution’ of the 1500s and 1600s that reshaped alignments in economic power, demography and politics.
- » Professor Anna Davies, was granted a **Consolidator Grant** of €1.9 million for ‘SHARECITY’, a research project that will assess the practice and sustainability potential of city-based food sharing economies. More than 50% of the world’s population live in cities. SHARECITY will produce the first global study of emergent and burgeoning food sharing in cities – from redistributing surplus food from retailers to charities and community kitchens, to web-based platforms identifying surplus crops as potentially transformative means to shift urban food systems onto more sustainable pathways.
- » Dr Sarah McCormack, was awarded a **Starting Grant** of €1.5 million. Her research looks at both direct and diffuse solar radiation in a static building component delivering not only breakthroughs in solar device

Table 1 Trinity's current European Council Awards

name	Applicant Profile	Max. funding	Aim	No. in Trinity
Starting Grants	2-7 years post-PhD	€1.5M + in well justified circumstances: an additional €500K of start-up costs/relocation costs/ access to large equipment...	Supports up-and-coming independent research leaders. This is targeted at promoting early scientific independence of promising talent.	7
Consolidator Grants	7-12 years post-PhD	€2M + in well justified circumstances: an additional €750K of start-up costs/relocation costs/ access to large equipment...	Supports researchers at the stage at which they are consolidating their own independent research team or programme.	4
Advanced Grants	10+ years post-PhD with an excellent 10-year track record	€2.5M + in well justified circumstances: an additional €1M of start-up costs/relocation costs/ access to large equipment...	Supports researchers who have already established themselves as independent research leaders in their own right.	6
Proof of Concept Grants	Applicants must already hold an ERC grant	€150,000	Top-up funding open only to existing grant holders to bring their research ideas closer to market	2

efficiencies but also the development of unique building integrated components. Applying photovoltaic panels to buildings is important in achieving 20% renewable energy targets by 2020.

One of the characteristics of the ERC grants is mobility. Given that individuals can take awards with them to another university in a different country, competition to attract ERC awardees can be intense. Three awardees have transferred into Trinity and four have transferred out. Of those transferring out one went to another Irish university, one to a German university, and two to UK universities. One individual gave up an ERC award won while in Trinity to return to the United States.

Trinity's success in securing ERC awards shows that our research is addressing issues of global societal and economic importance. We aim to stimulate a wave of innovation that will stimulate jobs creation and generate long-term economic impact for the country. We have launched an Innovation and Entrepreneurship Strategy (see <https://www.tcd.ie/innovation/ie-strategy/>) to make this happen.

In recent years there has been effective partnering between government agencies and universities to maximise Ireland's return from Horizon 2020. We are seeing the results and this year has seen Ireland's best ever performance in the ERC. It has jumped from second-lowest ERC performer to second highest. Only Israel performed more strongly in per capita terms.

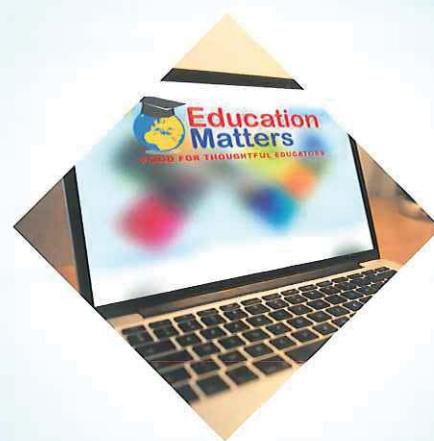
It is clear that research in Ireland remains strong, but mainly based on infrastructure investments made prior to the economic downturn. As the economy improves it is now time to further invest in science so that Ireland can do even better in the competition between universities globally for talented researchers. We will need to continuously improve our reputation as a location where research can be performed to the very highest international impact.

Scientists, engineers, and humanities researchers with original ideas are the foundation for innovation. Through world class education and research, they are the key to creating wealth and sustainable jobs. In the competition between cities and regions for talented researchers, Irish universities serve the dual role of both attracting talent to Ireland, and developing it within the country. They are a key driver for Ireland in successfully developing reputation for an innovation economy.

“Sharing and collaborating demand new skills: - the capacity to engage with peers across a range of disciplines, to respect yet challenge methodologies and research paradigms...; and more systematic management of data and workloads to ensure harmonious co-operation.”

University Presidents are very conscious of the importance of ERC awards; however they are only a part of the picture when it comes to funding successful research. Nor is it forgotten that universities have a wider purpose than this as they act to serve the public good in a time of rapid social and economic change.

Further information on Trinity College Dublin’s current active grants is available at <https://www.tcd.ie/research/expertise/>



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