

ANNUAL REPORT AND ACCOUNTS 2012



Research for Ireland's Future



Front cover image

Winner of the SFI Image of the Year Competition 2012.



Dr Rohit Mishra

PI: Prof Martin Hegner

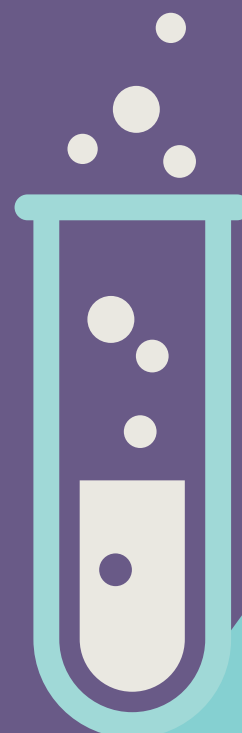
Institute: CRANN

Title: Asteroid Belt

This is an image of crystallised Carbamide dyed with azo orange and imaged using a Zeiss Axio Imager in the polarised transmission mode. The colours seen in the image are real and obtained because of the crystal structures interaction with polarised light (the same technique used in modern 3D cinema glasses). Carbamide is a strong agent for dehybridisation (separation) of double stranded DNA to individual strands as well as for denaturing proteins. Hence it is widely used as a regeneration scheme in several bio-chips and bio-sensors.

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SFI VISION:

Ireland will be a global knowledge leader that places scientific and engineering research at the core of its society to power economic development and social progress.

SFI MISSION:

SFI will build and strengthen scientific and engineering research and its infrastructure in the areas of greatest strategic value to Ireland's long term competitiveness and development.

AGENDA 2020

Agenda 2020 is SFI's strategic plan over the period 2012 to 2020. It has four primary objectives:

- 1. To be the best science funding agency in the world at creating impact from excellent research and demonstrating clear value for money invested. This will mean:**
 - a. Investing strategically and selectively, guided by ongoing research prioritisation including the recently completed national research prioritisation exercise;
 - b. Investing in SFI's translational research capability to enhance the progression of research from discovery to delivery;
 - c. Developing a set of research centres that are recognised internationally, that attract international research talent and capital, and that attract, anchor and spin out related companies in Ireland; and
 - d. Increasing the numbers of SFI-trained researchers employed in industry.

- 2. To be the exemplar in building partnerships that fund excellent science and drive it out into the market and society. This will require:**
 - a. Building strategic partnerships; and
 - b. Diversifying the funding sources for Ireland's scientific base.

- 3. To have the most engaged and scientifically informed public.**

- 4. To represent the ideal modern public service organisation, staffed in a lean and flexible manner, with efficient and effective management.**

In 2012:

SFI supported approximately

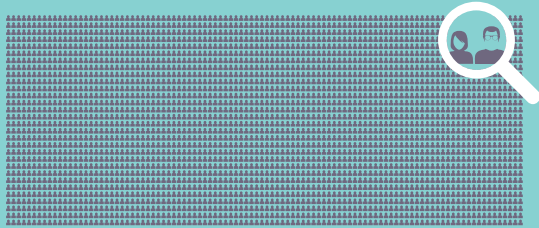
2,815

researchers in Ireland led by over **400 lead scientists**.



€156,000,000

SFI invested €156 million in research projects.



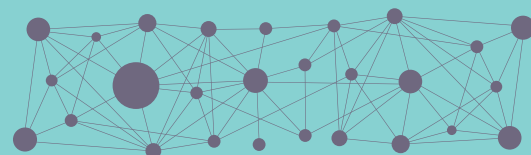
A **third** of individuals who left SFI funded teams took up employment in industry, **60%** in companies in Ireland.



SFI researchers are engaged in

1,821

international partnerships in over 60 countries.

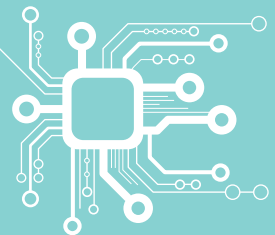


SFI researchers published over 5,790 scientific papers,

1/3

of papers published are co-authored with internationally based researchers.

Over **700** companies were linked to **SFI research groups**.





Links with multinational corporations (MNCs) increased by 5% to 540, involving 274 companies.

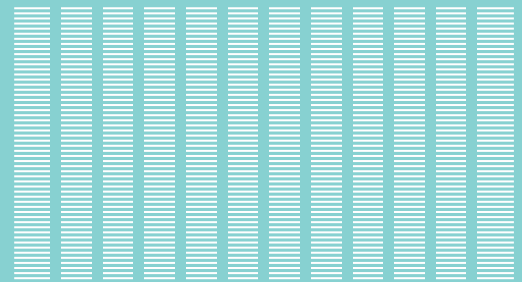


Links with small-medium enterprises (SMEs) increased by 24% to 527, involving links to 428 companies.

60%

SFI researchers have links to the companies that generated approx. 60% of recent IDA-supported job announcements.

c.450

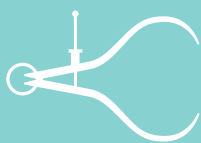


SFI supported approx 450 active research projects in Ireland.

€68,000,000

SFI researchers secured over **€68 million** from the EU, up **21%** since 2011.

SFI funded researchers secured an additional **€171 million** in non-SFI funding.



SFI researchers' pre-commercial outputs:

14 spinouts

147 invention disclosures

80 patents filed

25 patents awarded

30 licenced technologies





CHAIRPERSON'S STATEMENT

I AM DELIGHTED TO PRESENT SFI'S ANNUAL REPORT AND FINANCIAL STATEMENTS FOR 2012.

In a banner year for science in Ireland, SFI's commitment to funding and supporting excellent science that makes economic and societal benefit was clearly evident. It was a year in which science was high on the national agenda and the global scientific community gathered in Ireland to share the excitement of science with the wider public.

The year brought with it a number of high profile events for our organisation including the appointment of a new Director General. Prof Mark Ferguson, a native of Northern Ireland, was appointed in January 2012.

2012 was a year when the attention of the European science community was focused firmly on Dublin. In July, our capital city played host to the Euroscience Open Forum (ESOF) 2012. The most influential contributors to the world of science and representatives from society and policy gathered in Dublin for the largest ever open forum of its kind. It was remarkable to see Dublin as a hub where over 4,500 delegates from over 70 countries conversed on topics ranging from influencing policy to strengthening the links between science and society.

In tandem with ESOF, Dublin was designated a 'City of Science', over 600,000 people participated in the 200 events that included visual art, theatre, film, puppetry, interactive installations, large scale experiments, talks, debates and workshops. 2012 really was the year when the excitement of science was brought to life for the Irish public.

2012 was a particularly busy year for SFI, characterised by a number of significant funding announcements, policy initiatives and award-winning achievements by individual SFI-funded researchers.

A renewed focus was placed on strategic policy with the publication of SFI's Agenda 2020. This ambitious new strategy aims to position Ireland as a global knowledge leader and a society with scientific and engineering research at its core. In particular, this new strategy is geared towards further strengthening research capacity and linkages with industry, serving to complement the Government's 'Report of the Research Prioritisation Steering Group', issued in March 2012.

At the core of SFI's Agenda 2020 are four main objectives, namely to be the best science funding agency in the world, to be the exemplar in building partnerships, to have the most engaged and scientifically informed public and to represent the ideal modern public service organisation.

The strategy's implementation over its timeframe will see SFI collaborating closely with other State agencies such as IDA Ireland, Enterprise Ireland, Higher Education Authority, Higher Education Institutions and other key stakeholders.

Agenda 2020, together with the continued development of enabling policies, regulation and financial supports, will position Ireland to emerge as a significant player in research and development over the next ten years.

Across its suite of award programmes SFI approved a total of 224 new awards across 18 programmes led by 19 research bodies. Total payments to research bodies from SFI amounted to €156 million.

Throughout the year SFI endeavoured to establish and strengthen existing international links and collaborations. SFI co-hosted a full day event in Brazil to promote greater partnerships with the country in the area of research and development, attended by Irish and Brazilian research teams and representatives from Irish Government agencies. In his keynote speech, Minister of State with Responsibility for Trade and Development, Mr Joe Costello TD, outlined the SFI proposition and the talent of Ireland's skills base and wealth of research excellence.

Closer to home, the 2012 SFI Science Summit, 'Sharing Science' was another highlight in the year. The theme of sharing and communicating science was fitting given the heightened profile of science in the public consciousness. Attended by over 300 of our leading scientific researchers, the event once again culminated in the SFI 'Researcher of the Year' award, where Prof Michael Coey of Trinity College Dublin was honoured. As the most cited physical scientist in Ireland, over his career he has made important discoveries such as a new iron-based rare earth magnet, while also educating future generations through his textbooks on magnetism and magnetic materials.



Prof Mark Ferguson, Director General, SFI, Ms Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science and Prof Pat Fottrell, Chairperson, SFI, attending the SFI Board Meeting in January 2012.

I would like to acknowledge the ongoing dedication to science in Ireland of An Taoiseach, Mr Enda Kenny TD, Minister for Jobs, Enterprise and Innovation, Richard Bruton TD, and Minister of State, Department of Enterprise, Jobs & Innovation, Mr Seán Sherlock TD. The Government has shown a strong and sustained commitment to promoting and progressing Ireland's scientific and engineering capacity, and our reputation on the international stage continues to be enhanced.

To the Board and staff of SFI, I wish to express my appreciation for the relentless effort and commitment displayed throughout 2012. I would like to thank Mr John Travers, on his retirement from the Board, for long and valued service to the organisation. I would like to commend and thank Prof Mark Ferguson, for his passionate and tireless leadership as the new Director General of SFI.

A central part of the Government's Action Plan for Jobs is to ensure that research is better targeted at turning the good ideas of researchers into good products and good jobs. SFI has a central role to play in ensuring that the commitments made in this plan are realised over the coming years. This represents an enormous challenge to all members of the scientific research and enterprise ecosystem but it is a challenge that we face with great confidence and enthusiasm.

Prof Patrick Fottrell
Chairperson

CASE STUDY 01

MATCHMAKING PHARMA COMPANIES WITH ANALYTICAL EXPERTISE

Gaining contracts from global pharma businesses is a competitive business, and the portal ATLAS aims to help Ireland make those deals.

It provides the pharmaceutical industry with a one-stop information source detailing all of the facilities, equipment and analytical services available across all of the Irish Higher Education Institutions. Developed by the Solid State Pharmaceutical Cluster (SSPC), at the University of Limerick, the portal aims to provide better connectivity between the pharmaceutical industry and higher education institutions in Ireland, with a view to retaining some of the significant contract analysis business that this industry is currently sending abroad. The Cluster also analyses mechanisms that allow pharmaceutical solids to be produced with predefined characteristics, and the objective is to rationally design solid-state pharmaceutical materials to meet the demands of advanced formulation and drug delivery systems. The Cluster collaborates with companies such as Pfizer, Roche, Schering-Plough, Clariochem Ireland Ltd, MSD Ireland, Eli Lilly, Janssen Pharmaceutical Ltd, GlaxoSmithKline, Bristol Myers Squibb and UCB Pharma.



Mr Michael Noonan TD, Minister for Finance, and Prof Mary Shire, VP for Research, University of Limerick, at the launch of ATLAS.



DIRECTOR GENERAL'S STATEMENT

“STRIVE FOR PERFECTION IN EVERYTHING YOU DO. TAKE THE BEST THAT EXISTS AND MAKE IT BETTER. WHEN IT DOES NOT EXIST, DESIGN IT”.

Sir Henry Royce, 1863 – 1933

The above quotation from Sir Henry Royce of Rolls Royce fame encapsulates what we try to achieve in Science Foundation Ireland.

2012 has been a busy and productive year. The Government's Action Plan for Jobs 2012 was published and contained a number of key actions and targets for SFI, all of which were met. SFI is pleased to see the Government's continued commitment to investment in scientific research and its appreciation of the importance of such investment for future economic and societal development.

The report of the Irish Government's Research Prioritisation Steering Group was published in March 2012, was subsequently adopted as Government Policy and the various funding agencies, including SFI, charged with its implementation. The Prioritisation Action Group (PAG) was established, chaired by Mr Séan Sherlock TD, Minister for Research and Innovation, to stimulate and coordinate actions between the various funding agencies.

Small countries are not scaled down versions of large countries. The science systems of large countries like the USA, UK, Germany etc, in which all aspects of all sciences are encompassed, do not scale or work in small countries such as Ireland with a limited population and a limited budget. We cannot do everything well, so the Government's strategy is to prioritise funding to a number of broad areas where Ireland can be expected to lead internationally and to reap the benefits of such research investment. The National Research Prioritisation Exercise (NRPE) is a form of smart specialisation, which is now required of EU member states in order to draw down certain EU funding streams and which has, or is, being utilised in most small (and some large) countries throughout the world.

Of course, the Research Prioritisation Report is a point in time exercise, so it might be expected, with time, that some new areas of priority would emerge whilst others might be eclipsed. The principle, however, endures; namely focusing major research funding on a number of strategic areas of potential economic and societal benefit for Ireland.

SFI responded quickly to the National Research Prioritisation policy. First, in widespread consultation with the academic, industrial and service communities, we developed our new strategy for the next seven years, namely Agenda 2020. This strategic plan has four key pillars: Excellent Science and Impact, Partnership, Outreach and an Efficient Public Service Organisation. Under each of these pillars a number of key goals are articulated. The importance of each goal is described, as are the actions required to achieve the goal objectives and the key performance indicators which will be used to monitor progress.

Agenda 2020 lays out a clear and ambitious strategy for SFI over the next seven years. SFI will maintain a high bar for scientific excellence. It does not matter if the research is basic or applied, short or long term, curiosity driven, use or needs inspired: second rate research is useless to anyone. We absolutely need excellence but although excellence is required, it is not sufficient. We also need impact; economic, societal, health, environmental, policy impact, of which economic impact, including job creation, is the most important for Ireland at the present time.



Pictured at the announcement of SFI investment of €35 million in research infrastructure are Mr Richard Bruton TD, Minister for Jobs, Enterprise and Innovation, Prof Mark Ferguson, Director General of SFI, Prof Valeria Nicolosi, CRANN, TCD, and Mr Séan Sherlock TD, Minister for Research & Innovation.

To implement Agenda 2020, a number of key actions have been taken this year. First SFI has been internally restructured into a much smaller number of divisions: Pre Award and Post Award with a high turnover staffing model for the Scientific Programme Officers and a new internship scheme. This new flexible structure should allow SFI to cope with the demands of the new strategy and a decreasing staffing base in line with the Government's Employment Control Framework for the Public Sector. Second, SFI's Research Funding Programmes have been rationalised down to approximately 20 programmes which cover all dimensions of SFI's activities. These are succinctly described and the precise programmes that will operate in any year notified in our Annual Plan. These programmes encompass the full range of funding instruments from large scale Centres, project funding, funding for young investigators, incentives to apply for ERC funding, partnership scheme, research professorship scheme, conferences and workshops etc. Like all good investment plans, SFI has a diversified portfolio of uncorrelated risk, e.g. focused themes in areas of strategic national importance, bottom-up open calls, support for young people, schemes to recruit outstanding scientific leaders, large scale centres, smaller investigator projects etc.

A number of existing programmes have been modified or new programmes initiated, e.g. Research Centres, Partnership Programme, Thematic Calls under IvP, Industrial Fellowship, ISCA, ERC Support and Development Programmes, Research Infrastructure and the SFI Internship Scheme. In all of these programmes SFI has attempted to be clear about what we are trying to achieve with the funding scheme and how we are going to measure success.

International peer review remains central to SFI's operating procedures. In addition to operating international peer review for scientific excellence, we have, in appropriate programmes, augmented this with an international review for impact using individuals with relevant experience drawn from appropriate backgrounds. We have consulted, and published, the NRPE criteria which will apply to each of the programmes which SFI operates and we will continue to do so on an annual basis. We have applied the prioritisation criteria intelligently, e.g. with a high requirement for compliance and demonstration of potential economic impact in, for example, the Centres programme, but with a much reduced focus in, for example, the schemes to support outstanding young researchers of potential.

A number of programmes strive to achieve enhanced industrial participation and relevance and to build the research ecosystem in Ireland. Thus, for example, we mandated in the Centres application that as a minimum at least 30% of the funding must come from industry with at least 10% in cash. These metrics were exceeded by all of the full proposals received. Additionally we have encouraged, where appropriate, industrial collaboration on IvP project

CASE STUDY 02

FUJITSU AND DERI RESEARCH COLLABORATION

In July 2012 Fujitsu Ireland announced that Fujitsu Laboratories Ltd, a wholly owned subsidiary of Fujitsu, the global ICT giant, would begin a significant investment in a research programme with the Digital Enterprise Research Institute (DERI) based in NUI Galway.

The research will be conducted in the area of networked knowledge, identifying new models and commercial opportunities for exploiting the vast quantities of static and dynamic data on the Internet, making it more valuable to end-users. The research project is fully funded by Fujitsu and the support of IDA Ireland ensured the successful establishment of the research project.

Commenting on how this will impact positively on Ireland, Ms Regina Moran, CEO of Fujitsu Ireland, said, "The aim of the research programme is to ensure that the results it delivers are the seeds for the innovation of commercial services and products right here in Ireland. If Ireland is to succeed in being a leader in technology innovation, investment in world-class research programmes such as this, here in Ireland, are critical. We cannot stand in the wings waiting for innovations elsewhere in the world to reach us, we need to demonstrate leadership."



CASE STUDY 03

APC BUDDING BIOLOGISTS TRANSITION YEAR EXPERIENCE 2012

Twenty six transition year students from around Ireland spent a week at the SFI-supported Alimentary Pharmabiotic Centre (APC), UCC, exploring biological science and research.

Students had an action packed week involving hands-on experiments in microbiology, food science and anatomy, and learning about APC research and technologies. The students visited the Dialysis Unit at Cork University Hospital where Dr Liam Plant and his colleagues highlighted the importance of science, technology and biomedical engineering for safe and effective dialysis at the hospital or at home. Students also had a tour of Merck MSD's centre of excellence at Brinny, Co Cork, which specialises in the fermentation, purification and sterile filling of biotech products. In addition, the students had workshops on GM food, careers, CVs and presentation skills, and a tour of UCC. The Budding Biologists Transition Year Experience programme has been running for five years and is highly subscribed, receiving more than 80 applications this year. Further details can be seen on <http://apc.ucc.ie>.



funding and introduced thematic funding calls, for instance planning jointly with colleagues in Teagasc on the topic of Future Agri-Food for a joint IvP call. Going forward IvP calls will alternate, on a yearly basis, between thematic and open calls. Additionally, the SFI Industry Fellowship Scheme allows placement of SFI-funded researchers in industry, anywhere in the world, to conduct a collaborative research programme. This scheme should serve not only to enhance the research ecosystem in Ireland but also serve as a career development programme for many of our outstanding researchers who will go on to jobs in the private sector. The SFI Partnership Scheme is a unique and flexible programme focused on excellent research with potential impact in collaboration with industry. One of the many beauties of science is that it has the potential to create wealth as well as improve societal wellbeing, health and the environment and to satisfy our innate curiosity about what the world consists of and how it works.

This year SFI was assigned the Discover Science and Engineering (DSE) Programme from Forfás and we have started to integrate DSE activities into SFI's operations. With this enhanced remit for public engagement and outreach, we will be restructuring these activities so as to maximise the potential and impact of all outreach programmes funded by SFI, e.g. through Centres, CSETs, Conferences and Workshops, DSE Programme etc. Encouraging young people to study STEM subjects, and to go on to utilise their scientific qualifications in a rewarding career, as well as having a general public that is informed about science and is comfortable with science as both users and producers, is important for Ireland's future.

We want to use SFI's money catalytically to initiate and stimulate actions and enable research groups in Ireland to compete globally for additional funding. Research funding from the European Union is important to Irish research groups and we have this year initiated schemes to assist individuals in successfully obtaining support from the European Research Council (ERC) through our new support and development schemes. Ireland this year became a signatory to the Brazil 'Science without Borders' initiative and Irish research groups can now recruit talented individuals from Brazil. In collaboration with NSF, NIH and Invest NI, SFI has enhanced and broadened the scope of its US-Ireland programme and through the Wild Geese Network we are attempting to engage the Irish scientific diaspora in constructive ways to support and assist the broad research community in Ireland.

By focusing funds on a small number of overseas countries through the newly initiated ISCA calls, SFI hopes to assist the Irish research community in developing meaningful collaborations with important countries overseas. With time we expect these collaborations to mature into collaborative applications through our various funding schemes which will see



SFI fund the groups in Ireland, whilst comparable funders and schemes in host countries will fund the overseas collaborating group.

The ESOF meeting in Dublin was a huge success and hearty congratulations are due to Prof Patrick Cunningham and his team for organising such an outstanding meeting and for the prolonged programme which took place throughout the year as part of Dublin City of Science. During 2012, I was privileged to take on the additional duties pertaining to the Chief Scientific Adviser's role following Prof Patrick Cunningham's retirement and the abolition of the separate office of CSA. I would like to pay tribute to Prof Cunningham and thank him for his excellent work, particularly around the successful ESOF event.

As part of a broader international engagement I have participated in the Global Research Council which brings together the main research funders from all over the world and, as Chief Scientific Adviser, in a new initiative of the six advanced small nations (New Zealand, Israel, Singapore, Finland, Denmark and Ireland) who intend to work together on scientific and economic policy, comparing initiatives, developing benchmarking, new assessment metrics etc.

During 2012 a number of senior staff left SFI: Dr Paul Dodd, on his appointment as Associate Vice Chancellor for Interdisciplinary Research and Strategic Initiatives, University of California, Berkeley; Dr Stephen Simpson, on his appointment as Director of Research Programmes Arthritis Research UK; and Prof Fionn Murtagh. We thank them for their contributions to SFI. Equally in the SFI internal restructuring, great credit is due to Dr Ruth Freeman for her leadership of the Programmes, Enterprise & International Affairs Directorate which encompasses the new Pre-Award and Post-Award teams, headed by Dr Lisa Higgins and Dr Marion Boland respectively.

2012 also showed increasing performance on a number of fronts by the broad SFI research community, for example a 16% increase in research publications, a 20% increase in industrial collaborations and a 10% increase in leveraged funding particularly from the EU, as detailed later in this Annual Report. This increasing performance of the Irish research community, together with our clear Agenda 2020 strategy, defined programmes and a restructured organisation gives me great confidence that we can collectively achieve even greater things in the future.



Prof Mark W.J. Ferguson

Director General, Science Foundation Ireland and Chief Scientific Adviser to the Government of Ireland

CASE STUDY 04

BRINGING MACHINE TRANSLATION TO THE CLOUD

For companies seeking to internationalise, machine translation offers a relatively quick and cost effective way to make product and service information available in foreign languages.

However, machine translation requires significant computing power which can be difficult for translation companies to access. Dublin start-up Xcelerator has raised €1 million in funding for a new cloud-based statistical machine translation product that means companies supplying translation services don't need to worry about computing power or special hardware. With its origins in data-cleansing work by the SFI-funded Centre for Next Generation Localisation (CNGL), KantanMT allows clients with little or no experience or knowledge of machine translation to build their own machine-translation engines and translate documents, all from a simple Web interface. Founded in 2012, Xcelerator has already created ten high value jobs for Ireland.



Mr Tony O'Dowd, Founder and CEO of Xcelerator Machine Translations Ltd and Mr Steve Gotz, Commercial Development Manager, CNGL.

OVERVIEW OF 2012 KEY MILESTONES

JANUARY

SFI participates in the BT Young Scientist Competition & Exhibition 2012.

The Board of SFI appoints Prof Mark Ferguson as Director General of SFI.

SFI Research Centres Call launched.



Biomedical Diagnostic Institute (BDI) participates at SFI stand at the BTYS.

FEBRUARY

Investment of €7.2 million in 65 research awards announced as a part of SFI's Technology Innovation Development Awards (TIDA).

As part of the re-organisation of the public sector, Minister Bruton announced the transfer of the Discover Science and Engineering Programme from Forfás to SFI.

MARCH

SFI, in partnership with the Embassy of Ireland, Washington DC, hosted a forum entitled "The Irish Scientific Diaspora: Celebrating Success and Supporting Ireland's Economy".

Publication of the Report of the Research Prioritisation Steering Group.

APRIL

SFI announced funding of €12.8 million for 23 early-career scientific researchers to carry out pioneering work in Ireland under the SIRG programme.

Prof James Gleeson, University of Limerick, invented a new mathematical technique that has the ability to provide more accurate prediction of spreading phenomena such as epidemics, computer viruses and social media trends.

Prof Jim Greer and Dr Paul Hurley at Tyndall National Institute received the 2012 Intel Outstanding Researcher Award; they were the only two researchers outside the USA to receive this inaugural award.

SFI Infrastructure Call launched.

MAY

The University of Limerick launched ATLAS (Access to Third Level Analytical Services), a web-based portal to provide the pharmaceutical industry with details of all of the facilities, equipment and analytical services available in Irish Higher Education Institutions.

Prof Mark Ferguson participated at the inaugural meeting of the Global Research Council (GRC) in Washington DC, alongside the heads of research councils from 44 research-intensive countries.

JUNE

Doctors in Cork have shown that the radiation exposure of patients with Crohn's disease referred for a CT scan (computed tomography) can be significantly reduced while retaining diagnostic accuracy.

JULY

Ireland hosted the largest general science meeting in all of Europe; the European Science Open Forum (ESOF) 2012 took place in the Dublin Convention Centre. The event was attended by over 4,500 people.

Inaugural SFI International Strategic Cooperation Award (ISCA) Programme was launched.





Mr Joe Costello, TD, Minister for Trade and Development signs agreement in Brazil.

AUGUST

The Network of Excellence for Functional Biomaterials (NFB) at NUI Galway signed a Memorandum of Understanding (MOU) with a leading Chinese research institute, the Tianjin International Joint Academy of Biotechnology and Medicine (TJAB), and a major Chinese medical technology company, China Nucleon Medical Technology Group (CNPK).

New ways that viruses manipulate the human immune response were revealed in a research paper published in Nature involving TCD scientists. Dr Orla Mulhern and Prof Andrew Bowie, School of Biochemistry and Immunology were part of the multi-disciplinary, multi-centre study comprising immunologists, virologists, biochemists and bioinformaticians from across Europe.

SEPTEMBER

Minister Sherlock launched 'Smart Futures' campaign to get students thinking about careers in science and technology.

SFI launched a public consultation process on its draft strategy Agenda 2020 and Operational Plan for 2013.



Mr Seán Sherlock, TD, Minister for Research and Innovation and Director General of SFI, Professor Mark Ferguson, pictured at the Euroscience Open Forum (ESOF).

OCTOBER

Following abolition of the separate office of the Chief Scientific Adviser to the Government, Prof Mark Ferguson agreed to take on the additional duties pertaining to the role of Chief Scientific Adviser to the Government.

NUI Maynooth researchers discovered the function of a gene in regulating the amount of protective proteins called 'interferons' produced in response to a virus, which could help in the treatment of immune-mediated diseases.

Ireland signed an education and research agreement with Brazil as part of Brazil's Science Without Borders Programme.

NOVEMBER

SFI's strategic plan - Agenda 2020 was published.

Science Week 2012 took place on the theme Everyday Experimenting. Over 200,000 people took part in almost 800 events.

Prof Michael Coey, CRANN, TCD was named SFI Researcher of the Year 2012 at the SFI Science Summit.

Prof Pete Humphries, TCD, was awarded an ERC Advanced Award.

Minister Bruton announced SFI support for 43 infrastructural projects valued at €35 million.



The Rubberbandits and Dr Sarah Kelly at School of Health and Human Performance at DCU.

DECEMBER

The Industrial Development (Science Foundation Ireland) (Amendment) Bill 2012, was published following agreement by Government. The purpose of the Bill is to extend the remit of SFI to enable it to fund applied research in addition to its existing remit to fund oriented basic research.

Researchers at the Digital Enterprise Research Institute (DERI) in NUI Galway are leading a European Union, multi-million euro initiative aimed at government transparency. The project, entitled 'Puzzled by Policy' launched a new widget (<http://join.puzzledbypolicy.eu>) that provides a fun way for users to find out about immigration policy and become actively involved in the immigration policy-making process.

2012 OVERVIEW OF ACTIVITIES

2012 was a noteworthy year for science in Ireland. SFI continued its focused commitment to funding and supporting excellent scientific and engineering research that has an economic and societal benefit. The year generated a number of high profile events and activities for the organisation. SFI continued to deliver key milestones, namely:

- ▶ the development of a credible base of excellent research teams across the higher education sector;
- ▶ an increase in scientific publications;
- ▶ an increase in the number of linkages between industry and academic researchers;
- ▶ the development of new funding programmes to increase the interaction with industry, support infrastructure, encourage young early career researchers, and international engagement.

SFI undertook a public consultation process on its ambitious seven year strategic plan and operational plan. Following this process, SFI published Agenda 2020 which lays out four key goals, the strategies for achieving them, and the performance indicators that will be used to measure SFI's progress.

SFI's four goals are:

1. To be the best science funding agency in the world at creating impact from excellent research and demonstrating clear value for money invested.
2. To be the exemplar in building partnerships that fund excellent science and drive it out into the market and society.
3. To have the most engaged and scientifically informed public.
4. To represent the ideal modern public service organisation, staffed in a lean and flexible manner, with efficient and effective management.

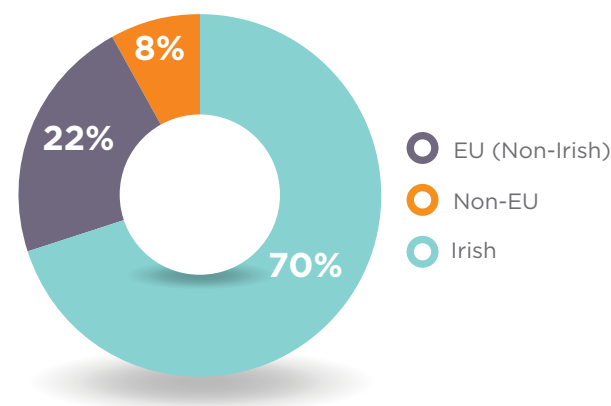
In the Agenda 2020 document, each of these objectives is elaborated upon by setting out the reasons why it is important, the actions that will be taken to achieve it and the KPIs that will be used to measure progress. Each year, commencing at the end of 2013, SFI will publish both an audit of progress and an annual plan.

SUPPORTING PEOPLE

Supporting an internationally competitive academic research base, together with the training of high quality researchers, in particular PhD graduates, is at the core of SFI's activities. During 2012, SFI directly supported over 2,800 researchers on 445 active research awards led by 418 award holders. 30% of SFI award holders are non-Irish. The international nationalities most represented include the UK, Germany and the USA.

A total of 627 team members left SFI-funded research groups in 2012, compared to 535 people in 2011. Of these, more than half remained in Ireland, while 45% moved abroad, in a similar trend to recent years. A third of individuals who left SFI-funded teams in 2012 went into industry, with 60% of this cohort taking up employment with industry in Ireland.

Nationality of Award Holders in 2012



RESEARCH EXCELLENCE

SFI-funded researchers reported a total of 5,792 publications in 2012. 3,351 publications were attributed to SFI funding (representing the same figure as 2011) while 2,441 were attributed to other sources of funding.

In addition, 735 publications were reported from inactive SFI awards. 37% of the publications reported from SFI active awards have a named co-author with an address other than Ireland. 40% of SFI-funded publications are available in open access repositories.

	TOTAL FROM SFI FUNDING	OTHER FUNDING SOURCES	TOTAL
Total Research Outputs	3,351	2,441	5,792
Outputs with non-Irish co-author	36.8%	38.0%	37.3%
Outputs available in Open Access Repositories	39.9%	26.4%	34.2%
SFI Accredited Outputs	81.1%	30.2%	59.7%

Through SFI investment, Ireland has over the past number of years consolidated its position in the international ranking of scientific research capability. Ireland has maintained an overall position in the Top 20 countries. In addition, particular strengths have emerged with a world ranking of 3rd in immunology, 6th in nanotechnology and 8th in material science.

Publications Table 2012
Country Ranking (Thomson Reuters)

Listed by Citations per Paper

1	SWITZERLAND
2	DENMARK
3	USA
4	NETHERLANDS
5	SCOTLAND
6	ENGLAND
7	SWEDEN
8	BELGIUM
9	FINLAND
10	GERMANY
11	CANADA
12	AUSTRIA
13	ISRAEL
14	NORWAY
15	WALES
16	FRANCE
17	AUSTRALIA
18	ITALY
19	NORTHERN IRELAND
20	IRELAND

Source: Essential Science IndicatorsSM from Thomson Reuters

CASE STUDY 05

GOOD (STEREO) VIBRATIONS

When it comes to 1960s classics, there are few more memorable than Good Vibrations by the Beach Boys.

But for many years, fans were destined to listen to the track in mono only. Stereo was out of reach. SFI-funded researcher and a Stokes Lecturer at Dublin Institute of Technology, Dr Derry Fitzgerald, though, has cracked the puzzle of converting the track to stereo, and the technology he developed to do it could unlock several other early recordings and even help to boost home remixing and music education.

For a listener using headphones a mono track sounds as though all of the sounds are in the 'middle', whereas stereo allows instruments or vocals to sound as though they are coming from the right or left.

In his work at the Audio Research Group in DIT, Dr Fitzgerald realised the technology he was developing could get around the problem by chopping up the vocals and instruments from the original mono track into separate signals that could then be remixed in stereo.

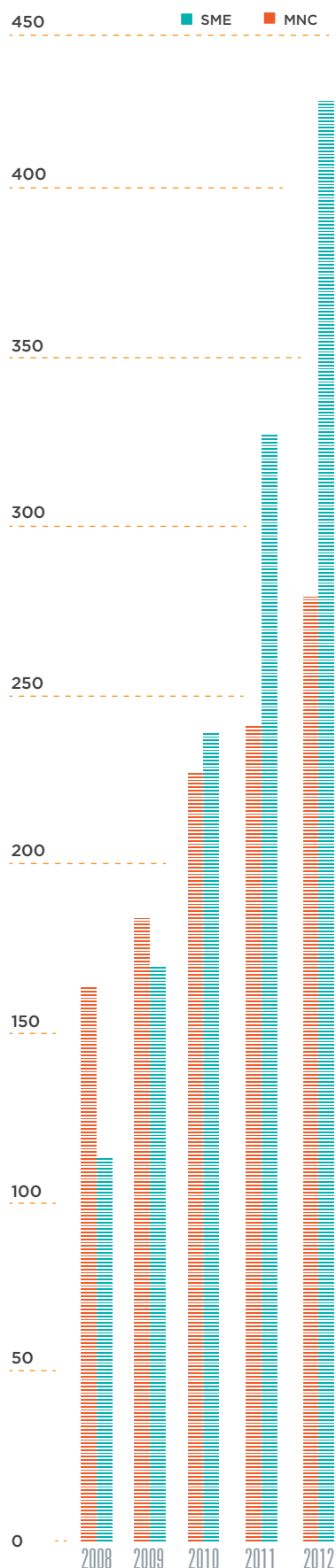
He tried it out with Good Vibrations and sent it to the engineer who did the Beach Boys remastering and he ended up remixing several tracks in stereo for reissued Beach Boys albums.



The signal-splitting technology could also be applied to other mono recordings and Dr Fitzgerald is now eyeing up tracks by the young Elvis Presley and Frank Sinatra, though even earlier tracks from the '78' era could benefit from the treatment.

The approach could also benefit home remixing of mono tracks and in music education. It would allow a particular instrument to be brought forward so a student can follow it more easily.

Number of companies working with SFI researchers from 2008-2012



SFI ENGAGING WITH INDUSTRY

Academic-Industry collaboration remains one of the key methods for transferring the benefits of public investment in research into sustainable economic development and creating competitive advantage. SFI programmes have a strong focus on creating impact from the research funded through collaborative partnership with industry. This engagement has increased significantly over the past few years. In 2012, SFI-funded researchers reported 1,163 collaborations; this represents a 12% increase in the number of collaborations between SFI researchers and companies, government departments and the non-government organisations (NGO) sector. The number of linkages with industry rose to 1,067 compared to 939 in 2011. 703 companies were involved in these relations compared to 583 in 2011.

The number of linkages with multinational corporations (MNCs) increased by 5% to 540, involving 274 companies. The number of relationships with small-medium enterprises (SMEs) increased by 24% to 527, involving links to 428 companies. It is worth noting that the number of relationships between SFI researchers and SMEs has increased by almost 300% over the past five years, from 108 in 2009 to 428 in 2012.

Over half of them (59%) that collaborated with industry have legal agreements in place and 50% indicate the purpose is for collaborative research.

	COLLABORATIONS 2012	COLLABORATIONS 2011
Multinational Corporations	540	515
Small Medium Enterprises	527	424
Government Departments or Semi-State Bodies	70	73
Private Foundations/ Charities/Non-Government Organisations (NGO)	26	23
Total by Award	1,163	1,035

In addition to the linkages with industry, there is also a strong focus on commercialisation of research with the support of Enterprise Ireland and through the Technology Transfer Offices. In 2012, SFI researchers reported a number of commercial outputs, including:

- 14 early spin out companies
- 147 inventions disclosures
- 80 patents filed
- 25 patents awarded
- 20 standards contributed to
- 30 licenced technologies

SFI RESEARCHERS

- ▶ Academic-Industry Linkages up 12%
- ▶ 300% increase in number of SMEs linking with SFI researchers over the last five years
- ▶ SFI researchers involved in 1,067 linkages with industry
- ▶ SFI researchers were working with 703 distinct companies



SFI RESEARCHERS' GLOBAL CONNECTIONS



- ▶ SFI Researchers are engaged in 2,500 international academic linkages
- ▶ SFI Researchers' partners are based in 68 countries

SFI RESEARCHER OF THE YEAR

PROF MICHAEL COEY ANNOUNCED AS SFI RESEARCHER OF THE YEAR 2012

Prof Michael Coey, one of Ireland's leading scientists, was chosen as the SFI Researcher of the Year 2012. Based in Trinity College Dublin, Prof Coey's career in science has been marked by remarkable scientific discoveries. Prof Coey directs the MANSE, Magnetic Nanostructures and Spin Electronics group and they developed new magnetic materials which can be lithographically patterned into nanoscale device structures. His group is also actively investigating the effects of magnetism on electrochemistry and biology. Coey also discovered that phantom ferromagnetism is independent on magnetic dopants but on defects present in the oxide films.

In presenting Prof Coey with his award, Minister Sherlock said, *"During his extensive career, Michael has contributed to the continued development of Ireland as a centre of excellence for research by translating scientific excellence into societal and economic impact. As the most cited physical scientist in Ireland, he has made important discoveries such as a new iron-based rare earth magnet, while also educating future generations through his textbooks on magnetism and magnetic materials. I would like to congratulate Michael on his invaluable contribution to research in Ireland."*



Pictured receiving the SFI Researcher of the Year Award 2012 is Prof Mike Coey, TCD, with Prof Mark Ferguson, Director General SFI, and Minister for Research and Innovation, Mr Seán Sherlock TD.

CASE STUDY 06

THESIS IN THREE

The SFI Research Centres' Thesis in Three contest showcases student research in a series of concise, rapidly paced talks consisting of three slides of precisely one minute each.

Eighteen students coming from the nine SFI Centres (CLARITY, SBI, CNGL, CRANN, Lero, BDI, CTVR, APC and DERI) presented their findings to the general public and a judging panel, which consisted of high profile individuals from industry, the media and state agencies. The panel picked the researcher who presented their research most effectively for a non-specialist audience. The overall winner of the event was Deirdre Cogan from CLARITY: Centre for Sensor Web Technologies with her presentation entitled "Protecting our Environment - Minus the Wellies". The runner up was Thomas Schwarzl from Systems Biology Ireland with his presentation entitled "Stem Cell Therapy with Bob". The audience prize went to Emanuele Di Pascale with his presentation entitled "The Buy Local Paradigm for Next Generation Networks". The event was co-ordinated by Aoibheann Bird from CLARITY, Cara Greene from CNGL and Philip Smyth from Systems Biology Ireland.



Deirdre Cogan from CLARITY delivering her winning presentation.



Pictured at the CLARITY Open Day are Prof Barry Smith, Director, CLARITY, Dr Edel O'Connor, CLARITY Postdoctoral Researcher, Mr Richard Bruton TD, Minister for Jobs, Enterprise and Innovation and Prof Mark Ferguson, Director General, SFI.

LEVERAGING ADDITIONAL FUNDING

In 2012, SFI researchers reported securing over €171 million in funding from non-SFI sources, representing an increase of 9.6%. Funding secured from non-Irish exchequer sources increased by 12% to just over €100 million. SFI-funded researchers secured €86 million from international sources, mainly the EU.

Amount of non-SFI funding secured by SFI-funded researchers in 2012 (by source, amounts in €)

	External Funding Leveraged
European Union	68,192,006
Enterprise Ireland	27,374,828
Private Enterprise	13,955,898
Health Research Board	10,204,870
IRCSET	10,056,983
Wellcome Trust	9,209,422
Higher Education Authority	5,003,623
Department of Agriculture, Fisheries and Food	5,332,902
Other Irish Government Source	4,883,721
Other International Government Source	3,521,326
Charity/Non-Profit Organisation (Irish)	2,977,130
Teagasc	2,621,790
EPA	1,118,648
Charity/Non-Profit Organisation (International)	2,488,559
Other International Interest Organisation	1,294,715
NIH	1,371,530
Marine Institute	62,000
Other Source	388,439
DCENR	810,000
NSF	172,500
Total	171,040,890

SFI COMMUNICATING SCIENCE

2012 saw an increased focus on science and engineering in Ireland. In March 2012, the Discover Science & Engineering Programme (DSE) was moved to SFI from Forfás as part of the reorganisation of the public sector.

One of the most significant events supported by SFI in 2012 was the European Science Open Forum (ESOF) 2012 which took place in the Dublin Convention Centre from 11-15 July 2012. The event was attended by over 4,500 people. The conference provided a unique focus on scientific research and the benefit of science to the wider society. In addition, a wider public engagement and festival programme took place under the banner of Dublin City of Science throughout the year, with over 600,000 people taking part in science events across the country. ESOF was coordinated by the Office of the Chief Scientific Adviser, Prof Patrick Cunningham. SFI supported the event as a key partner and worked with the organisers throughout the planning and development of events and was represented on the Local Organising Committee, the Media and Marketing Sub-Committee and Chaired the Public Engagement Programme Sub-Committee.

Highlights of activities 2012:

- ▶ **Science Week** – DSE’s flagship initiative saw over 800 events take place across the country with over 200,000 participants taking part with a focus on Every Day Experimenting.
- ▶ **Smart Futures** – a joint initiative between industry and government led by DSE to promote STEM careers to second level students was piloted. 2012 saw direct engagement with over 1,300 students and over 58,000 visitors to www.smartfutures.ie
- ▶ **Discover Primary Science & Maths** has 3,376 primary schools registered with the programme, up by 12.5%. 421 primary schools received an award of Science & Maths Excellence in 2012.
- ▶ **The DSE websites** received 255,311 unique visits and 1.6 million page views during 2012. In addition, the SFI website received 79,720 unique visits and 468,000 page views.
- ▶ **Significant media coverage** generated by both DSE and SFI media engagement – 644 print articles with a value of approx €2.1 million.

IRISH PRIMARY SCHOOLS FIGURE OUT SCIENCE AND MATHS!

Primary schools across Ireland took part in Discover Primary Science and Maths Programme, which encourages primary school children and teachers to approach science and maths in a fun and interactive way.



Pictured with Minister for Research and Innovation, Mr Seán Sherlock TD, were primary school students from Scoil Mhuire, Gilford Road, Sandymount. L-R: Jennifer Dowling; Sasha Tiernan; and Izzie Dowling.

TAOISEACH VISITS BDI EDUCATION AND OUTREACH LAB



The Taoiseach, Mr Enda Kenny TD, visited the Biomedical Diagnostics Institute's (BDI) Education & Outreach Laboratory in July 2012. The visit was in association with the Centre for Talented Youth Ireland (CTYI) at Dublin City University. During his visit, the Taoiseach met with students from ages 8 to 12 who were performing chemistry experiments in the laboratory, including acid-base reactions and looking at hydrophobic materials.

CASE STUDY 07

BENCH TO BEDSIDE - TRANSLATING BDI RESEARCH INTO CLINICAL PRACTISE

The BDI's collaboration with industry partner, Biosurfit, has resulted in the direct translation of laboratory research into an Irish hospital.

The collaboration involved the engineering of an antibody to C-reactive protein (CRP), which was designed specifically by the BDI for integration with the Biosurfit spinit® detection platform. The focus of this Point-of-Care test is the early detection of bacterial versus viral infection, which allows clinicians to quickly and efficiently direct patient therapy. The spinit® CRP test was CE-certified in 2012

and will shortly undergo evaluation at the Coombe Women's Hospital, Dublin, specifically for the early detection of sepsis in the mother and baby. The success

of the collaboration was further highlighted when Prof Richard O'Kennedy, Dr Stephen Hearty and Dr Barry McDonnell - the BDI researchers responsible for this work - received the inaugural DCU President's Award for Innovation, sponsored by Fujitsu in 2013. BDI is a SFI-supported CSET.



Minister for Research and Innovation, Mr Seán Sherlock TD, and Director General of SFI, Prof Mark Ferguson, pictured with Dr James Kennedy from Athlone IT at the announcement of SFI funding under the Technology Innovation Development Award (TIDA) programme. Dr Kennedy's research will develop a smart artificial meniscus, the cartilage that protects the knee.

SFI NEW AWARDS 2012

224 new awards valued at over €77 million were approved across 18 programmes led by 19 research bodies. Total payments to research bodies in 2012 were €156 million. A complete list of all awards approved in 2012 is available at page 12. Examples of projects approved in 2012 included:

- A €35 million investment was made in 43 projects under the SFI Research Infrastructure Programme. The infrastructural funding was awarded to research groups where projects demonstrated partnerships and collaborations, links with industry, relevance to Ireland's prioritised research areas and sustainable planning. Projects supported included:
 - ☐ An "aberration corrected electron microscope" in CRANN, TCD, unique in Ireland, which will enable scientists to study materials within atoms in new ways, imaging at a magnification of ten million;
 - ☐ A marine energy testing site in Galway Bay to help source renewable energy from the power of the ocean (Marine Institute);
 - ☐ A Germ Free Facility in UCC for research in food and life sciences;
 - ☐ A "Microvascular tomography system" which will enable doctors to see high-contrast 3-dimensional images from inside the body (NUIG);



Prof Richard O'Kennedy receiving the award from DCU President, Prof Brian MacCraith and Regina Moran, CEO of Fujitsu Ireland.

- €12.8 million was invested in 23 research projects under the SFI 'Starting Investigator Research Grant' (SIRG) programme which focuses on supporting early career scientific researchers. The young researchers are working in key areas such as geothermal energy, marine ecology, thermoelectrics, tissue engineering, cancer, cystic fibrosis, immunology, neuroscience and schizophrenia.
- €7.2 million was invested in 65 research awards as part of SFI's Technology Innovation Development Award (TIDA) programme aimed at enabling SFI-funded research groups to focus on the first steps of an applied research project which may have a commercial benefit if further developed. The projects present significant opportunities for commercialisation of research and potential treatments in diverse areas such as new drug delivery system, new transistor devices, 4G wireless communication, cornea repair, SMART needles, hay fever, diabetes, cystic fibrosis, biomass, wastewater treatment and acoustic sensors to detect damage in pipes.

224
NEW AWARDS WERE APPROVED ACROSS

18
PROGRAMMES LED BY

19
RESEARCH BODIES

Total payments to research bodies in 2012 were:

€156
Million

CASE STUDY 08

GUT BACTERIA REGULATE HAPPINESS

Alimentary Pharmabiotic Centre (APC) scientists have shown that brain levels of serotonin, a brain chemical associated with mood, are regulated by the amount of bacteria in the gut during early life.

This research shows that normal adult brain function depends on the presence of gut microbes during development. Scientists at the SFI-supported APC used a germ-free mouse model to show that the absence of bacteria during early life significantly affected serotonin concentrations in the brain in adulthood.

Serotonin, the major chemical involved in the regulation of mood and emotion, is altered in times of stress, anxiety and depression and most clinically effective antidepressant drugs work by targeting this neurochemical. This research has multiple health implications as it shows that manipulations of the microbiota (e.g. by antibiotics, diet, or infection) can have profound knock-on effects on brain function. The research was carried out by Dr Gerard Clarke, Prof Fergus Shanahan, Prof Ted Dinan and Prof John F Cryan and colleagues at the APC in UCC.



Prof John Cryan and Prof Ted Dinan, APC, UCC.

CASE STUDY 09

WHO YOU GONNA CALL? MATHSBUSTERS

Has your company got a problem?

Would fixing it help to save you money? Who can you call? MACSI, that's who. The SFI-supported Mathematics Applications Consortium for Science and Industry (MACSI) at the University of Limerick held their annual workshop where applied mathematicians from around Europe spent an intense few days working on specific, real-world problems that companies presented.

The group tackled six problems that came in many shapes and sizes - from optimising delivery to consumers to analysing how water drips through a coffee percolator - but each one had the potential to be cracked by using mathematics as a tool to analyse and solve it. After day one, the group broke into smaller groups, brainstormed for three days, and then presented the results on the final day.

In 2012, some of the experts looked at how to assess the quality of materials stored in silos, while others worked out how to improve the design and sanitation of latrines, and sterilise a product for use in the healthcare market. Analog Devices asked the group to help them better focus their high-speed cameras in mobile phones. The group developed a real-time pulse that took the lens through the nonlinear region to a desired location while decreasing the time of oscillations at that point.



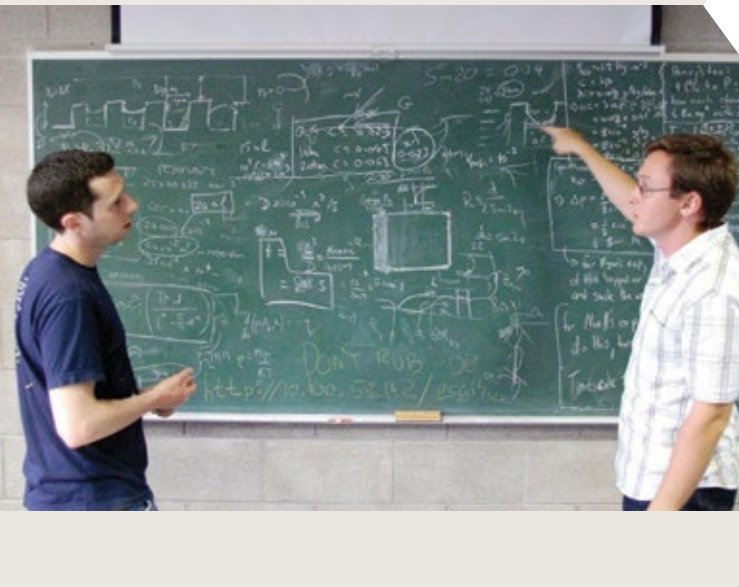
At the launch of SFI's Agenda 2020 strategy were Mr Richard Bruton, TD, Minister for Jobs, Enterprise and Innovation, Prof Mark Ferguson, Director General, SFI and Mr Seán Sherlock TD, Minister for Research and Innovation.

SFI INTERNATIONAL ACTIVITIES

SFI researchers contribute significantly to building Ireland's international scientific reputation. In 2012, there were over 2,500 academic collaborations with international partners in over 60 countries. SFI developed and launched a new programme to further support international cooperation, the International Strategic Collaboration Award (ISCA). The four successful consortia, under the inaugural ISCA 2012 programme, received funding of approximately €500,000 each. Successful institutes included UCD, UCC, NUIG, Teagasc, UL, DCU, RCSI, TCD, Carlow IT, WIT and DIT. Activities will focus on the designated partner countries of China, India and Brazil.

SFI undertook and engaged in a number of significant international events and showcases during 2012:

- In January 2012, SFI attended the Destination Europe Conference in Cambridge, USA. The conference was attended by over 200 delegates consisting mainly of US-based researchers (many of European origin) interested in new options for developing their careers by moving to, or returning to, Europe and knowledge-based SMEs interested in locating in Europe.
- SFI attended the 2012 MIT European Career Fair in Cambridge on 21 January. The European Career Fair at MIT is an annual recruiting event that connects employers from Europe with talented candidates, European and otherwise, who live in the US. Information was provided on SFI awards



including Starting Investigator Research Grant (SIRG) and the President of Ireland Young Research Award (PIYRA) in particular, with additional advice on the ERC awards.

- SFI, in partnership with the Embassy of Ireland, hosted a seminar entitled “The Irish Scientific Diaspora: Celebrating Success and Supporting Ireland’s Economy” as part of An Taoiseach’s St. Patrick’s Day programme in Washington DC. Speakers at the event included: Mr Peter Heffernan, CEO, Marine Institute; Prof Mark Ferguson, Director General, SFI; Dr Kristina Johnson, former Under Secretary at US DoE; Prof Mike Hinchey, Director of Lero - the Irish Software Engineering Research Centre; Prof Stuart Coulson, Stanford University, For-Profit/For-Benefit Business Angel; Dr David Loane, founder and committee member of Wild Geese Network of Irish Scientists; Dr Brid Ryan, founder and committee member of Wild Geese Network of Irish Scientists; and Dr Jack Bagley, President, Bagley Group and WGNIS Advisory Board Member.
- Embassy of Ireland, Berlin, and the Technische Universität (TU), Berlin, in partnership with SFI and the Office of the Chief Scientific Advisor, hosted a full day event in Berlin to promote greater partnerships between Ireland and Germany in the area of research and development and to celebrate Dublin City of Science 2012 hosting ESOF 2012. The event, based on the theme of Smart Cities and Homes of the Future, was attended by academics and business leaders with an interest in building upon existing and forging new collaborative relationships between Ireland and Germany.

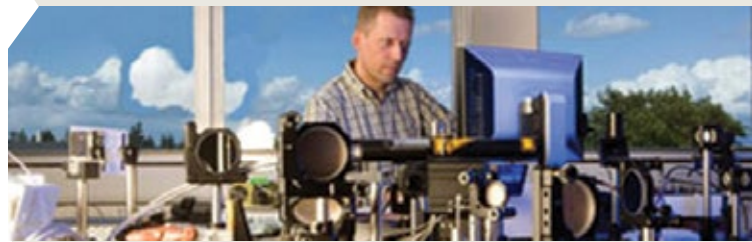


An Taoiseach, Mr Enda Kenny TD, Prof Mark Ferguson, SFI and Prof Nicholas Farrell at the briefing in Washington.

CASE STUDY 10

SHEDDING NEW LIGHT ON EYE DISEASE

Being able to image tiny structures and cells in the eye can potentially identify the early stages of degenerative blindness, and it may also help eye surgeons carry out corrective procedures.



So Dr Brian Vohnsen and his team at the Advanced Optical Imaging Group in UCD are developing ways to image the eye both closely and rapidly. One of their approaches uses a laser to build up an extremely high resolution image of the retina. Being able to view it up close may ultimately help clinicians detect the early signs of age-related macular degeneration, or AMD. One of the most common causes of sight loss in the over 50s, AMD involves the progressive death of light-sensitive cells in a key part of the retina.

To get that picture, they send a laser beam into the eye, using the pupil as a pivot point. The eye can then focus the beam and the team can scan across the retina. By detecting the small amount of light that is reflected back, the approach rapidly builds up a high resolution image.

At the moment, the usual test for signs of AMD looks for a loss of visual function, but imaging the eye instead may be able to pick up structural changes or ‘bumps’ that can appear on the retina in early AMD. The goal is to capture images from an important section of the retina called the fovea. Surgeons can carry out corrective procedures that remove some of the corneal tissue, and the imaging technology could ultimately allow them to monitor the corneal collagen in real time.

CASE STUDY 11

HOW TO BUILD BONE

You might take your skeleton for granted but you'll soon know if something goes wrong with it.

Bone grafting puts healthy bone or synthetic material at sites of disease or damage to help recovery, but it's an invasive procedure and it can take time to recover. Prof Fergal O'Brien at the Royal College of Surgeons in Ireland has developed a new bone graft substitute, HydroxyColl, based on products found naturally in the body. The material recruits the body's own regenerative mechanisms and encourages bone to repair, then it biodegrades over time to leave the regenerated bone in place. HydroxyColl is one of a number of products from Prof O'Brien's lab that are being commercialised through a spinout company, SurgaColl Technologies.



Prof Fergal O'Brien, Royal College of Surgeons Ireland.

- ▶ In May, Prof Mark Ferguson attended the inaugural meeting of the Global Research Council (GRC) in Washington DC, alongside the heads of research councils from 44 countries.
- ▶ In October, SFI held a showcase in the University of Sao Paulo, Brazil, which was addressed by Minister Costello as part of his trade mission. The event, titled 'Ireland and Brazil: Celebrating the Success of Partnerships and Forging Relationships for a New Generation of Scientists and Engineers', showcased the successes and mutual benefits of existing collaborations between Irish and Brazilian research teams across several fields of expertise including novel materials, nanotechnology, sensor research and future internet. In addition, representatives from Irish Government agencies presented the opportunities that exist in Ireland for Brazilian students and researchers through programmes such as Science Without Borders and EU projects.
- ▶ In October, SFI took part in an Education in Ireland Workshop, attended by both President Higgins and Minister Costello, in Brasilia at which Ireland's inclusion in the "Science Without Borders" programme was officially launched.
- ▶ SFI researchers played an active role in international conferences, with an increase of 35% in the number of international events attended in 2012.

Breakdown of Location and Member Roles at International Events in 2012

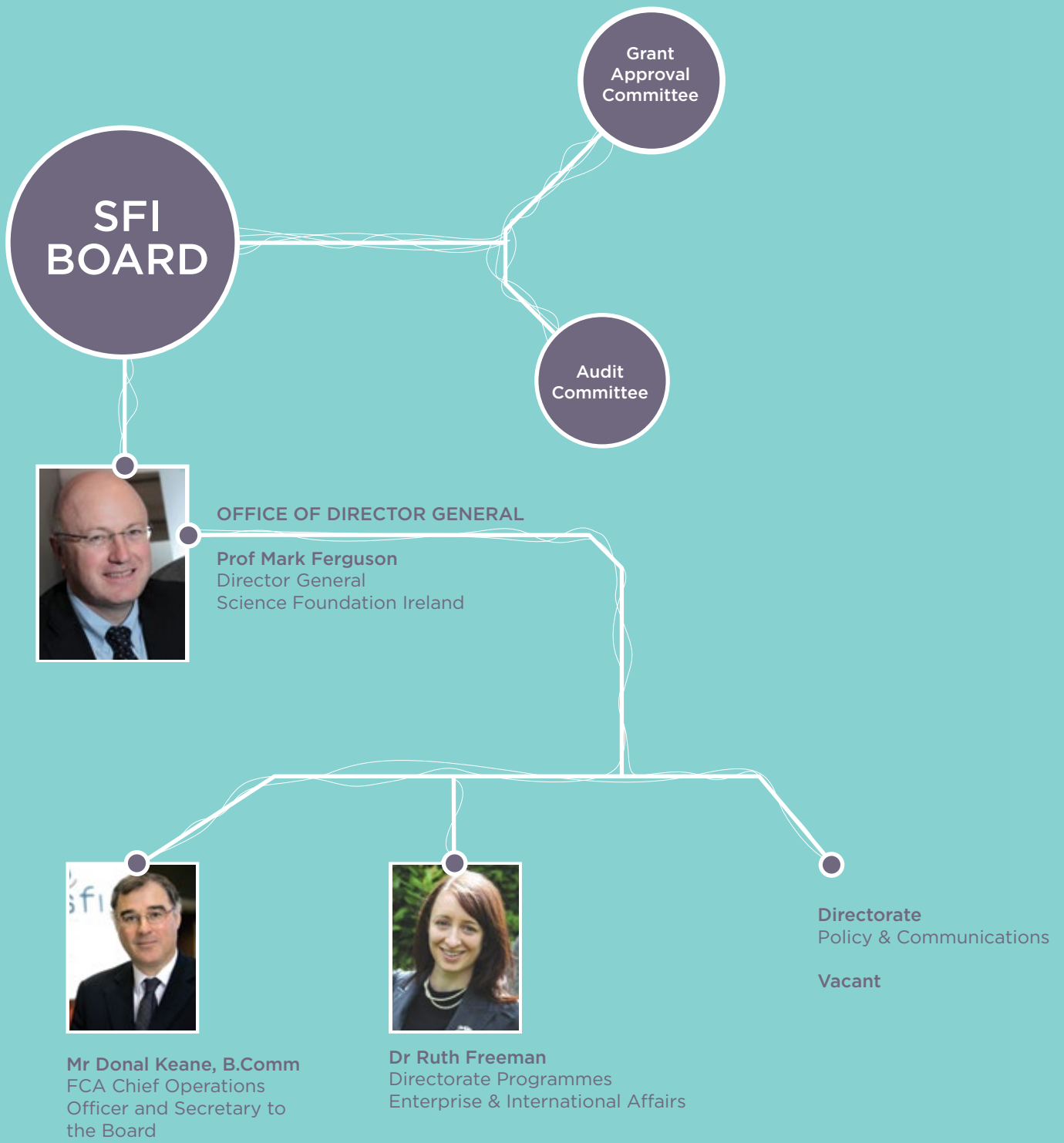
	Ireland	EU (excl Ireland)	Outside EU	Total
Host	179	41	18	238
Programme Committee Member	188	241	137	566
Invited Speaker	448	846	478	1772
Oral Presentation of a Paper	466	962	514	1942
Poster Presented	770	841	449	2060
Meeting participant	637	573	196	1406
Total	2688	3504	1792	7984

ORGANISATION
STRUCTURE
AND STATUTORY
NOTICES

ANNUAL
FINANCIAL
STATEMENTS 2012

31 DECEMBER 2012

ORGANISATION STRUCTURE



BOARD MEMBERS



1. Prof Patrick Fottrell
*Chairperson,
Science Foundation
Ireland*



2. Dr Jim Mountjoy
*Deputy Chairperson,
Science Foundation
Ireland*



3. Prof Mark Ferguson
*Director General,
Science Foundation
Ireland and Chief
Scientific Adviser to
the Government*



4. Mr Sean Aherne
*Senior Director
of Operations
American Medical
Systems Ireland Ltd*



5. Mr Peter MacDonagh
Research Consultant



6. Dr Martina Newell-McGloughlin
*Director International
Biotechnology Program,
Co-Director NIH
Program in Biomolecular
Technology, Co-Director
NSF CREATE IGERT
Adjunct Professor,
Plant Pathology, UC Davis*



7. Dr Rita R. Colwell
*Distinguished University
Professor, University
of Maryland, College
Park and Johns Hopkins
University Bloomberg
School of Public Health*



8. Ms Bernie Cullinan
*Chief Executive
Officer, Clarigen*



9. Dr Pat Duane
*Global VP Operations
Creganna Tactx
Medical*



10. Mr Dermot Curran
*Assistant Secretary
General/Director of
the Innovation and
Investment Division
of the Department
of Jobs, Enterprise
and Innovation*



11. Ms Mary Doyle
*Deputy Secretary
General, Department
of Education and
Skills*



12. Prof Liam Madden
*Corporate Vice
President of
Engineering, Xilinx*

STATUTORY AND OTHER NOTICES

1. BOARD MEMBERS - REGISTER OF INTERESTS

The Board operates to the best practice corporate governance principles and in accordance with the guidelines set out in the Code of Practice for the Governance of State Bodies, as issued by the Department of Finance, both in its activities and in its use of committees. In accordance with these guidelines, SFI Board Members register their interests in other undertakings with the Secretary.

2. ETHICS IN PUBLIC OFFICE ACTS, 1995 AND STANDARDS IN PUBLIC OFFICES ACT, 2001

SFI became subject to the Ethics in Public Office Acts 1995 and 2001 on the 1 January 2005. SFI has complied with the provisions of the Act.

3. FREEDOM OF INFORMATION ACT, 1997 AND FREEDOM OF INFORMATION (AMENDMENT) ACT, 2003.

SFI became a prescribed body under the Freedom of Information Act, 1997 from 31 May 2006. SFI complies fully with the Act. Requests for information under this Act should be addressed to the FOI Officer, SFI, Wilton Park House, Wilton Place, Dublin 2.

4. PROMPT PAYMENT OF ACCOUNTS ACT, 1997

SFI comes under the remit of the Prompt Payment of Accounts Act, 1997 which came into effect on 2 January 1998, and the European Communities (Late Payment in Commercial Transactions) Regulations 2002, which came into effect on the on 7 August 2002. It is the policy of SFI to ensure that all invoices are paid promptly. Specific procedures are in place that enable SFI to track all invoices and ensure that payments are made before the due date. Invoices are registered daily and electronic payments are issued as required to ensure timely payments. There were no late payments in 2012.

5. BOARD MEETINGS/ATTENDANCE

The SFI Board normally consists of 12 members appointed by the Minister for Jobs, Enterprise and Innovation, as set out in Section 8 of the Industrial Development (Science Foundation Ireland) Act 2003. The quorum for the SFI Board is five members. Six scheduled SFI Board meetings were held in 2012 as follows:

Date	Venue	Number of Attendees
09 February 2012	Board Room, Wilton Park House	11/12
26 March 2012	Board Room, Wilton Park House	9/12
28 May 2012	Board Room, Wilton Park House	12/12
10 September 2012	Board Room, Wilton Park House	9/10
22 October 2012	Board Room, Wilton Park House	9/10
17 December 2012	Board Room, Wilton Park House	9/11

Board Members 2012

Name of Director	Attendance at Board Meetings (6 meetings)
Patrick Fottrell (Chairman)	6 out of 6
Sean Ahern	6 out of 6
Tom Boland (1)	3 out of 3
Rita Colwell	5 out of 6
Bernie Cullinan	6 out of 6
Dermot Curran (2)	1 out of 3
Mary Doyle (3)	1 out of 1
Pat Duane	6 out of 6
Mark Ferguson	6 out of 6
Peter MacDonagh	5 out of 6
Jim Mountjoy	3 out of 6
Martina Newell-McGloughlin	5 out of 6
Martin Shanagher (2)	3 out of 3
John Travers (1)	3 out of 3

- (1) In compliance with Sections 9(3) and 9(4) of the Industrial Development (Science Foundation Ireland) Act 2003 relating to Board Membership, the following Board Members were selected for retirement in July 2012 as the longest serving members: Mr Tom Boland and Mr John Travers.
- (2) Mr Martin Shanagher resigned from the Board as DJEI representative on 28 June 2012 and was replaced by Mr Dermot Curran on 1 September 2012.

- (3) Ms Mary Doyle was appointed to the Board on 5 December 2012 following nomination by the Minister of Education and Skills.

Members of Committees of the Board 2012

Board Sub Group on Programme Grants (now known as the Grant Approval Committee – effective 2013)

Dr Martina Newell-McGloughlin (*Chairperson*), Prof Mark Ferguson, Mr Peter MacDonagh, Dr Gary Crawley, Dr Rita Colwell and Dr Eucharia Meehan.

SFI Audit Committee

Dr Jim Mountjoy (*Chairperson to 30 January 2012 then retired from Audit Committee – still Board member*), Ms Bernie Cullinan (*Chairperson from 31 January 2012*) Mr Aidan Hodson, Mr Sean Aherne, Dr Pat Duane and Mr Tom Boland (*to 23 July 2012 when retired from the Board*).

Management Development and Remuneration Committee

(disbanded December 2012)

Prof Patrick Fottrell (*Chairperson*), Mr Sean Aherne and Mr Martin Shanagher.

Board Sub Committee Meetings

1. The Audit Committee held six meetings.
2. The Board Sub Group on Programme Grants held four (virtual) meetings.
3. The Management Development and Remuneration Committee held no meetings.

6. EMPLOYMENT EQUALITY ACTS 1998 AND 2004

SFI wholeheartedly supports the principle of equal opportunities in employment. It opposes all forms of discrimination on the grounds of colour, race, nationality, sexual orientation, ethnic or national origin (and/or area of origin), religion, gender, marital status, age or disability. SFI's commitment to implementing equal opportunities is reflected in its policies, practices and procedures, recruitment, promotion, training, use of non-discriminatory language in company documents and publications. The objective is to ensure that all staff are selected and treated only on the basis of their abilities, knowledge and qualifications.

7. SAFETY, HEALTH AND WELFARE AT WORK ACT 1989

In accordance with the above Act, SFI in consultation with Forfás implements appropriate measures to protect the safety, health and welfare of all employees and visitors within its offices.

8. CLIENTS' CHARTER

SFI has published a Clients' Charter setting out its commitment to a high quality of service. This Charter includes a procedure for dealing with complaints. In 2012, no complaints were received under the Charter.

9. ANNUAL ENERGY EFFICIENCY REPORTING BY PUBLIC SECTOR BODIES

Under Statutory Instrument (SI) 542, 2009 the public sector has specific energy reporting obligations. SFI's offices are located in Wilton Park House, Wilton Place, Dublin 2. The building facilities are managed by Forfás. In each area relevant to energy usage and services to the building, SFI is satisfied that Forfás endeavours to employ the most energy efficient and environmentally friendly means available. In compliance with the SI, Forfás' annual report and statement of accounts 2012 includes details of energy usage in the building, actions undertaken in 2012 to improve the energy performance in the building.

10. BOARD EXPENSES

The total board expenses for 2012 were

Expenditure Heading	€
Foreign Travel	€40,748
Domestic Travel	€1,853
Accommodation/Subsistence/Incidental expenses	€6,711

11. DIRECTOR GENERAL'S REMUNERATION

Prof Mark Ferguson was appointed Director General with effect from 16 January 2012. Prof Ferguson's salary for the year was €181,364 and standard public sector pension arrangements were applied. No performance related bonus was applicable.

Prof Ferguson was also appointed Chief Scientific Adviser to the Government, a role formerly under the administration of Forfás. There is no remuneration for this role and all administration costs for the duties are absorbed by SFI.

Dr Graham Love was appointed as Director General of SFI with effect from 18 October 2011 pending the appointment of a Director General on a more permanent basis. In 2012, Dr Graham Love received a salary as Director General of €6,388 up to 15 January 2012. Dr Love stepped down as Director General on the 15 January 2012.

REPORT OF COMPTROLLER & AUDITOR GENERAL

REPORT FOR PRESENTATION TO THE HOUSES OF THE OIREACHTAS

I have audited the financial statements of Science Foundation Ireland for the year ended 31 December 2012 under the Industrial Development (Science Foundation Ireland) Act 2003. The financial statements, which have been prepared under the accounting policies set out therein, comprise the accounting policies, the income and expenditure account, the balance sheet, the cash flow statement and the related notes. The financial statements have been prepared in the form prescribed under Section 24 of the Act, and in accordance with generally accepted accounting practice in Ireland.

Responsibilities of the Members of the Board

The Board is responsible for the preparation of the financial statements, for ensuring that they give a true and fair view of the state of Science Foundation Ireland's affairs and of its income and expenditure, and for ensuring the regularity of transactions.

Responsibilities of the Comptroller and Auditor General

My responsibility is to audit the financial statements and to report on them in accordance with applicable law.

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation.

My audit is carried out in accordance with the International Standards on Auditing (UK and Ireland) and in compliance with the Auditing Practices Board's Ethical Standards for Auditors.

Scope of Audit of the Financial Statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements, sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of

- whether the accounting policies are appropriate to Science Foundation Ireland's circumstances, and have been consistently applied and adequately disclosed
- the reasonableness of significant accounting estimates made in the preparation of the financial statements, and
- the overall presentation of the financial statements.

I also seek to obtain evidence about the regularity of financial transactions in the course of audit.

In addition, I read Science Foundation Ireland's annual report to identify material inconsistencies with the audited financial statements. If I become aware of any apparent material misstatements or inconsistencies, I consider the implications for my report.

Opinion on the Financial Statements

In my opinion, the financial statements, which have been properly prepared in accordance with generally accepted accounting practice in Ireland, give a true and fair view of the state of Science Foundation Ireland's affairs at 31 December 2012 and of its income and expenditure for 2012.

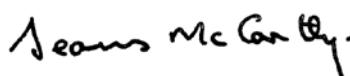
In my opinion, proper books of account have been kept by Science Foundation Ireland. The financial statements are in agreement with the books of account.

Matters on which I report by exception

I report by exception if

- I have not received all the information and explanations I required for my audit, or
- my audit noted any material instance where money has not been applied for the purposes intended or where the transactions did not conform to the authorities governing them, or
- the information given in Science Foundation Ireland's annual report is not consistent with the related financial statements, or
- the Statement on Internal Financial Control does not reflect Science Foundation Ireland's compliance with the Code of Practice for the Governance of State Bodies, or
- I find there are other material matters relating to the manner in which public business has been conducted.

I have nothing to report in regard to those matters upon which reporting is by exception.



Seamus McCarthy

For and on behalf of the
Comptroller and Auditor General

Date: 20 June 2013

STATEMENT OF BOARD MEMBERS' RESPONSIBILITIES

FOR 2012 ANNUAL FINANCIAL STATEMENTS

Section 24 (2) of the Industrial Development (Science Foundation Ireland) Act, 2003 requires Science Foundation Ireland to keep, in such form as may be approved by the Minister for Jobs, Enterprise and Innovation with the consent of the Minister for Public Expenditure and Reform, all proper and usual accounts of money received and expended by it and, in particular, to keep in such form as aforesaid all special accounts as the Minister may from time to time direct. In preparing those financial statements, Science Foundation Ireland is required to:


- ▶ select suitable accounting policies and apply them consistently;
- ▶ make judgements and estimates that are reasonable and prudent;
- ▶ prepare the financial statements on the going concern basis unless it is inappropriate to presume that Science Foundation Ireland will continue in operation;
- ▶ disclose and explain any material departures from applicable Accounting Standards.
- ▶ The Board is responsible for keeping proper books of account which disclose with reasonable accuracy at any time its financial position and which enable it to ensure that the financial statements comply with the overall requirements of Section 24 of the Industrial Development (Science Foundation Ireland) Act, 2003. These books of account are located at the Foundation's headquarters, Wilton Park House, Wilton Place, Dublin 2. The Board is also responsible for safeguarding its assets and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

On behalf of the Board:



Prof Patrick Fottrell
Chairman

Date: 10 June 2013



Prof Mark Ferguson
Director General

Date: 10 June 2013

STATEMENT ON INTERNAL FINANCIAL CONTROL

On behalf of the Board of Science Foundation Ireland I acknowledge our responsibility for ensuring that an effective system of internal financial control is maintained and operated.

The system can only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or detected in a timely period.

The Board has taken steps to ensure an appropriate control environment is in place by:

- Clearly defining and documenting management responsibilities and powers;
- Establishing formal procedures for monitoring the activities and safeguarding the assets of the organisation;
- Developing a culture of accountability across all levels of the organisation.

The Board has also established processes to identify and evaluate business risks by:

- Working closely with Government and various Agencies to ensure that there is a clear understanding of Science Foundation Ireland goals and support for the Agencies' strategies to achieve those goals.
- Carrying out regular reviews of strategic, plans both short and long term, and evaluating the risks to bringing those plans to fruition
- Setting annual targets for each area of our business followed by regular reporting on the results achieved;

The system of internal financial control is based on a framework of regular management information, administration procedures including segregation of duties, and a system of delegation and accountability. In particular it includes:

- A comprehensive budgeting system with an annual budget which is reviewed and agreed by the Board;
- Regular reviews by the Board of periodic and annual financial reports which indicate financial performance against forecasts;
- Setting targets to measure financial and other performance;
- Formal project management disciplines.
- Clearly defined capital investment control guidelines.

Science Foundation Ireland has established an Internal Audit function, in accordance with the Framework set out in the Code of Practice on the Governance of State Bodies, which reports directly to the Audit Committee. An annual Internal Audit work plan is agreed by the Audit Committee. The work of internal audit is informed by analysis of the risks to which the body is exposed. The Audit Committee meets six times a year and reviews the outcome of the specific internal audits and the on-going adequacy and effectiveness of the system of internal financial control. These reports highlight deficiencies or weaknesses, if any, in the system of internal financial control and the recommended corrective measures to be taken where necessary.

A Risk Management Committee, made up of the Senior Management team, meets on a regular basis to review and manage risks identified throughout the Foundation. These risks are ranked and updated on a comprehensive SFI Risk Register, which is reported as a standing item on the SFI Audit Committee agenda.

The Board's monitoring and review of the effectiveness of the system of internal financial control is informed by the work of the Internal Auditor and the Audit Committee which oversees the work of the Internal Auditor, the control exercised by the Executive managers within SFI who have responsibility for the development and maintenance of the financial framework, and comments by the Comptroller and Auditor General in his Management Letter.

I confirm that the Board conducted a review of the effectiveness of the system of internal financial controls for 2012.

Signed on behalf of the Board



Prof Patrick Fottrell
Chairman

ACCOUNTING POLICIES

The basis of accounting and significant accounting policies adopted by Science Foundation Ireland are as follows;

1) BASIS OF ACCOUNTING

The Financial Statements have been prepared under the historical cost convention in the form approved by the Minister for Jobs, Enterprise and Innovation with the consent of the Minister for Public Expenditure and Reform under the Industrial Development (Science Foundation Ireland) Act 2003. The Financial Statements are prepared on an accruals basis, except where stated below and are in accordance with generally accepted accounting practice. Financial Reporting Standards, recommended by the Accounting Standards Board, are adopted as they become effective.

2) INCOME RECOGNITION

Income from Oireachtas Grant and Grant refunds represent actual cash receipts in the year.

3) FIXED ASSETS

Fixed Assets are stated at cost less accumulated depreciation. Depreciation is calculated in order to write off the cost of fixed assets over their estimated useful lives (see Note 6).

4) CAPITAL ACCOUNT

The Capital Account represents the unamortised funds utilised for the acquisition of Fixed Assets and is written down in line with the depreciation policy for these assets.

5) FOREIGN CURRENCIES

Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates ruling at the Balance Sheet date. Revenues and costs are translated at the exchange rates ruling at the dates of the underlying transactions. The resultant surpluses or deficits are dealt with in the Income and Expenditure Account.

6) SUPERANNUATION

Science Foundation Ireland is established as an agency of Forfás in accordance with Section 6 (1) of the Industrial Development (Science Foundation Ireland) Act, 2003. Staff employed at the Foundation are legally employees of Forfás and are seconded to the Foundation, consequently, under Sections 2 and 3 of the Second Schedule of the Industrial Development Act, 1993, Forfás is responsible for all employee pension entitlements. Forfás prepares and administers pension schemes for the granting of pension entitlements to its staff including staff seconded to Science Foundation Ireland. Forfás is also responsible for pension reporting requirements, including those set out under FRS 17.

7) OPERATING LEASES

The rentals under operating leases are accounted for as they fall due.

8) RESEARCH GRANT PAYMENT

Amounts paid to Research Bodies on foot of research grants awarded are charged to the Income and Expenditure account in the year of issue.

INCOME AND EXPENDITURE ACCOUNT

FOR THE YEAR ENDED 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
Income			
Oireachtas Grant	1	171,039	166,642
Other Income	2	922	252
Profit on Disposal of Fixed Asset		12	-
		171,973	166,894
Expenditure			
Pay	3	3,978	4,175
Administration Expenses	4	3,965	3,434
IReL (E Journals) Subscription	5	5,000	5,000
Depreciation	6	232	114
Grants	7	156,927	154,049
Discover Science & Engineering	8(b)	1,788	-
		171,890	166,772
Operating Surplus for the Year		83	122
Contribution to the Exchequer	16	-	(20)
Net Surplus for the Year		83	102
Balance at beginning of Year		416	337
Transfer from/(to) Capital Account	9	53	(23)
Accumulated Surplus at end of Year		552	416

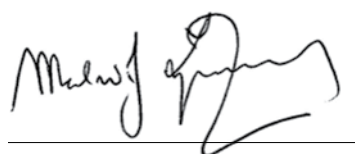
There are no recognised gains or losses, other than those dealt with in the Income and Expenditure Account.

The Accounting Policies, Cash Flow Statement and Notes 1 to 17 form part of these Financial Statements.

On behalf of the Board:



Prof Patrick Fottrell
Chairman



Prof Mark Ferguson
Director General

Date: 10 June 2013

Date: 10 June 2013

BALANCE SHEET

AS AT 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
Fixed Assets			
Tangible Fixed Assets	6	386	439
Current Assets			
Cash at Bank		556	465
Accounts Receivable	10	349	111
		905	576
Accounts Payable	11	353	160
Net Current Assets		552	416
Net Assets		938	855
Represented By:			
Capital Account	9	386	439
Income and Expenditure Account		552	416
		938	855

The Accounting Policies, Cash Flow Statement and Notes 1 to 17 form part of these Financial Statements.

On behalf of the Board:



Prof Patrick Fottrell
Chairman

Date: 10 June 2013



Prof Mark Ferguson
Director General

Date: 10 June 2013

CASH FLOW STATEMENT

FOR THE YEAR ENDED 31 DECEMBER 2012

	Notes	2012 €'000	2011 €'000
Reconciliation of Surplus for Year to Net Cash Flow from Operations			
Surplus for Year		83	102
Bank Interest	2	(7)	(3)
(Profit) on Disposal of Fixed Assets		(12)	0
Depreciation Charge	6	232	114
(Increase)/Decrease in Accounts Receivable	10	(238)	-
Increase/(Decrease) in Accounts Payable	11	193	(152)
Net Cash Flow from Operations		251	61
Cash Flow Statement			
Net Cash Flow from Operations		251	61
Returns on Investment and Servicing of Finance			
- Bank Interest	2	7	3
Cash Flow before Capital Expenditure		258	64
Capital Funding			
Receipts from Sale of Tangible Fixed Asset		12	-
- Purchase of Tangible Fixed Assets	6	(179)	(137)
Increase/(Decrease) in Cash		91	(73)
Reconciliation of Increase in Cash to Cash at Bank			
Movement in Cash for the Year		91	(73)
Cash at Bank at 01 January		465	538
Cash at Bank at 31 December		556	465

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

1 OIREACHTAS GRANT

(a) Science Foundation Ireland

Funded by Department of Jobs, Enterprise and Innovation Vote 32, Science and Technology Development Programme

		2012	2011
		€'000	€'000
Pay	Subhead B.4.2	4,123	4,287
Administration Expenses	Subhead B.4.2	4,116	3,555
E Journals Subscription	Subhead B.4.2	5,000	5,000
Research Grants	Subhead B.4.2	156,000	153,800
Research Grants - International Leverage*	Subhead B.4.3.1	200	-
		169,439	166,642
		1,600	-
		171,039	166,642

(b) Discover Science and Engineering [Note 8a]

*International Leverage funding received from the Department of Jobs, Enterprise and Innovation as a contribution to SFI's funding of the International Strategic Cooperation Award Programme (ISCA) which supports new and existing research-based collaborations between Ireland's Higher Education Institutions (HEIs) and partner organisations in three designated countries: Brazil, the People's Republic of China and India.

(c) Under Section 11 of the Industrial Development Act, 1993, as amended by Section 4 (a) of the Industrial Development Act, 2009, the aggregate amount of grants made by the Minister to Forfás and its Agencies, to enable them to discharge their obligations and liabilities shall not exceed €7,000,000,000. At 31 December, 2012 the aggregate amount so approved was €4,615,732,754.

2 OTHER INCOME

(a) Science Foundation Ireland

	2012	2011
	€'000	€'000
EU Nano Science Fund [Note (i)]	26	160
Starting Investigator Research Grant (SIRG) Funding [Note (ii)]	691	-
Health Research Board - Co Fund US/Ireland R & D Partnership	10	69
IT Carlow - Refund on expired Award (Extra Exchequer Receipt, see Note 16).	-	20
Sub Total Grant Co-Funding	727	249
Bank Interest	7	3
	734	252
(b) Discover Science and Engineering [Note 8a]		
European Space Agency [Note (iv)]	188	-
	922	252

(i) EU Nano Science E+ Collaborative Research Call set up to encourage Transnational networking and Co-ordination of Nano science research to generate new knowledge on the fabrication, study, control, or manipulation of individual nanoscale projects.

(ii) EU Marie Curie Fund contribution towards awards made in 2012.

(iii) Contributions received under Grant Co-Funding above are included in Total Grant payments expended in 2012 of €156,926,981.

(iv) Funding arising from an annual contract between Science Foundation Ireland and ESA for the implementation of a European Space Education Resource Office (ESERO) in Ireland.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

3 PAY

	2012 €'000	2011 €'000
Pay Costs comprise:		
Wages and Salaries	3,427	3,479
Agency Pay	230	375
Social Welfare Costs	313	311
Superannuation Costs	8	10
Total	3,978	4,175
Sanctioned Positions	52.5	50
Full Time Employed (at year end)	41	44

Science Foundation Ireland collected pension related deductions from staff salaries of €268,040 (2011: €261,718) which were paid over to the Department of Jobs, Enterprise and Innovation.

Prof Mark Ferguson was appointed Director General with effect from 16 January 2012. Prof Ferguson's salary for the year was €181,364 and standard public sector pension arrangements were applied. No performance related bonus was applicable.

Prof Ferguson was also appointed Chief Scientific Adviser to the Government, a role formerly under the administration of Forfás. There is no remuneration for this role and all administration costs for the duties are absorbed by SFI.

Dr Graham Love was appointed as Director General of SFI with effect from 18 October 2011 pending the appointment of a Director General on a more permanent basis. In 2012 Dr Graham Love received a salary as Director General of €6,388 up to 15 January 2012. Dr Love stepped down as Director General on the 15 January 2012.

4 (A) ADMINISTRATION EXPENSES

	2012 €'000	2011 €'000
Board Members' Remuneration and Expenses - (see below)	160	135
Programme Management	910	855
Facilities	1,092	832
Professional Fees	248	238
Legal Fees*	139	3
Public Engagement	85	85
Publications and On Line Content	158	123
Events and Sponsorship	441	499
IT Support & Infrastructure	321	296
Travel & Subsistence Costs	104	109
HR Management	141	123
Office Furniture & Equipment	12	11
General Office Expenses	131	105
Audit Fee	23	20
Total	3,965	3,434

* SFI, and certain identified staff members within SFI, were subjected to a sustained and anonymous campaign of harassment from June 2012 onwards on a small number of internet "blog sites", and through unsolicited e-mails and postings on Twitter. Legal advice was sought to assess the options available to SFI with respect to (a) potentially identifying the source of the offensive material, (b) assessing whether civil or criminal proceedings could be taken against any parties and (c) giving consideration to how best to prevent further material being published. Discussions with the legal advisors are on-going.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

4 (B) BOARD REMUNERATION AND EXPENSES

	2012	2011
	€	€
Board Remuneration		
Board Members		
Patrick Fottrell (Chairman)	20,520	19,440
Mark Ferguson	-	-
Sean Ahearne	11,970	11,340
Tom Boland	-	-
Rita Colwell	11,970	11,307
Bernie Cullinan	11,970	11,340
Dermot Curran	-	-
Mary Doyle	-	-
Pater MacDonagh	11,970	11,340
Martina Newell McGloughlin	11,970	11,307
James Mountjoy	11,970	11,340
Martin Shanagher	-	-
John Travers	6,770	11,340
Pat Duane	11,970	11,812
Frank Gannon	-	(577)
Graham Love*	-	459
Don Thornhill	-	(355)
	111,080	110,093
Board Members Expenses	49,312	25,095
	160,392	135,188

Board Members are paid fees as determined by the Minister of Jobs, Enterprise and Innovation with the consent of the Department of Public Expenditure & Reform. Certain Board Members are excluded from receiving fees from SFI under the "One Person One Salary" remuneration arrangements whereby public servants cannot receive Board Fees in addition to a salary.

Board Fees for 2011 take account, where relevant, of deductions for a retrospective reduction in Fees of 5% payable in respect of 2010 and subsequent years. This reduction was advised to Science Foundation Ireland by the then Department of Enterprise, Trade & Employment in January 2011. Prof Frank Gannon and Dr Don Thornhill repaid the arrears due to SFI as they were no longer members of the SFI Board in January 2011.

* Dr Graham Love stepped down as interim Director General and hence from the Board on the 15 January 2012.

Board Members expenses in 2012 amounted to €49,312 broken down as €40,748 in respect of foreign travel, primarily in relation to the attendance at Board meetings of three overseas Board members, two of whom are based in the United States, and €1,853 in relation to domestic travel and mileage. The balance of €6,711 relates to accommodation, subsistence and incidental expenses.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

5 IREL (E JOURNALS) SUBSCRIPTION

2012	2011
€'000	€'000
5,000	5,000

IRel the Irish Research eLibrary is a nationally funded electronic research library which provides access to electronic journals and databases to the 7 Universities, RCSI and the 14 Institutes of Technology. This funding allows IRIS Electronic Information Services, the universities consortium which administers the initiative, to purchase electronic resources for use by the Universities and Institutes of Technologies.

The Department of Jobs, Enterprise and Innovation assumed responsibility for payment of part of the annual subscription to IRel in 2011 and made payments of €5m for both 2011 and 2012, through SFI to IRIS, which is based at University College Dublin.

6 TANGIBLE FIXED ASSETS

	Computer Equipment €'000	Computer Software €'000	Computer Software Development €'000	Motor Vehicles €'000	Fixtures & Fittings €'000	Total €'000
Cost						
At 1 January 2012	709	383	365	47	197	1,701
Transfer from Software Development	-	365	(365)	-	-	-
Additions	6	173	-	-	-	179
Disposals	(105)	(383)	-	(47)	(13)	(548)
At 31 December 2012	610	538	-	-	184	1,332
Depreciation						
At 1 January 2012	639	383	-	47	193	1,262
Charge for Year	50	179	-	-	3	232
Disposals	(105)	(383)	-	(47)	(13)	(548)
At 31 December 2012	584	179	-	(0)	183	946
Net Book Amount						
At 1 January 2011	70	-	365	0	4	439
Net Movement for Year	(44)	359	(365)	0	(3)	(53)
At 31 December 2012	26	359	-	0	1	386

The cost of Tangible Fixed Assets is written off in equal instalments over their expected useful lives as follows:

- | | | |
|-------|--|---------|
| (i) | Computer Equipment & Computer Software | 3 years |
| (ii) | Motor Vehicles | 4 years |
| (iii) | Fixtures & Fittings | 5 years |

Note: Computer Software in Development is only depreciated when ultimately commissioned.

The Disposal of Computer Software represents the scrapping of an obsolete Award Management System, which has been replaced. It was carried at Nil value in the books.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

7 GRANTS

	2012 €'000	2011 €'000
(a) Analysis of Grants Paid		
Biotechnology Grants	66,971	74,869
Information and Communications Technology Grants	88,129	76,161
Research Frontiers Grants	1,827	3,019
Total	156,927	154,049
(b) Grant Commitments		
Outstanding Grant Commitments as at 01 January*	294,042	361,474
Grants Approved during the year	77,035	104,787
Decommitments during the year	(8,820)	(18,190)
Grant Payments made in the year	(156,927)	(154,049)
Refund on expired Award paid over to Exchequer (see Note 16)	-	20
Outstanding Commitments as at 31 December	205,330	294,042

* The Charles Parsons Energy Awards, formerly under the Department of Communications, Energy and Natural Resources (DCENR) were transferred to the Department of Jobs, Enterprise and Innovation (DJEI) in December 2009, at which time Science Foundation Ireland were requested to formally manage and administer the awards.

Under the agreed instalments final payments on these awards amounting to €3,936,000 are due in 2013.

8 DISCOVER SCIENCE & ENGINEERING

	2012 €'000	2011 €'000
a) Funding		
Oireachtas Grant	1,600	-
European Space Agency	188	-
	1,788	-
b) Expenditure		
Pay & Expenses	168	-
Communications	319	-
Programme Activities	1,301	-
Total	1,788	-

The Discover Science & Engineering Programme was set up to encourage and develop an interest in Science, Technology, Engineering and Maths (STEM) amongst primary, secondary and third level students, and the wider public. Science Foundation Ireland took over administration of this programme from Forfás with effect from 1 January 2012.

The Discover Science & Engineering Programme is accounted for by matching income and expenditure. An over/under expenditure on the programme is shown in accounts receivable (Note 10)/accounts payable (Note 11) as appropriate.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

9 CAPITAL ACCOUNT

	2012 €'000	2011 €'000
At 1 January	439	416
Transfer from Income & Expenditure Account		
- To fund Fixed Asset acquisitions	179	137
- Cost of Disposals	(548)	-
- Amortised in line with asset depreciation	(232)	(114)
- Depreciation on Disposals	548	-
Net Movement	(53)	23
At 31 December	386	439

10 ACCOUNTS RECEIVABLE

	2012 €'000	2011 €'000
General Debtors*	92	8
Prepayments	257	103
Total	349	111

* General Debtors includes ESA funding due for 2012 of €5,778

11 ACCOUNTS PAYABLE

	2012 €'000	2011 €'000
General Creditors	52	10
Accruals	115	145
Deferred Income JPI 2013*	153	-
Interagency Balance**	33	5
Total	353	160

* EU funding for JPI Joint Programming Conference "Agenda for Future & Achievements to Date" which took place in Dublin in early 2013 under the Irish Presidency of the Council of the European Union.

**Interagency Balance relates to the balance owed by Science Foundation Ireland to Forfás at 31 December 2012 in respect of charges made on Science Foundation Ireland as a tenant of Forfás in Wilton Park House.

12 COMMITMENTS UNDER OPERATING LEASES

Science Foundation Ireland is a tenant of Forfás in Wilton Park House and currently has no commitments under operating leases on the building, but pays rent to Forfás as a contribution to the lease costs incurred by Forfás.

13 TAXATION

Section 227 of the Taxes Consolidation Act, 1997, provides an exemption from tax on the income of non-commercial state bodies except where interest is subject to tax at source (e.g. DIRT). The net amount of such income is credited to the Income & Expenditure Account.

SFI is liable to employer taxes in Ireland and complies with related withholding, reporting and payment obligations.

NOTES TO THE ACCOUNTS

FOR THE YEAR ENDED 31 DECEMBER 2012

14 BOARD MEMBERS - DISCLOSURE OF TRANSACTIONS

In the normal course of business, Science Foundation Ireland may enter into contractual arrangements with undertakings in which Science Foundation Ireland Board Members are employed or otherwise interested. Science Foundation Ireland has adopted procedures in accordance with the guidelines issued by the Minister for Public Expenditure and Reform in relation to the disclosure of interests by Board Members and these procedures have been adhered to by Science Foundation Ireland during the year.

In 2012 no transactions involving Board Members either employed or otherwise occurred.

15 CONTINGENCIES AND LEGAL ACTIONS

There are no contingencies or legal actions which require specific provision in the Financial Statements.

16 CONTRIBUTION TO THE EXCHEQUER

In accordance with public finance procedures receipts in respect of grant refunds and surpluses on pay and administration activities, to the extent that they exceed the Foundations expenditure requirements are refundable to the Exchequer.

	2012	2011
	€'000	€'000
Research Grant Refunded - IT Carlow	-	20
Total	-	20

17 APPROVAL OF FINANCIAL STATEMENTS

The Financial Statements were approved by the Board of Science Foundation Ireland on 10th June 2013.

GRANT COMMITMENTS AND PAYMENTS ANALYSIS 2012

2012 Payments by Programme	
	€'000
CSET	36,493,230
Research Infrastructure	34,949,062
Investigators	32,592,682
SRC	20,388,199
Research Frontiers Programme	7,070,197
TIDA	6,559,674
STOKES	5,405,026
SIRG	3,450,303
Centres	2,011,571
International Strategic Cooperation Award	1,795,068
President of Ireland Young Researcher Award (PIYRA)	1,401,316
Maths Initiative	813,074
Engineering - Professorship and Lectureship Programme	796,485
US-Ireland R&D Partnership	726,943
European Research Council support Award	667,115
Translational Research Award	616,510
Conference & Workshop	596,584
SFI Internship	194,635
UREKA	161,225
NanoSci-E+ Transnational Call	95,448
Joint Programming Initiatives	49,307
SFI Scholarship Summer Research Internship	36,242
Supplements	31,697
PICA	14,244
Walton	13,371
Short Term Travel Fellowship	(2,219)
Grand Total	156,926,987

2012 Payments by Institution	
	€'000
Trinity College Dublin	39,098,331
University College Dublin	25,101,137
National University of Ireland, Galway	23,149,098
Dublin City University	16,229,141
University of Limerick	13,628,566
University College Cork	12,072,671
Tyndall National Institute	8,115,785
National University of Ireland, Maynooth	6,887,087
Waterford Institute of Technology	5,449,419
Royal College of Surgeons in Ireland	2,764,368
Dublin Institute of Technology	913,709
Teagasc	702,430
Health Research Board	665,817
Cork Institute of Technology	662,075
Dublin Institute for Advanced Studies	559,527
NIBRT	346,777
Dundalk Institute of Technology	300,486
Institute of Technology Tallaght	205,045
Institute of Technology Sligo	62,695
Athlone Institute of Technology	8,278
Royal Irish Academy	4,545
Grand Total	156,926,987

Note: Certain awards made to NUIG are co-funded by the European Regional Development Fund and the National Strategic Reference Framework EU Structure Funds (NSRF).



EUROPEAN REGIONAL
DEVELOPMENT FUND

2012 Grant Commitments by Programme	
	€'000
Research Infrastructure	34,949,062
CSET	13,514,129
SIRG	12,850,757
TIDA	7,261,739
PIYRA	2,165,121
International Strategic Cooperation Award	1,994,521
Translational Research Award	851,977
European Research Council Support Award	741,238
Conference & Workshop	708,858
Centres - Supplement	700,000
US-Ireland R&D Partnership	403,470
Maths Initiative Supplement	301,469
Principal Investigator Supplement	231,132
SFI Internship	194,635
Charles Parsons Energy Research Awards supplement	119,312
US-Ireland R&D Partnership Planning Grant	21,720
SFI Scholarship Summer Research Internship	19,174
TIDA Training Award 2012	7,000
Grand Total	77,035,314

2012 Number of Awards by Institution	
Trinity College Dublin	56
University College Dublin	38
National University of Ireland, Galway	22
Tyndall National Institute	20
Dublin City University	14
University of Limerick	13
University College Cork	13
Royal College of Surgeons in Ireland	11
National University of Ireland, Maynooth	10
Waterford Institute of Technology	8
Cork Institute of Technology	4
Dublin Institute of Technology	4
Dundalk Institute of Technology	2
Health Research Board	2
NIBRT	2
Teagasc	2
Dublin Institute for Advanced Studies	1
Queen's University Belfast	1
Royal Irish Academy	1
Grand Total	224

2012 Number of Awards by Programme	
TIDA	65
Conference & Workshop	61
Research Infrastructure	43
SIRG	23
US-Ireland R&D Partnership Planning Grant	6
European Research Council Support Award	3
International Strategic Cooperation Award	3
Principal Investigator Supplement	3
SFI Internship	3
SFI Scholarship Summer Research Internship	3
PIYRA	2
TIDA Training Award 2012	2
Translational Research Award	2
Centres - Supplement	1
Charles Parsons Energy research Award supplement	1
CSET	1
Maths Initiative Supplement	1
US-Ireland R&D Partnership	1
Grand Total	224

LIST OF SFI AWARDS MADE IN 2012

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Dr Ian O'Driscoll	SIRG	Ultrashort pulse generation in InAs quantum dots	Cork Institute of Technology	519,176
Dr Nicola Piana Agostinetti	SIRG	Seismic imaging and monitoring of the upper crust: exploring the potential low-enthalpy geothermal resources of Ireland	Dublin Institute for Advanced Studies	563,974
Dr Manus Biggs	SIRG	Engineering neuroelectrodes for deep brain stimulation through biomimetic conducting polymers	National University of Ireland, Galway	571,107
Dr Cindy Smith	SIRG	Molecular Microbial Ecology of Ammonia Oxidation in Coastal Bay Sediments	National University of Ireland, Galway	576,174
Dr Kristin K. Nicodemus	SIRG	Systems biology approach to elucidate the genetic architecture of schizophrenia: synthesis of genomics, structural/functional magnetic resonance imaging and cognition.	Trinity College Dublin	572,924
Dr Shane Bergin	SIRG	Surface Energetics of Low Dimensional Nanostructures	Trinity College Dublin	571,364
Dr Mark Ahearne	SIRG	Development of a Novel Stem Cell based Approach for Corneal Tissue Engineering	Trinity College Dublin	570,459
Dr Ivana Savic	SIRG	Thermoelectric properties of complex bulk materials from first principles	Tyndall National Institute	518,874
Dr Jonathan West	SIRG	Deterministic Microfluids for Recording Native-State Receptor Dynamics with Microsecond Resolution	Tyndall National Institute	574,172
Dr Robert J. Young	SIRG	Quantum dot molecules for single-photon memory	Tyndall National Institute	574,774
Dr Eoghan McGarrigle	SIRG	Towards the Development of 21st Century Synthetic Methods for Glycoscience: Catalyst-Controlled Stereoselective Glycosylation	University College Dublin	575,524
Dr Judith Coppinger	SIRG	Characterisation of Hsp90 trafficking pathways in Cystic Fibrosis.	University College Dublin	575,574
Dr Martin O'Halloran	SIRG	Microwave Imaging for the Detection and Classification of Early-Stage Breast Cancer	National University of Ireland, Galway	526,423
Dr Bryan Hennelly	SIRG	Surface Enhanced Raman Spectroscopy and Optical Tweezers for Diagnosis of Cancer and for Multicomponent Blood Analysis	National University of Ireland, Maynooth	562,944
Dr Jonathan Bones	SIRG	A Multi-Omics Investigation to Decipher the Role of Altered Bioprocessing on the Quality of Therapeutic Proteins – Is the Product Really the Process?	NIBRT	529,683
Dr Sinead Corr	SIRG	Exploration of the role of microRNA(miR)-21 in gut homeostasis and disease.	Trinity College Dublin	575,893
Dr Plamen Stanislavov Stamenov	SIRG	Development of High-Field, Real-Time Point Contact Andreev Reflection Techniques and Studies of Spin Polarisation and Propagation in Novel Materials	Trinity College Dublin	566,956
Dr Jian Zhao	SIRG	Digital Signal Processing based Optical Communication Systems	Tyndall National Institute	574,774
Dr Peter Ossieur	SIRG	Towards Green Photonic Ultra High-Speed Transceivers	Tyndall National Institute	571,511

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Dr Damien Thompson	SIRG	Engineering Multivalent Proteins for Regenerative Medicine (EMPoRium)	Tyndall National Institute	511,724
Dr Marcus J. Claesson	SIRG	Molecular diagnostics and metatranscriptomics of colonic bacteria in inflammatory bowel disease	University College Cork	574,674
Dr Run Long	SIRG	Excitation energy and charge transfer dynamics in new light harvesting photovoltaic materials from theoretical simulation	University College Dublin	516,524
Dr David Croucher	SIRG	Crosstalk between ErbB2 and breast cancer associated receptor tyrosine kinases in resistance to ErbB2 targeted therapies	University College Dublin	575,552
Dr Nick Bennett	TIDA	Nanostructured next-generation silicon based thermoelectric power reclamation (nextstep)	Dublin City University	122,599
Dr Andreas Heise	TIDA	Development of low-cost bioanalytical platform for therapeutic glycoproteins for the biopharmaceutical industry	Dublin City University	121,323
Prof Tia Keyes	TIDA	Peptide directed metal complex probes for intra-cell sensing	Dublin City University	128,779
Prof Robert Forster	TIDA	GeneSys: A high sensitivity and selectivity DNA detection platform	Dublin City University	130,197
Dr Aoife Morrish	TIDA	Electrochemically-responsive monolithic chromatography	Dublin City University	82,139
Prof Josef Van Genabith	TIDA	Iterative Retraining of Machine Translation with Post-edits to Increase Post-Editing Productivity in Localisation Workflows	Dublin City University	127,483
Dr PJ Cullen	TIDA	Non-invasive cold plasma wound healing (Plasma-Aid)	Dublin Institute of Technology	116,365
Prof Gerald Farrell	TIDA	Ultrasensitive Fibre Optic Nose for Environmental, Food & Medical Devices	Dublin Institute of Technology	96,615
Dr Aidan Meade	TIDA	PredCEtTion of Patient Response to Neo-Adjuvant Chemoradiotherapy using label free spectroscopic imaging (PANACEA)	Dublin Institute of Technology	127,540
Dr Eva Szegezdi	TIDA	Development of Ex Vivo Diagnostic Multivariate Index Assay for PredCEtTion of Treatment Efficacy in Acute Leukemias	National University of Ireland, Galway	124,065
Dr Stephen Cunningham	TIDA	Novel direct detection of early bacterial infection for bovine mastitis	National University of Ireland, Galway	129,206
Dr Donal Leech	TIDA	Development of a biological oxygen demand monitoring system for wastewaters	National University of Ireland, Galway	86,125
Dr Thomas Ritter	TIDA	Regulating immunogenicity and tolerogenicity through cell surface glycosylation (Acronym: GlycoShield)	National University of Ireland, Galway	129,644
Prof Paul Murphy	TIDA	New macrocyclic peptidomimetics with potential in cancer therapy	National University of Ireland, Galway	128,802
Prof Charles Spillane	TIDA	Application of unique lineage-specific orphan gene cassettes to confer drought stress tolerance in crop plants of commercial importance.	National University of Ireland, Galway	120,759
Prof Stefan Decker	TIDA	Feasibility study into the social semantic journalism	National University of Ireland, Galway	126,796
Prof Manfred Hauswirth	TIDA	Research, Design, and development of a demonstrator integrating private commercial data, Public Sector data and geographic mapping data with a simple visual user interface to support retail business planning	National University of Ireland, Galway	127,527
Dr Bryan Hennelly	TIDA	"High speed lensless holographic microscope for imaging particles in large volumes of fluid flow with applications in pharmaceutical manufacturing; specifically for purity testing and protein aggregation."	National University of Ireland, Maynooth	119,113
Dr Tianji Li	TIDA	LoFi: A Precise and Social Indoor-Localization WiFi System	National University of Ireland, Maynooth	119,937

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Prof John P Lowry	TIDA	Understanding Cognition in terms of Electrophysiology and Neurochemistry: Novel Animal Models and Analytics.	National University of Ireland, Maynooth	121,631
Dr Warren Thomas	TIDA	Development of novel anti-tumour peptides for the treatment of malignant pleural mesothelioma	Royal College of Surgeons in Ireland	61,784
Dr Kevin McGuigan PhD BSc FInstP	TIDA	A smart phone/ laptop application to screen for and detect central and obstructive sleep apnea events. The APn-App	Royal College of Surgeons in Ireland	96,004
Dr Adolfo Lopez-Noriega	TIDA	Collagen-based scaffolds as a platform for the controlled release of bioactive molecules	Royal College of Surgeons in Ireland	129,169
Dr Celine Marmion	TIDA	An In Vivo study of novel multi-functional metalloid drug candidates as anti-cancer agents: a crucial step in their commercialisation	Royal College of Surgeons in Ireland	69,950
Dr Catherine Greene	TIDA	Capture affinity technology to isolate messenger RNA-specific microRNAs (miR-CATCH)	Royal College of Surgeons in Ireland	99,005
Prof Jochen Prehn	TIDA	Circulating microRNAs in HNF1A-MODY carriers: Evaluation as novel biomarkers and therapeutic targets	Royal College of Surgeons in Ireland	128,175
Prof Dr Mathias O. Senge	TIDA	Phosphorous porphyrins as simple and efficient imaging and treatment dyes for photodynamic cancer therapy	Trinity College Dublin	129,282
Prof Marina Lynch	TIDA	Development of a blood-based marker for early detection of cognitive dysfunction	Trinity College Dublin	128,603
Prof Graham Cross	TIDA	Hi throughput production of nanostructures for non-conventional surfaces and materials.	Trinity College Dublin	107,859
Dr Wolfgang Schmitt	TIDA	Advanced Carbon Capture Technologies: Reversible Adsorption and Desorption of CO ₂ using Coordination Complexes	Trinity College Dublin	125,213
Prof Martin Hegner	TIDA	Lab-On-a-Chip port for Nanomechanical diagnostic assays (LOCHNESS)	Trinity College Dublin	129,485
Prof Paula E. Colavita	TIDA	Natural antifouling coatings via photochemical reactions	Trinity College Dublin	89,085
Prof John Michael David Cosy	TIDA	Magnetically enhanced electro-coagulation system for heavy metal removal from wastewater	Trinity College Dublin	57,890
Prof Peter Humphries	TIDA	On the development of a systemically-deliverable low molecular weight therapeutic for dry AMD.	Trinity College Dublin	129,462
Dr David Edward Lewis	TIDA	iOmega T - An Instrumented Replacable Computer-Aided-Translation Tool	Trinity College Dublin	118,305
Prof James G Lunney	TIDA	"A novel technique for the manufacture of nanoparticle films for application in SERS and catalysis"	Trinity College Dublin	122,015
Prof Mike Lyons	TIDA	"Innovative Electrochemical Non enzymatic Glucose Sensors for Biomedical Diagnostics."	Trinity College Dublin	120,759
Dr Giaoyin Lu	TIDA	Monolithic wavelength tunable slotted single mode laser array	Trinity College Dublin	126,576
Dr Eoin Scanlan	TIDA	"A New Cost Effective Methodology for the Synthesis of Anti-Diabetes Therapeutics"	Trinity College Dublin	90,061
Prof Igor Shvets	TIDA	Underground high voltage AC power cable technology as a substitute for overhead power lines	Trinity College Dublin	122,541
Dr Hongzhou Zhang	TIDA	"A Photon-Electron Correlation System for 3D Nanoscale Metrology"	Trinity College Dublin	115,685
Prof Vincent Wade	TIDA	Linguabox:Automated open Content Repurposing Service to support Personalized elearning	Trinity College Dublin	111,789

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Dr Simon Osborne	TIDA	Enhancing the bandwidth of optical frequency combs through use of multi-wavelength discrete mode lasers	Tyndall National Institute	127,033
Dr Alan O'Riordan	TIDA	Development of next generation highly sensitive nanowire sensors for electrochemical-based-immuno-sensing-NASCENCE	Tyndall National Institute	122,323
Dr Lorraine Nagle	TIDA	Design of ID Nanoporous PtNi nanotubular catalysts for Oxygen reduction reaction in Fuel Cells	Tyndall National Institute	106,731
Dr James Rohan	TIDA	Probing the limits of ultrathin solution based metal and alloy deposition	Tyndall National Institute	122,037
Dr Gerard McGlacken	TIDA	Optimised detection of key biomarkers of Pseudomonas aeruginosa towards a clinical application	University College Cork	128,824
Dr Anne Moore	TIDA	Dermal Drug Delivery for Lymphatic Targeting	University College Cork	83,615
Prof Fergal O'Gara	TIDA	Development of small molecule therapeutics for medical intervention: anti-biofilm inhibitors for the medical device sector.	University College Cork	129,389
Dr Ruslan I. Dmitriev	TIDA	Novel High Performance phosphorescent probes for imaging cellular oxygen	University College Cork	99,809
Dr Mark Tangney	TIDA	Development of Novel Bacterial Imaging Probes	University College Cork	108,313
Dr Thomas Doyle	TIDA	Captured at Sea Tags (CASTAWAY)	University College Cork	61,411
Dr Dean Venables	TIDA	A robust and low cost Continuous Emissions Monitor for real-time measurements of mercury emissions	University College Cork	88,135
Prof Seamas Donnelly	TIDA	"Development novel anti-inflammatory compounds targeting Macrophage Migration Inhibitory Factor's (MIF) tautomerase enzymatic activity."	University College Dublin	122,598
Dr Suzanne Foley	TIDA	"Novel Applications of a Gamma-Ray Concentrator for Nuclear Medicine"	University College Dublin	95,455
Dr Paul Doherty	TIDA	Developing an optimum substructure health monitoring system for offshore wind turbines (OPTI-WIND)	University College Dublin	83,009
Dr Patrick Hayden	TIDA	"Deep ultraviolet photon source for nano-metrology - the development of the world's brightest tabletop light source for current and future nanoindustries"	University College Dublin	115,697
Dr Keith Murphy	TIDA	Characterisation of a novel biomarker panel for clinical and preclinical neurotherapeutics	University College Dublin	122,895
Prof Cairiona O' Driscoll	TIDA	"Formulation development and deposition of novel anti-bacterial coatings using atomic laser deposition to prevent infections associated with orthopaedic trauma (long bone femoral) implants."	University College Cork	127,236
Dr Darran O'Connor	TIDA	Development of a novel antibody for the cocaine and amphetamine-regulated transcript	University College Dublin	125,200
Prof Eoin Casey	TIDA	Development of low cost green technology for biofueling control in the process industry	University College Dublin	84,757
Dr John Fitzpatrick	TIDA	"Design and Development of Mobile Virtual Private Network for Enterprises"	University College Dublin	102,693
Prof Shane Ward	TIDA	Smart Networked Sensing Systems in Agriculture: A Poultry Industry Focus	University College Dublin	96,926
Prof Elfed Lewis	TIDA	Evaluating the Commercial Feasibility of an all optical Fibre Non-Invasive Total Haemoglobin Concentration and Cardiac Output Sensor	University of Limerick	116,402

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Prof Gary Walsh	TIDA	Development of an alternative processing technology, using thermoacidophilic enzymes, for the production of second generation bioethanol	University of Limerick	95,909
Dr Owen Conlan	TIDA Training Award 2012	Wripl cross site personalisation - Kevin Koidl	Trinity College Dublin	3,500
Prof Richard O'Kennedy	TIDA Training Award 2012	DICAST - Leading the way in drug discovery - Paul Leonard	Dublin City University	3,500
Dr Aidan Coffey	Research Infrastructure	MALDI-TOF mass spectrometer	Cork Institute of Technology	155,877
Dr Ambrose Furey	Research Infrastructure	ICP-HRMS mass spectrometer	Cork Institute of Technology	384,537
Prof Fiona Regan	Research Infrastructure	Ocean Energy Test Bed	Dublin City University	2,299,831
Prof Ian W. Marison	Research Infrastructure	Analytical Ultra Centrifuge	NIBRT	287,439
Prof Martin Leahy	Research Infrastructure	Lazr Label-free in vivo Microvascular Tomography	National University of Ireland, Galway	536,231
Prof Peter McHugh	Research Infrastructure	High Resolution MicroCT Scanner	National University of Ireland, Galway	294,694
Prof Vincent O'Flaherty	Research Infrastructure	Bioflux Microfluidics System for Cell Analysis under Shear	National University of Ireland, Galway	186,075
Prof John Lowry	Research Infrastructure	Long-term In-Vivo Electrochemical (LIVE) Neurochemical Behaviour Equipment	National University of Ireland, Maynooth	170,384
Prof Paul Moynagh	Research Infrastructure	CryoViz whole small animal cryo-imaging system	National University of Ireland, Maynooth	348,262
Prof Sean Doyle	Research Infrastructure	Thermo Scientific Q Exactive benchtop LC-MS/MS mass spectrometer	National University of Ireland, Maynooth	566,540
Dr Kieran Meade	Research Infrastructure	BD Accuri® C6 flow cytometer	Teagasc	64,168
Dr Paul Cotter	Research Infrastructure	Ion Torrent DNA Sequencing Platform	Teagasc	383,975
Prof James Meaney	Research Infrastructure	Diagnostic Ultrasound: novel system with Elastography & Ultrafast Doppler	Trinity College Dublin	116,886
Prof Kingston Mills	Research Infrastructure	Flow Cytometry Cell Sorter	Trinity College Dublin	587,300
Prof Shane O'Mara	Research Infrastructure	MRI Systems upgrade (Advance III platform with MRI Cryoprobe, etc.)	Trinity College Dublin	1,333,841
Prof Valeria Nicolosi	Research Infrastructure	Aberration-corrected TEM	Trinity College Dublin	4,695,584
Dr Peter O'Brien	Research Infrastructure	Laser Welding System	Tyndall National Institute	347,364
Dr Peter O'Brien	Research Infrastructure	Advanced Fibre-Waveguide Packaging	Tyndall National Institute	212,445
Dr Peter O'Brien	Research Infrastructure	Solder Ink-Jet Dispenser	Tyndall National Institute	263,244
Dr Saibal Roy	Research Infrastructure	Magnetron Sputtering System with Multi-Metal targets	Tyndall National Institute	737,999
Prof Martyn Pemble	Research Infrastructure	Materials Deposition, Characterisation and Process Development System*	Tyndall National Institute	540,521
Prof Paul Townsend	Research Infrastructure	High Speed Photonic Device and System Testbed (Real-time oscilloscope)	Tyndall National Institute	305,748
Prof Ger Fitzgerald	Research Infrastructure	Cross Flow Filtration Unit - GMP	University College Cork	372,231
Prof Ken O'Halloran	Research Infrastructure	National Transgenic and Germ Free Facility	University College Cork	1,088,119
Prof Tony Lewis	Research Infrastructure	National Ocean Energy Test Facility Enhancement	University College Cork	1,225,888
Prof J.M.D. MacElroy	Research Infrastructure	Advanced materials/surface characterization system including XPS/AES/SIMS	University College Dublin	1,102,818
Prof Mark O'Malley	Research Infrastructure	Real Time Digital Simulator System	University College Dublin	422,457

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Prof Pat Guiry	Research Infrastructure	500 MHz Nuclear Magnetic Resonance Spectrometer	University College Dublin	602,894
Prof Dick Fitzgerald	Research Infrastructure	2D ESI LC-MS/MS incorporating automated table top peptide synthesis	University of Limerick	784,103
Prof Gavin Walker	Research Infrastructure	Pharmaceutical Powder Extrusion Suite	University of Limerick	345,659
Prof Kieran Hodnett	Research Infrastructure	Environmental SEM with in-situ Raman Microscopy	University of Limerick	346,224
Prof Michael McCarthy	Research Infrastructure	Polymer Composites Processing Suite	University of Limerick	346,486
Prof Noel O'Dowd	Research Infrastructure	Imaging X-Ray Photoelectron Spectrometer (IXPS)	University of Limerick	694,199
Prof Tim McGloughlin	Research Infrastructure	3D Multi Material Printing System	University of Limerick	287,490
Dr Peter McLoughlin	Research Infrastructure	Glovebox-mounted Scanning Probe Microscope (SPM) system	Waterford Institute of Technology	338,718
Dr Peter McLoughlin	Research Infrastructure	Next generation X-ray Micro Tomography (XMT) system	Waterford Institute of Technology	1,076,096
Dr Peter McLoughlin	Research Infrastructure	Multifunctional Supercritical Fluid (SCF) and extrusion and injection moulding system	Waterford Institute of Technology	307,721
Dr Willie Donnelly	Research Infrastructure	FAME Testbed	Waterford Institute of Technology	1,956,246
Prof Terry Smith	Research Infrastructure	Strategic Funds	National University of Ireland, Galway	1,000,000
Dr Mary Shire	Research Infrastructure	Strategic Funds	University of Limerick	2,500,000
Prof Vinny Cahill	Research Infrastructure	Strategic Funds	Trinity College Dublin	1,000,000
Prof Ray O'Neill	Research Infrastructure	Strategic Funds	National University of Ireland, Maynooth	624,000
Prof J.C. Desplat	Research Infrastructure	High-Performance Computing infrastructure	National University of Ireland, Galway	3,708,768
Dr Jean Christophe Desplat	Centres - Supplement	ICHEC	National University of Ireland, Galway	700,000
Dr John Morrow	Charles Parsons Energy research Awards	Electrical Power & Energy Systems Research Cluster	Queen's University Belfast	119,312
Prof Vincent Wade	CSET	Centre for Next Generation Localisation (CNGL) II	Trinity College Dublin	13,514,129
Prof Des Fitzgerald	European Research Council Support Award	SFI ERC Support Prof Frederic Dias ERC Advanced Grant	University College Dublin	203,160
Prof Vinny Cahill	European Research Council Support Award	SFI ERC Support Award - Prof Dan Bradley-Decoding Domesticated DNA	Trinity College Dublin	278,083
Prof Vinny Cahill	European Research Council Support Award	SFI ERC Support - Prof Aoife McLysaght - Dosage Sensitive Genes in Evolution and Disease	Trinity College Dublin	259,995
Prof Alan Harvey	International Strategic Cooperation Award	Ireland-Brazil ISCA Programme	Dublin City University	715,000
Prof Des Fitzgerald	International Strategic Cooperation Award	Ireland-China ISCA Programme	University College Dublin	701,375
Prof Ray O'Neill	International Strategic Cooperation Award	Ireland-China ISCA Programme	National University of Ireland, Maynooth	578,146
Prof Stephen O'Brien	Maths Initiative Supplement	MACSI-Mathematics Applications Consortium for Science & Industry	University of Limerick	301,469
Prof Mark Little	PIYRA	Dissecting the pathogenesis of PR3-ANCA associated vasculitis using humanised mice	Trinity College Dublin	1,227,574
Dr James McInerney	Conference & Workshop	Society for Molecular Biology and Evolution Annual Conference	National University of Ireland, Maynooth	31,900

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Prof Walter Kolch	Conference & Workshop	SBI International Systems Medicine Conference	University College Dublin	8,625
Prof Noel O'Connor	Conference & Workshop	13th International Workshop on Image Analysis for Interactive Multimedia Services	Dublin City University	2,529
Dr Simon Laurence	Conference & Workshop	Quantitative analytical methods for the solid state	University College Cork	3,145
Dr Brian Vohnsen	Conference & Workshop	Optoinformatics 2012	University College Dublin	7,400
Prof Cliona O'Farrelly	Conference & Workshop	Liver Immunology, Infection & Inflammation Workshop	Trinity College Dublin	11,500
Prof Igor Shvets	Conference & Workshop	Novel TCO materials for energy and optoelectronics applications	Trinity College Dublin	7,900
Prof Michael Bruen	Conference & Workshop	International Water Association World Congress on Water, Climate and Energy	University College Dublin	35,500
Prof John Donegan	Conference & Workshop	From peering at atoms to gazing at the stars - a symposium to celebrate the vision of Edward Hutchinson Synge	Trinity College Dublin	4,700
Dr Gerald Mills	Conference & Workshop	The 8th International Conference on Urban Climates	University College Dublin	25,000
Dr Lawrence Stapleton	Conference & Workshop	International Stability and Systems Engineering 2012	Waterford Institute of Technology	5,000
Prof Harry Holthofer	Conference & Workshop	25th Annual Conference of the European Diabetic Nephropathy Study Group	Dublin City University	8,800
Prof Frank Barry	Conference & Workshop	International Mesenchymal Stem Cell Conference	National University of Ireland, Galway	8,000
Prof Martin Clynes	Conference & Workshop	A celebration of Translational Cellular Biotechnology: Stem cells & Tissue Engineering Cancer Biomarkers and Recombinant Protein Manufacture	Dublin City University	7,600
Prof Dolores Cahill	Conference & Workshop	The International Partnership for Critical Marker of Disease, 10th Annual Cardiovascular Biomarkers Symposium	University College Dublin	2,500
Dr Dermot Cox	Conference & Workshop	62nd Scientific & Standardization Committee Meeting of the International Society on Thrombosis and Haemostasis	Royal College of Surgeons in Ireland	2,000
Dr Alan O'Riordan & Dr Eamonn Cashell	Conference & Workshop	Drop Reaction and Microfluidic Analysis	Cork Institute of Technology	15,000
Prof Xiaojun Wang	Conference & Workshop	China Ireland Symposium on ICT 2012	Dublin City University	9,000
Dr Ciaran Simms	Conference & Workshop	The International Research Council on Biomechanics of Injury (IRCOBI) Annual Scientific Conference" + "IRCOBI Pre-conference Workshop on Pedestrian and Cyclist Impact Mechanisms and Injury Prevention Strategies	Trinity College Dublin	2,000
Prof Michael Gilchrist	Conference & Workshop	KARIM Open Forum on Environmental Solutions for Water and Agriculture	University College Dublin	3,000
Dr Brian Vohnsen	Conference & Workshop	6th EOS Topical meeting on Visual and Physiological Optics	University College Dublin	2,600
Prof Padraig Cunningham & Dr Neil Hurley	Conference & Workshop	6th ACM Conference on Recommender Systems	University College Dublin	26,515
Dr Colin Caprani	Conference & Workshop	Bridge and Concrete Research in Ireland Conference 2012	Dublin Institute of Technology	5,000
Dr Stefan Hutzler	Conference & Workshop	International Workshop on Packing Problems	Trinity College Dublin	5,000
Prof Ake Rasmuson	Conference & Workshop	Crystal Growth of Organic Materials 10	University of Limerick	9,000
Dr Stephen O'Brien	Conference & Workshop	Problem Solving with Industry (ESGI 87)	University of Limerick	10,000

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Prof Kumlesh Dev	Conference & Workshop	Block MS Ireland 2nd Annual Meeting: Neuroprotection at the cellular, in vivo and clinical level	Trinity College Dublin	3,500
Dr Marijke Beltman	Conference & Workshop	16th conference of the European Society of Domestic Animal Reproduction and the Annual Conference of the EU-AI vets	University College Dublin	5,500
Dr Denis Dowling	Conference & Workshop	22nd Annual BioInterface Conference	University College Dublin	20,574
Dr Aideen Long	Conference & Workshop	ISI 2012: Current and Emerging Themes in Immunology	Trinity College Dublin	6,600
Prof David Coker	Conference & Workshop	ACAM Workshop Series: Bridging Simulation, Experiment and Industrial Application in Biology and Advanced Materials (Year IV)	University College Dublin	30,000
Dr Anding Zhu	Conference & Workshop	The International Workshop on Integrated Nonlinear Microwave and Millimetre-wave Circuits	University College Dublin	2,000
Dr Dmitri Zaitsev	Conference & Workshop	8th William Rowan Hamilton Geometry and Topology Workshop	Trinity College Dublin	5,600
Prof Yuri Volkov	Conference & Workshop	2012 World Molecular Imaging Congress	Trinity College Dublin	24,750
Prof Michael Lyons	Conference & Workshop	Electrochem 2012	Trinity College Dublin	5,000
Dr Ed Lavelle	Conference & Workshop	European Mucosal Immunology Group Meeting (EMIG 2012)	Trinity College Dublin	10,000
Prof Des Fitzgerald	Conference & Workshop	UCD Imagine Science Film Festival	University College Dublin	25,000
Prof Andrew Ellis	Conference & Workshop	European Conference on Optical Communications 2017	Tyndall National Institute	6,000
Dr Sheila Donegan	Conference & Workshop	Robert Boyle Summer School	Waterford Institute of Technology	10,000
Prof Mathias Senge	Conference & Workshop	3rd Sino-Ireland Bilateral Symposia on "Frontiers in Synthetic Chemistry"	Trinity College Dublin	3,700
Prof David Henshall	Conference & Workshop	The 7th Annual Meeting of Neuroscience Ireland	Royal College of Surgeons in Ireland	6,000
Dr James Geraghty	Conference & Workshop	BCY1 - Breast Cancer in Young Women Conference 2012	University College Dublin	10,000
Dr John Fitzpatrick	Conference & Workshop	Wireless Days 2012 Conference	University College Dublin	6,000
Dr Sheila Donegan	Conference & Workshop	Maths Week Ireland	Waterford Institute of Technology	30,000
Dr Andrew Shearer	Conference & Workshop	CERN Accelerating Science Exhibition	National University of Ireland, Galway	10,000
Prof John Boland	Conference & Workshop	Nanoweek Workshop 2012 - "Nanoscience Excellence with Impact"	Trinity College Dublin	6,000
Dr Sandra Collins	Conference & Workshop	Realising the Opportunities of Digital Humanities	Royal Irish Academy	5,050
Dr Eleanor Jennings	Conference & Workshop	GLEON 14 Meeting (Global Lake Ecological Observatory Network)	Dundalk Institute of Technology	1,850
Dr Aoibheann Bird	Conference & Workshop	Thesis in 3	University College Dublin	4,000
Prof Michael Berndt	Conference & Workshop	Ireland/Taiwan Workshop on Cancer & Stem Cell Biology	Dublin City University	2,500
Dr Stephen Keely	Conference & Workshop	"The 5th Annual Meeting of the Irish Epithelial Physiology Group"	Royal College of Surgeons in Ireland	500
Dr Sarah O'Neill	Conference & Workshop	International Conference for Healthcare and Medical Students (ICHAMS)	Royal College of Surgeons in Ireland	1,300
Prof Denis Shields	Conference & Workshop	3rd PhD Symposium in Computational Biology	University College Dublin	3,600
Prof Vojislav Krstic	Conference & Workshop	Synthetic Nanocarbon Materials Symposium	Trinity College Dublin	3,120
Dr Sheila Donegan	Conference & Workshop	Maths Week Ireland	Waterford Institute of Technology	30,000
Dr David Finn	Conference & Workshop	6th European Workshop on Cannabinoid Research	National University of Ireland, Galway	12,000
Dr Michael J Gorman	Conference & Workshop	Science Gallery-Oscillator Exhibition and Event Programme	Trinity College Dublin	50,000

SFI Research Scientist	Programmes	Research Title	Research Body	Total value of award including overheads
Dr Michael J Gorman	Conference & Workshop	TEDx Dublin	Trinity College Dublin	15,000
Dr Michael J Gorman	Conference & Workshop	Science Foundation Ireland speaker series at Science Gallery, 2013	Trinity College Dublin	35,800
Dr Louise Bradley	Principal Investigator Supplement	Plasmonic enhanced nanophotonic devices	Trinity College Dublin	90,826
Prof Georg Duesberg	Principal Investigator Supplement	Graphene Engineering for Electronics and Sensing (GREET)	Trinity College Dublin	74,666
Prof Michael Coey	Principal Investigator Supplement	Nanoscale Interfaces and Spin Electronics	Trinity College Dublin	65,641
Prof Mani Ramaswami	SFI Internship	SFI Internship	Trinity College Dublin	78,623
Prof Brendan Loftus	SFI Internship	SFI Internship	University College Dublin	43,953
Dr Grace Mulcahy	SFI Internship	SFI Internship	University College Dublin	72,059
Dr Dermot O'Dwyer	SFI Scholarship Summer Research Internship	SFI Scholarship Summer Research Internship 2012	Trinity College Dublin	6,500
Dr Edmund Lalor	SFI Scholarship Summer Research Internship	SFI Scholarship Summer Research Internship 2012	Trinity College Dublin	6,175
Prof Tim McGloughlin	SFI Scholarship Summer Research Internship	SFI Scholarship Summer Research Internship 2012	University of Limerick	6,500
Prof Fergal O'Brien	Translational Research Award	Translation of novel strategies for joint repair from bench to bedside	Health Research Board	646,042
Prof Paul McLoughlin	Translational Research Award	Targeting gremlin in the diagnosis and treatment of fibrotic lung diseases	Health Research Board	205,935
Dr Christopher Bleakley	US-Ireland R&D Partnership	WiPhyLoc8: Dynamic WiFi Positioning using Physical Layer Parameters for Location-Based Services and Security	University College Dublin	403,470
Dr Alan O'Riordan	US-Ireland R&D Partnership Planning Grant	Multichannel disposable sensors for animal health disease diagnostics	Tyndall National Institute	2,700
Prof Jagdish Vij	US-Ireland R&D Partnership Planning Grant	Molecular engineering of liquid crystalline functional materials for high performance applications in Telecommunications and Sensors	Trinity College Dublin	4,600
Prof Dermot Kenny	US-Ireland R&D Partnership Planning Grant	Thrombosis, from surface to stimulation to Disease	Royal College of Surgeons in Ireland	5,000
Prof Martyn Pemble	US-Ireland R&D Partnership Planning Grant	RENEW - Research into emerging Nano-structured Electrodes for the oxidation of Water	Tyndall National Institute	1,830
Prof Paul Hurlley & Prof Greg Hughes	US-Ireland R&D Partnership Planning Grant	Understanding the Nature of Interfaces in Tunnel FET Electronics (UNITE)	Tyndall National Institute	3,460
Mr. Rodd Bond & Dr Julie Doyle	US-Ireland R&D Partnership Planning Grant	Detection & intervention of emotional status to improve health & wellbeing in the older population	Dundalk Institute of Technology	4,130
Sub-Total PIYRA AWARD ACCEPTED AND SUBSEQUENTLY DECLINED				76,097,767
Total				77,035,314

Research for Ireland's Future

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