The European Research Council:
Excellent Researchers with Excellent Ideas
The ERC – Research at the Frontier

- In its own words, the ERC’s mission is...

  “To encourage the highest quality research in Europe and support investigator-driven frontier research across all fields, on the basis of scientific excellence”

  “To encourage the work of the established and the next generation of independent top research leaders in Europe”

  “To allow researchers to identify new opportunities and directions in any field of research”

  “To reward innovative proposals by placing emphasis on the quality of the idea rather than the research area”
ERC Schemes

- The 2018 ERC Work Programme was recently published with the following 5 schemes:
  
  - **Starting Grant (StG):** to initiate an independent career; applicants generally 2-7 years post-PhD
    - Awards of up to €2M over five years; est. budget for the 2018 call: €581M (391 awards; down 7%)
  
  - **Consolidator Grant (CoG):** to reinforce independence; applicants generally 7-12 years post-PhD
    - Awards of up to €2.75M over five years; est. budget for the 2018 call: €550M (287 awards; down 10%)
  
  - **Advanced Grant (AdG):** to help established researchers to become/remain leaders in their field; must demonstrate a 10-year track record of research excellence
    - Awards of up to €3.5M over five years; est. budget for the 2018 call: €450M (194 awards; down 20%)
  
  - **Synergy Grant (SyG):** bringing together 2-4 PIs with complementary skills and knowledge to address ambitious research problems
    - Awards of up to €14M over six years; est. budget for the 2018 call: €250M (30 awards; “new” scheme)
  
  - **Proof of Concept (PoC):** providing ERC awardees a route towards commercialising their research
    - Awards of up to €150k over 18 months; est. budget for the 2018 call: €20M (130 awards)
Context with Other Funding Opportunities

SFI-HRB-WT (Sir Henry Wellcome, RCDF & Career Re-entry)
- Royal Society-SFI URF
- SFI ERC Development - Starting
- SFI SIRG

SFI-HRB-WT (Senior Research Fellowship)
- SFI Career Development Award
- SFI PIYRA
- SFI Future Research Leaders Award
- SFI ERC Development - Consolidator

SFI Investigator Programme (iVP)
- SFI ERC Development - Advanced
- SFI Research Professorship

Years post-PhD (approx.)
ERC Success in Ireland?

- The first call to the ERC was launched in 2007 – in total there were 22 completed calls to the three principal schemes (StG, CoG & AdG) between 2007 and 2016, the first 13 under the FP7 framework and the most recent nine as part of Horizon 2020

- Under FP7, researchers based in Ireland won a total of 35 ERC awards (25 StG, 2 CoG, 8 AdG)

- The nine H2020 calls have yielded 33 ERC awardees from Irish HEIs (19 StG, 11 CoG, 3 AdG), whose awards have a combined value of approx. €56M

- Ireland’s success rate has increased from 10.4% under FP7 to 12.5% under H2020, and there has been a ca. 50% increase in the share of total awards won by Ireland’s researchers, BUT these results must take into account an incredibly strong performance in 2014, in which 18 awards were won

- Performance since 2014 has been more modest, particularly in the Advanced Grant scheme – at a time when it is increasingly important for Ireland’s researchers to seek support from non-Exchequer sources, it is essential that the ERC is considered seriously
ERC: The Basics

- Single-stage application procedure (EC Participant Portal); three-part proposal:
  - Part A: Administrative information
  - Part B1: 5-page extended synopsis, 2-page CV and 2-page record of achievements
  - Part B2: 15-page scientific proposal (state of the art and objectives, methodology & resources)

- Three Research Domains, further divided into 25 Panels
  - Physical Sciences and Engineering (PE, 10 panels); Life Sciences (LE, 9 panels); Social Sciences and Humanities (SH, 6 panels)
  - Budget allocated to each domain is based on demand
  - Applicants may apply to a single panel, or choose a second where other expertise is required

- Two-stage review process:
  - Stage 1: Part B1 of proposals are reviewed by members of the ERC’s 25 review panels – approx. 30-40% of proposals are progressed
  - Stage 2: Part B2 (and B1) reviewed by panel members and external expert peer reviewers
  - StG & CoG applicants through to Stage 2 are required to carry out an interview in Brussels
  - Success rates in ERC calls are generally in the 10-14% range (SyG likely to be a little lower)
ERC Panel Structure

Life Sciences
- LS1 Molecular Biology, Biochemistry, Structural Biology and Molecular Biophysics
- LS2 Genetics, ‘Omics’, Bioinformatics and Systems Biology
- LS3 Cellular and Developmental Biology
- LS4 Physiology, Pathophysiology and Endocrinology
- LS5 Neurosciences and Neural Disorders
- LS6 Immunity and Infection
- LS7 Applied Medical Technologies, Diagnostics, Therapies, and Public Health
- LS8 Ecology, Evolution and Environmental Biology
- LS9 Applied Life Sciences, Biotechnology and Molecular and Biosystems Engineering

Social Sciences and Humanities
- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Values, Environment and Space
- SH3 The Social World, Diversity, Population
- SH4 The Human Mind and its Complexity
- SH5 Cultures and Cultural Production
- SH6 The Study of the Human Past

Physical Sciences & Engineering
- PE1 Mathematics
- PE2 Fundamental Constituents of Matter
- PE3 Condensed Matter Physics
- PE4 Physical and Analytical Chemical Sciences
- PE5 Synthetic Chemistry and Materials
- PE6 Computer Science and Informatics
- PE7 Systems and Communication Engineering
- PE8 Products and Processes Engineering
- PE9 Universe Sciences
- PE10 Earth System Science
ERC Panel Keywords (an Example)

**PE8 Products and Processes Engineering:**
Product design, process design and control, construction methods, civil engineering, energy processes, material engineering

**PE8_1**  Aerospace engineering
**PE8_2**  Chemical engineering, technical chemistry
**PE8_3**  Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment
**PE8_4**  Computational engineering
**PE8_5**  Fluid mechanics, hydraulic-, turbo-, and piston engines
**PE8_6**  Energy processes engineering
**PE8_7**  Mechanical and manufacturing engineering (shaping, mounting, joining, separation)
**PE8_8**  Materials engineering (biomaterials, metals, ceramics, polymers, composites, etc.)
**PE8_9**  Production technology, process engineering
**PE8_10**  Industrial design (product design, ergonomics, man-machine interfaces, etc.)
**PE8_11**  Sustainable design (for recycling, for environment, eco-design)
**PE8_12**  Lightweight construction, textile technology
**PE8_13**  Industrial bioengineering
ERC Applicants – What is Required

Applicants to the ERC must:

- look to carry out fundamental basic research of critical importance to economic and social welfare
- attempt research at and beyond the frontiers of understanding in an intrinsically risky venture
- have an excellent recent track record of achievements and an excellent, challenging idea
- select the most appropriate scheme based on career stage and/or achievements
- have published either one (StG) or a few (CoG) papers independent of your PhD supervisor
- choose the most suitable ERC panel to enhance your chance of success
- take the maximum possible time to prepare applications
- only apply when really ready
How to Succeed with the ERC

● Attend meetings like this and learn from people with ERC experience
● Talk to colleagues that have been through the process (successfully or otherwise)
● Use online resources, such as those provided by SFI and the ERC, amongst others
● Find the best time to apply (from a personal and programmatic perspective)
● Work closely with your Host Institution – help is available!
● Don’t rush! Give yourself enough time to produce the best possible proposal
● Learn how to use the H2020 Participant Portal in advance... and submit early!
The Essentials of an ERC Project

- Provide **context** (e.g., a grand challenge being met, a disease that affects millions, etc.)
- Explain why the problem is **important** and why it must be tackled now
- Describe how your solution and/or approach is **ground-breaking**
- Give a rationale for the **novelty** of your idea – why has it not been done before?
- Demonstrate that your project is **viable**, based on your skill set and your team/budget
- Outline the key **impacts** of a successful project – who will benefit, and how?
- Give an honest assessment of **risk** in your project – demonstrate plans on how to mitigate the risks and provide alternative options should Plan A not work as envisaged
- Why you? Demonstrate your **suitability** to be the person to win an award
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Financial Support (under review)

● Enterprise Ireland offers financial support to researchers preparing applications to ERC schemes (http://www.horizon2020.ie/who-can-help/financial-assistance/)

● An award of up to €8,000 can be obtained for the following assistance:
  ▪ Professional consultancy services to assist in proposal preparation
  ▪ Graphical design services
  ▪ Teaching buy-out to free up time
  ▪ Hiring a research assistant to help collate information or to interpret experimental results – not to carry out research!

● Applications for this support must be received no later than three weeks after the opening of a given ERC call

● Proposals are submitted to Enterprise Ireland through your Research Office. The NCPs provide feedback in advance of a decision on support being made. Only applications that give appropriate justifications for all requested budget items will be supported (e.g., using approved salary schemes for hires)
SFI’s ERC-Related Programmes (PE & LS)

• The SFI ERC Support Programme supports Host Institutions of ERC award holders by providing additional indirect contributions to the costs of hosting ERC-funded programmes. Applications associated with awardees from any ERC scheme are eligible, but note that the area of research funded by the ERC award must align to SFI’s legal remit and have been submitted to either an PE or LS panel. Awardees already based in an Irish HI may receive a contribution of €150,000. Awardees moving to Irish HIs with an ERC award may receive enhanced overhead support (maximum value of €500k for StG awardees, €750k for CoG awardees and €1M for AdG awardees; may be awarded pro-rata depending on time remaining on the ERC award)

• The SFI ERC Development Programme supports researchers that have submitted a proposal to the ERC that has been deemed excellent and fundable (given an “A” rating at Stage 2) but was not funded due to a lack of available programme budget. Open to investigators based in Ireland or overseas that applied to PE and LS panels, and whose research is aligned to SFI’s legal remit. Awards are capped at 50% of the original direct-cost request to the ERC or €500,000, whichever is lower, and have a duration of 24 months. The programme aims either to support a resubmission to the next relevant ERC call where the evaluation report has not indicated a need for major changes, or to improve upon a project where the evaluation has made it clear that such improvements are required before resubmission would be advised.

• SH applicants/awardees should contact the IRC to learn about opportunities there.
Key Dates and Useful Links

- Reminder: Dates for 2018 calls:
  - **StG 2018**: Opened 3rd August 2017; Deadline 17th October 2017
  - **CoG 2018**: Opens 24th October 2017; Deadline 15th February 2018
  - **AdG 2018**: Opens 17th May 2018; Deadline 30th August 2018
  - **SyG 2018**: Opened 3rd August 2017; Deadline 14th November 2017

- **SFI: ERC Information Homepage:**
  [http://www.sfi.ie/funding/european-research-area/horizon-2020/european-research-council/](http://www.sfi.ie/funding/european-research-area/horizon-2020/european-research-council/)

- **IRC: European/International Projects:**

- **Horizon 2020 National Network Homepage:**

- **ERC Homepage:**

- **Participant Portal:**

- **E-mail:**
  [erc@sfi.ie](mailto:erc@sfi.ie) or [info@research.ie](mailto:info@research.ie)
Thank You!!