The European Research Council

How to apply for an ERC grant WORKSHOP

Jana Šifta 25 May 2023 VI International Congress on Risks





Presentation outline

- 1. ERC and Horizon Europe
- 2. ERC basics
- 3. ERC calls
- 4. ERC evaluation process
- 5. Successful ERC projects
- 6. Tips and tricks for proposal preparation









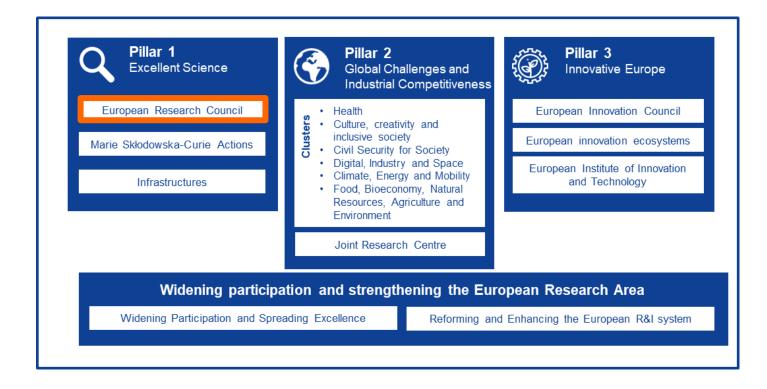
The ERC awards long-term grants to researchers of any nationality and age, from anywhere in the world, who wish to carry out their research projects in a host institution based in Europe.

Scientific excellence is the sole evaluation criterion.





ERC in Horizon Europe





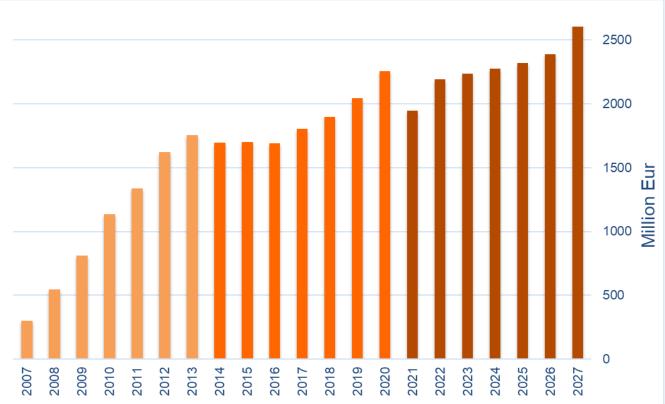


ERC budget

FP7: €7.5 billion

H2020: €13 billion

HE: €16 billion







ERC structure



The European Commission

- Provides financing through the EU framework programmes
- Guarantees autonomy of the ERC
- Assures the integrity and accountability of the ERC
- Adopts annual work programmes as established by the Scientific Council

The ERC Scientific Council

- 21 prominent researchers proposed by an independent identification committee
- President appointed following recommendation of an independent committee
- Appointed by the Commission (4 years, renewable once)
- Establishes overall scientific strategy; annual work programmes (incl. calls for proposals, evaluation criteria); peer review methodology; selection and accreditation of experts
- Controls quality of operations and management
- Ensures communication with the scientific community







ERC Scientific Council



Maria LEPTIN (Biology) **ERC President**



Eystein JANSEN (Earth Science) Vice-President



Jesper SVEJSTRUP (Biology) Vice-President



Geneviève ALMOUZNI (Biology)



Harriet BULKELEY (Geography)



Ben FERINGA (Organic Chemistry)



Mercedes GARCÍA-ARENAL (History)



Gerd GIGERENZER (Psychology)



Tom HENZINGER (Computer Science)



Liselotte HØJGAARD (Medicine)



Dirk INZÉ (Plant Biology)



László LOVÁSZ (Mathematics)



Chryssa KOUVELIOTOU (High-Energy Astrophysics) (Mechanical Engineering)



Sylvie LORENTE



Eveline CRONE

(Psychology)

Luke O'NEILL (Biochemistry & Immunology)



Björn OTTERSTEN (Electric Engineering)



Giovanni SARTOR (Law)



Nicola SPALDIN (Materials Theory)



Alice VALKÁROVÁ (Physics)



Milena ŽIC FUCHS (Linguistics)







ERC in figures



Over **13,000** top researchers funded since the ERC creation in 2007



Over **90,000** researchers and other professionals employed in ERC research teams



Over **2,400**patents and other IPR applications generated by ERC funding



Over **400** start-ups identified as founded or co-founded by ERC grantees



Over **220,000** articles from ERC projects published in scientific journals



Over 900 research institutions hosting ERC grantees – universities, public or private research centres in the EU or Associated Countries



89 nationalities of grant holders



12 Nobel Prizes, 6 Fields Medals, 11 Wolf Prizes and other prizes awarded to ERC grantees





ERC Basics















Why should one apply for an ERC grant?

Research topic of own choice, with a

team of own choice



Evaluation panel structure (2024)

Life Sciences

- LS1 Molecules of Life: Biological Mechanisms, Structures and Functions
- LS2 Integrative Biology: From Genes and Genomes to Systems
- LS3 Cell Biology, Development, Stem Cells and Regeneration
- LS4 Physiology in Health, Disease and Ageing
- LS5 Neuroscience and Disorders of the Nervous System
- LS6 Immunity, Infection and Immunotherapy
- LS7 Prevention, Diagnosis and Treatment of Human Diseases
- LS8 Environmental Biology, Ecology and Evolution
- LS9 Biotechnology and Biosystems Engineering





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
- PE11 Materials Engineering

Social Sciences and Humanities

- SH1 Individuals, Markets and Organisations
- SH2 Institutions, Governance and Legal Systems
- SH3 The Social World and Its Interactions
- SH4 The Human Mind and Its Complexity
- SH5 Texts and Concepts
- SH6 The Study of the Human Past
- SH7 Human Mobility, Environment, and Space
- SH8 Studies of Cultures and Arts

Why should one apply for an ERC grant?

Attract top team members (EU and non-

EU) and collaborators



PIs from all over the world can apply to ERC

Opportunities for non ERA* researchers:

- Additional "start-up" funding for researchers moving to Europe (1 M€ irrespective of call scheme)
- Grantee can keep affiliation with home institute outside Europe ("significant part" of work time in Europe, at least 50%)
- Team members can be based outside Europe
- Grantee can move within Europe with the grant
- * ERA = European Research Area (EU + Associated Countries)





48 non-EU/Associated Country grantee nationalities - 8% of all ERC grants

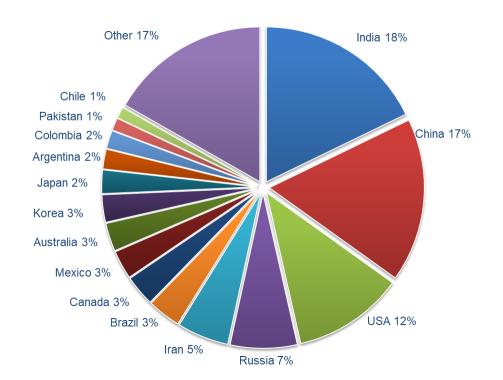
| Non-EU/AC Principal Investigators | Starting and Consolidator grants | Advanced grants | Total grants | |
|--------------------------------------|--|-----------------|--------------|--|
| USA | 276 | 142 | 418 | |
| Canada | 100 | 21 | 121 | |
| China | 77 | 2 | 79 | |
| India | 73 | 3 | 76 | |
| Australia | 59 | 16 | 75 | |
| Russia | 62 | 11 | 73 | |
| Japan | 32 | 9 | 41 | |
| New Zealand | 19 | 6 | 25 | |
| Argentina | 23 | 2 | 25 | |
| Other | 141 | 13 | 154 | |
| Total | 862 | 225 | 1087 | |





Attracting researchers to Europe

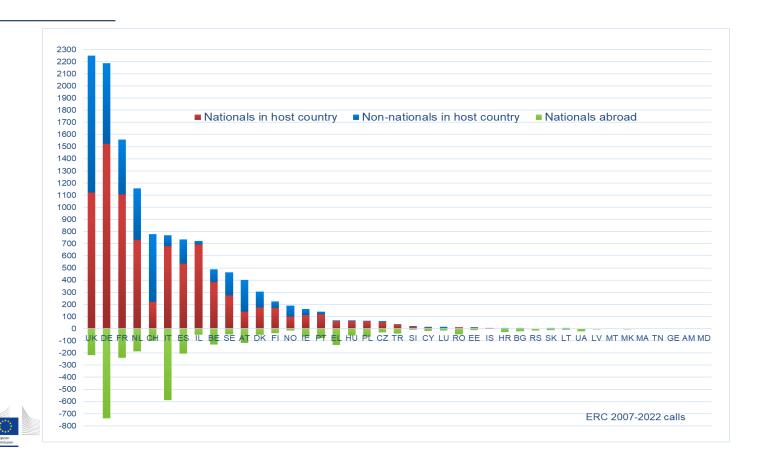
In ~2,000 H2020 grants, over 18% team members were from:



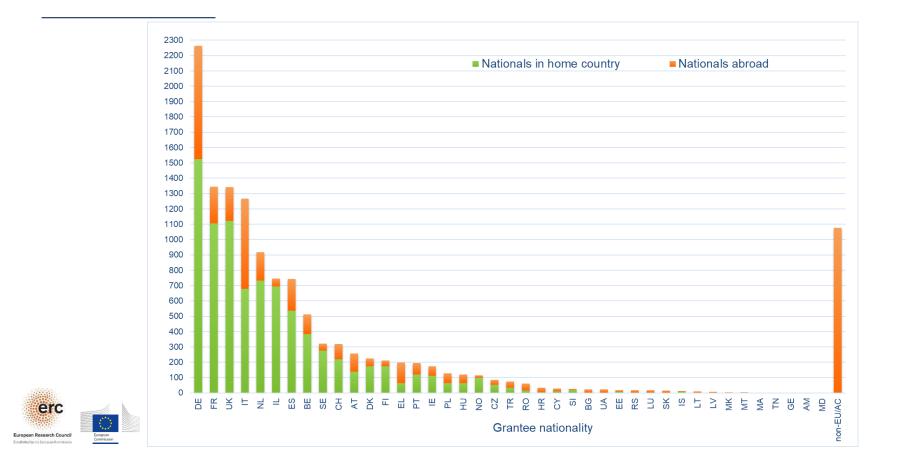




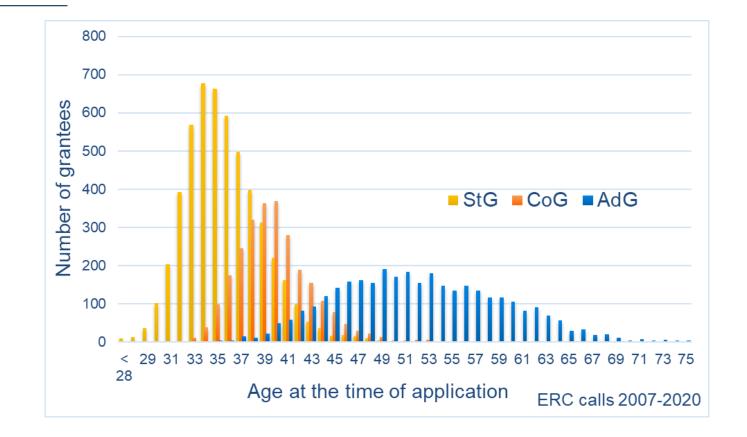
Grantees at home and abroad



Nationals at home and abroad



Two-thirds of ERC grants awarded to early-stage researchers





Why should one apply for an ERC grant?

- True financial autonomy for 5 years
- Negotiate with the host institution the best conditions

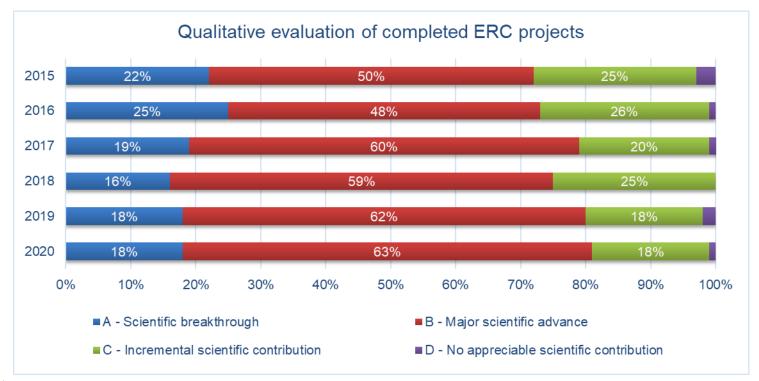
of work

Portability of grants within Europe





20% of the ERC-funded projects deliver scientific breakthroughs







Nobel Prizes to ERC grantees





Benjamin List Nobel 2021 ERC Grantee AdG 2010 ERC Grantee AdG 2015

The Nobel Prize in Chemistry 2021 was awarded jointly to Benjamin List and David W.C. MacMillan "for the development of asymmetric organocatalysis".



Giorgio Parisi Nobel 2021 ERC Grantee AdG 2009 ERC Grantee AdG 2015

The Nobel Prize in Physics 2021 was awarded jointly to Syukuro Manabe, Klaus Hasselmann and Giorgio Parisi "for ground-breaking contributions to our understanding of complex physical systems".



Sir Peter J. Ratcliffe Nobel 2019 ERC Grantee AdG 2008



Bernard Feringa Nobel 2016 ERC Grantee AdG 2008 ERC Grantee AdG 2015



May-Britt Moser Nobel 2014 ERC Grantee AdG 2010



Edvard Moser Nobel 2014 ERC Grantee AdG 2008 ERC Grantee AdG 2013



Jean Tirole Nobel 2014 ERC Grantee AdG 2009



Serge Haroche Nobel 2012 ERC Grantee AdG 2009



Konstantin Novoselov Nobel 2010 ERC Grantee StG 2007 ERC Grantee SyG 2012





Other 7 ERC grantees were already Nobel laureates at the moment they received the ERC grant

ERC Grant Schemes



Starting Grant

Up to €1.5 million + up to €1 million Duration: up to 5 years 2-7 years of experience after PhD



Consolidator Grant

Up to €2 million + up to €1 million Duration: up to 5 years 7-12 years of experience after PhD



Advanced Grant

Up to €2.5 million + up to €1 million

Duration: up to 5 years

An excellent scientific track record of recognized achievements in the last 10 years



Synergy grant

Size of the grant: €10 million + up to €4 million

Duration: up to 6 years

2 to 4 researchers and their research groups

(one researcher can be based outside EU/AC)



Proof of Concept

Size of the grant: €150 000 Duration: up to 18 months

Demonstrate that the idea funded by the original

ERC grant has innovation potential

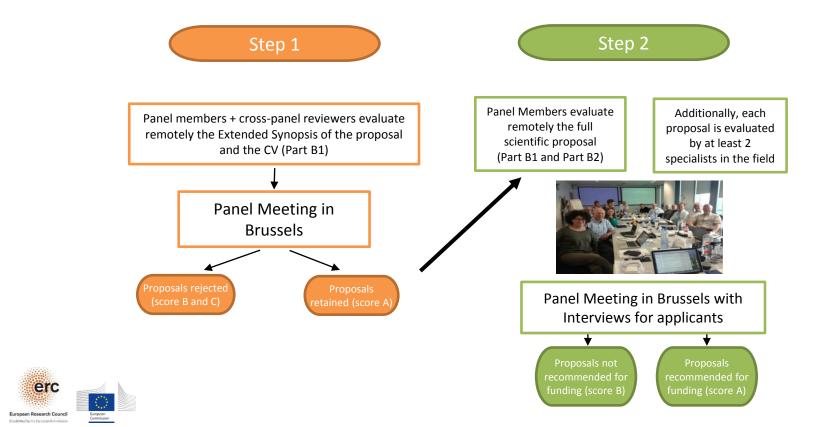
and significant economic or societal benefits





Evaluation: Process

For individuals calls: a single submission but a two step evaluation



Evaluation: Principle



Excellence

is the sole evaluation criterion

Excellence of the Research Project

- Ground breaking nature
- Potential impact
- Scientific Approach

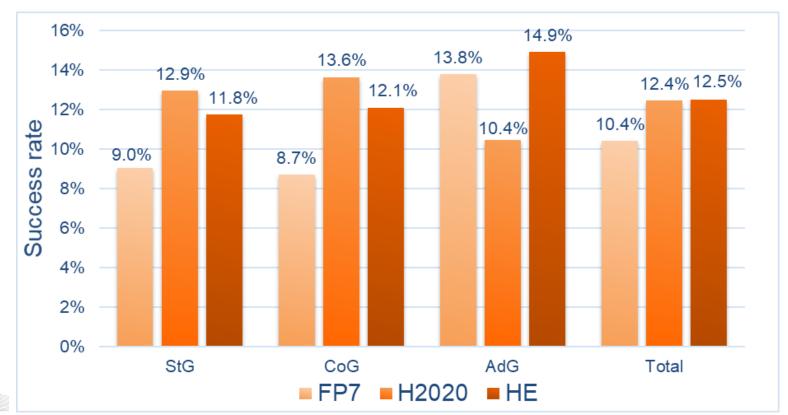
Excellence of the Principal Investigator

- Intellectual capacity
- Creativity
- Commitment





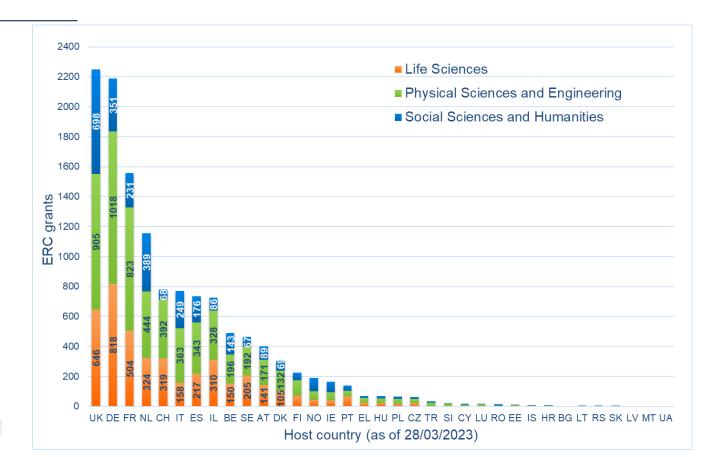
ERC success rate







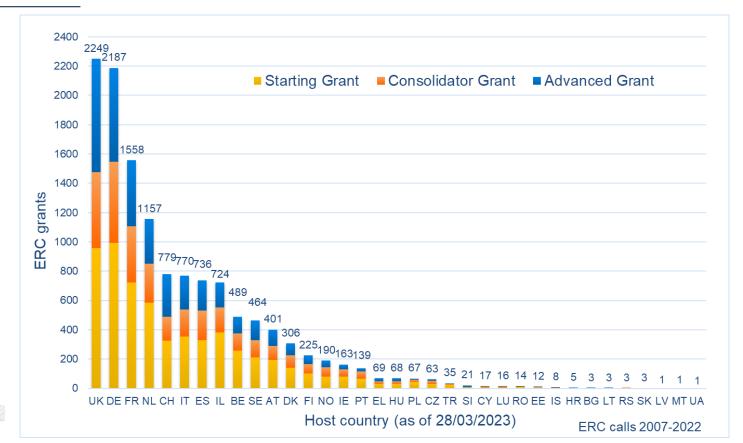
ERC-funded projects by domain







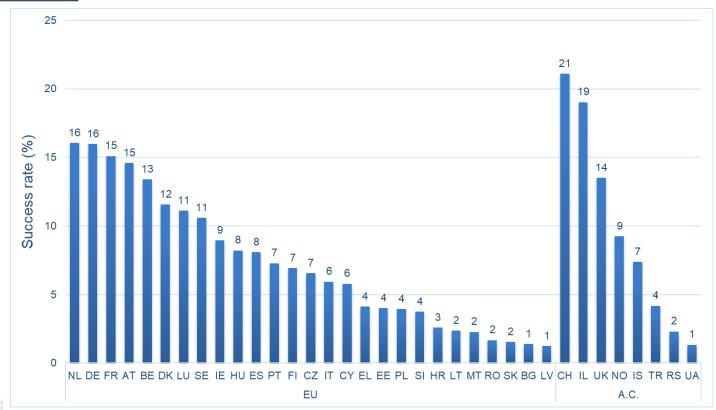
ERC-funded projects by country of Host Institution





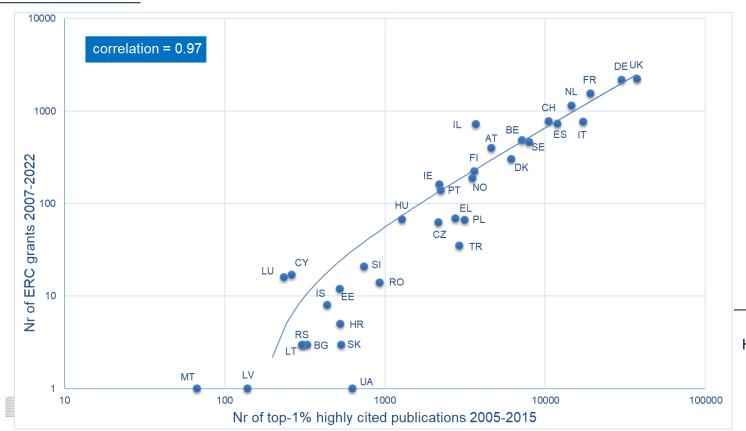


Success rate by country of Host Institution





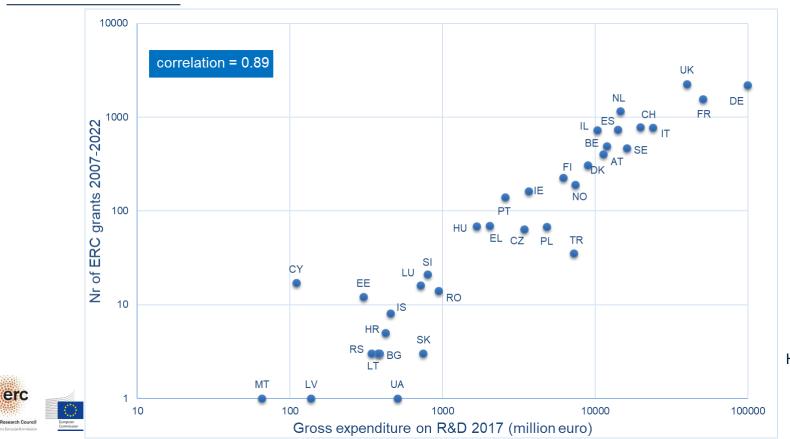
ERC grants versus top publications



Linear fit

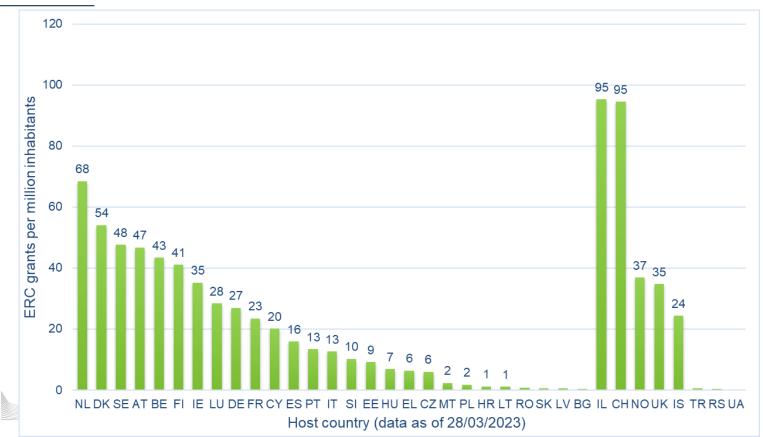
Host countries as of 28/03/2023

ERC grants versus gross expenditure on R&D



Host countries as of 28/03/2023

ERC grants per population







ERC Stories

ENTANGLED BALKANS

Balkan Histories: Shared, Connected,

Entangled

Researcher: Prof. Roumen Daskalov

ERC Advanced Grant 2008

HI: New Bulgarian University, Bulgaria



""I can imagine such research as promoting good neighbor relations rather than fostering divisiveness and separation".





http://www.su.se

ERA

Earth Resilience in the Anthropocene (ERA)Integrating non-linear biophysical and social determinantsof Earth-system stability for global sustainabilitythrough a novel community modelling platform



Researcher:
Johan Rockström
Host institution:
Stockholms Universitet,
Sweden



ERC Funding 2 492 834 €



http://www.uni-muenchen.de

Highland Connections

Remoteness and Connectivity: Highland Asia in the World



Researcher:
Martin Saxer
Host institution:
Ludwig Maximilians
Universitaet Muenchen
Germany

Call details ERC-2014-STG, SH2

ERC Funding 1 499 875 €

http://www.ku.dk

FORESTDIET



Researcher: Laura Vang Rasmussen Host institution: Kobenhavns Universitet, Denmark

Project website

Low Carbon Action in Ordinary Cities



Vanesa Castán Broto
Host institution:
Urban Institute, University of
Sheffield
United Kingdom

Researcher:

Call details ERC-2020-STG, SH2

ERC Funding 1 447 389 €

Call details ERC-2018-STG, SH2

ERC Funding 1 393 979 €





MOCHA

Understanding and leveraging 'moments of change' for proenvironmental behaviour shifts



Researcher:
Lorraine Whitmarsh
Host institution:
UNIVERSITY OF BATH,
United Kingdom

http://www.sciencespo.fr

NUCLEAR

Nuclear Weapons Choices Governing vulnerabilities between past and future



Researcher:
Benoît Pelopidas
Host institution:
Fondation Nationale des
Sciences Politiques
France

Call details ERC-2018-COG, SH2

ERC Funding 1 999 125 €



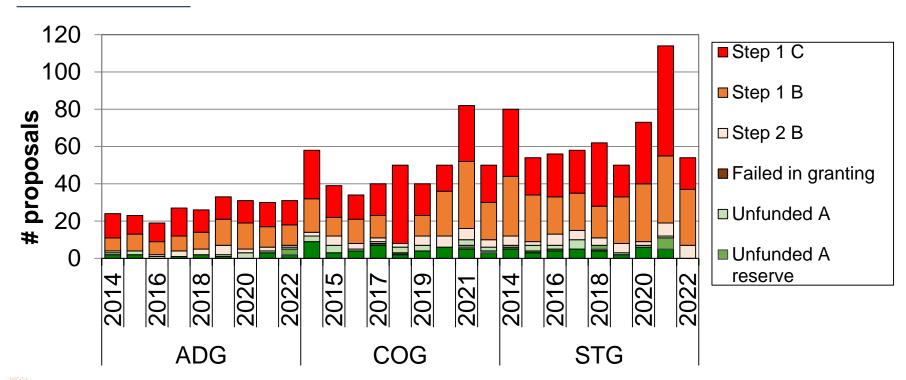
ERC-2017-STG, SH2

ERC Funding 1 480 145 €





Evaluation history Portugal







Contrary to what you may think

- ERC funds "frontier research", including applied research.
- The budget is distributed among the scientific panels as a function of demand.
- The panel descriptors do not represent ERC scientific priorities.
- The success rate is virtually flat across the eligibility window (StG, CoG).
- Publication record is not decisive in selection decisions.
- The Host Institution is not an evaluation criterion.







Some rumours

Rumour 1: You can only apply for an ERC grant if you are a highly accomplished scientist.

➤ NOT true: Accomplishments are appreciated in relation to your stage/seniority as giving some evidence of your capacity to conduct the research you propose and of creativity within the past 10-12 years of your career.

Rumour 2: To be successful, you need to continue on an established research line, to prove continuity and credibility

X NOT true: Generally, the opposite is true.

Rumour 3: If you have already obtained an ERC grant you are less/more likely to get another one.

NOT true: Panels look at each proposal on its own merit and in comparison with the other applications, irrespectively of whether you have or have not obtained an ERC grant in the past. (Of course this does not apply for applications to a Proof of Concept grant.)

Rumour 4: The more socially or medically relevant a grant proposal is, the higher the chances of it getting funded.

➤ NOT true: ERC funds frontier research, not research that promises to be only an incremental advancement of knowledge. This is irrespective of the field and whether it has societal, medical or clinical applications.





2024 Tentative call calendar

| | Starting Grant | Consolidator Grant | Advanced Grant | Synergy Grant | Proof of Concept Grant |
|---------------------------------------|-------------------|-----------------------|-------------------|------------------|---------------------------|
| Call opens | 11/07/2023 | 12/09/2023 | 29/05/2024 | 12/07/2023 | 16/11/2023 |
| Deadline to submit applications | 24/10/2023 | 12/12/2023 | 29/08/2024 | 08/11/2023 | 14/03/2024 17/09/2024 |





Where can you find more information?



Videos - ERC Classes

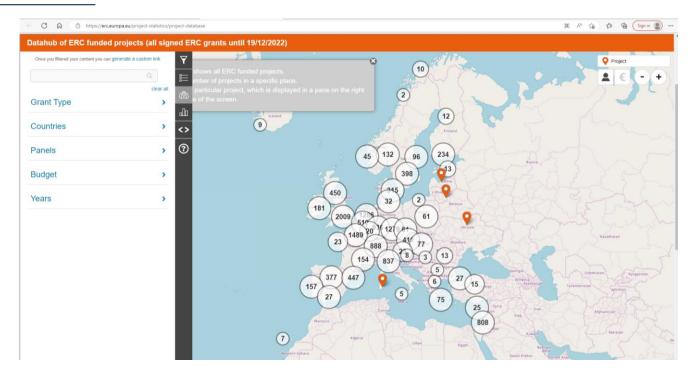
- What to consider before applying
- How to fill in the application (Part B1 and B2)
- The interview
- How the evaluation works

https://www.youtube.com/watch?v=xbFbz kVWgCU&list=PLtv6FnsXqnXAYRk6HCEr wMxwML0ZKoMcy





Get inspired by browsing through the ERC-funded projects on our website – https://erc.europa.eu







National Contact Points: erc.europa.eu/national-contact-points

Sign up for news alerts: erc.europa.eu/keep-updated-erc

Funding & Tender Opportunities: https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home

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Thank you!

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