

A GUIDE TO EU-FUNDED PROGRAMMES FOR SINGAPORE-BASED CNRS UMIS AND THEIR RESEARCHERS

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EU FUNDS IN A NUTSHELL

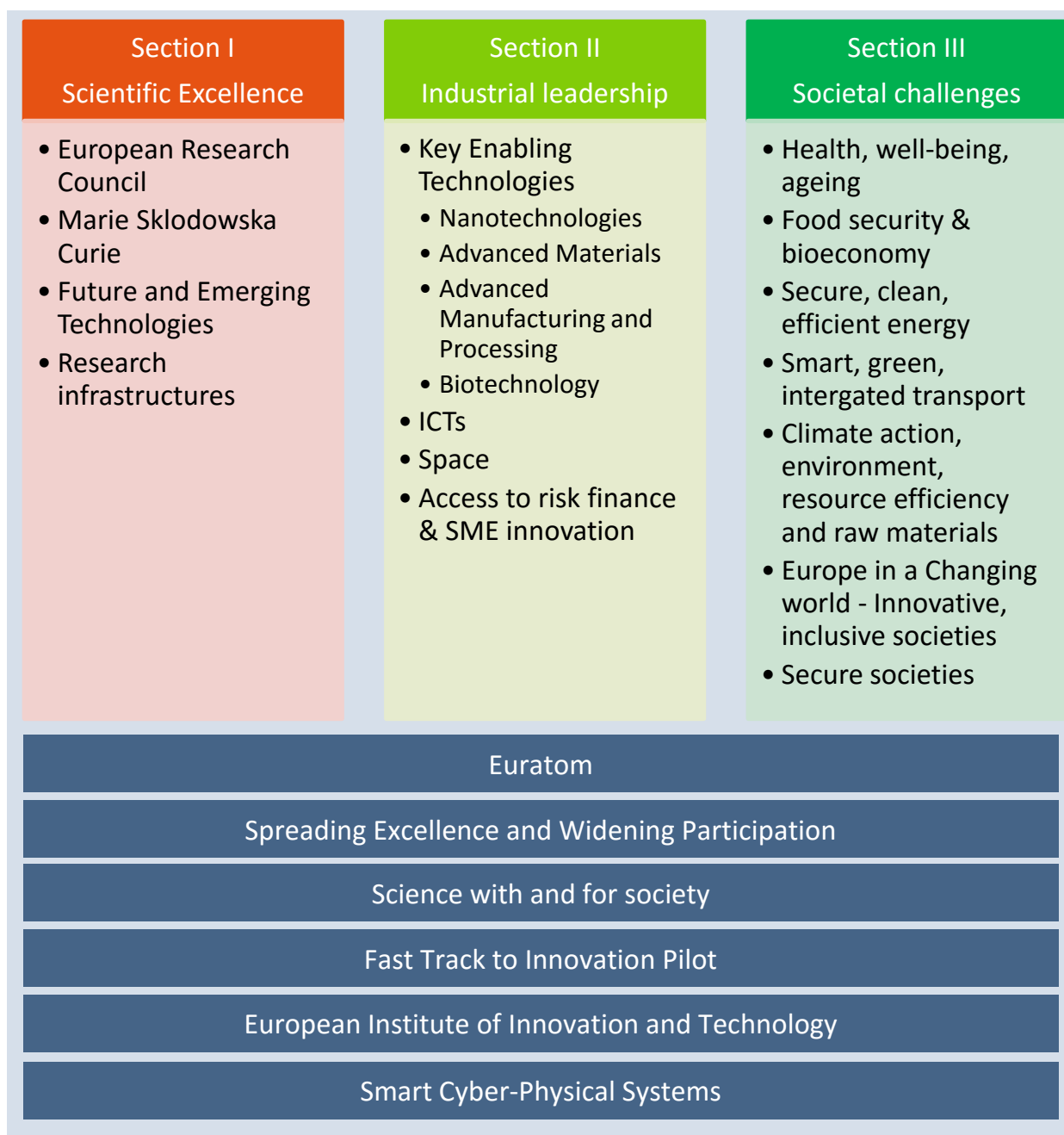
The European Commission pilots the European Union policy and budget. It uses dedicated funds in each of its many fields of action, such as structural funds (e.g. [ERDF/FEDER](#) for regional development, [INTERREG](#) for interregional cooperation...), or the [LIFE programme](#) for the environment for instance. Some of these may be relevant to research in a project-based way, but the EU research policy has its own set of funding tools.

EU RESEARCH POLICY & FUNDING

The [EU research policy](#) is headed by the Commissioner for Research, Science & Innovation (Carlos Moedas at the time of writing), and implemented by the [Directorate-General for Research & Innovation](#) (DG Robert-Jan Smits). The funding arm of the research policy is the [Research Executive Agency](#) which manages most of the funds under the [Horizon 2020](#) programme, the umbrella programme that took over the Framework Programme 7 in 2014. Another key part of that programme, ERC, is piloted and implemented by the [European Research Council](#).

HORIZON 2020 PROGRAMME

The Horizon 2020 programme is organised in 3 sections and transversal programmes, in which 80bn€ in total will be invested.



A NOTE ON ELIGIBLE COUNTRIES

For most (but not all) calls, there is a territorial restriction: to be eligible, researchers must **be from / work in a lab** of either a Member State of the EU and their overseas territory, or an [associated country](#) (mainly neighbouring countries of the EU), or a country that is listed as third country in [this list](#).

Singapore is not part of it to this day. This does not mean researchers of CNRS UMIs are not eligible, since UMIs are legally established in France. The facts support this; we do have precedents of UMI teams getting H2020 funding as project leaders or major partners (as teams, not individuals).

If you are part of a UMI (e.g. entered in the Reseda database – check with your UMI’s director), CNRS can be this host institution.

A specific point for the ERC call still needs to be clarified, since it requires the grantees to spend 50% of their time in a European lab – whether this is territorial (located in the EU or associated/third country) or legal (established under EU law) remains unclear.

1ST SECTION: SCIENTIFIC EXCELLENCE

EUROPEAN RESEARCH COUNCIL

The European Research Council (ERC) funds pioneering research in all fields. Its programs provide support for investigator-driven research projects selected on the basis of scientific excellence.

- **Starting grant:** for researchers with 2 to 7 years’ experience after their PhD (up to €1.5m for 5 years)
- **Consolidator grant:** for researchers with 7 to 12 years’ experience after their PhD (up to €2m for 5 years)

The goal of a *Starting* or *Consolidator* grant is to allow young scientists to set up or consolidate a research team based on an original research topic.

- **Advanced grant:** for established researchers (up to €2.5m for 5 years)

This grant is aimed at established, leading researchers who wish to pursue ground-breaking projects that are on the frontier of a field of research.

- **Proof of Concept grant:** for ERC grant holders only, designed to help researchers explore their project’s innovation potential and a possible transition to market (up to €150,000)

There is no condition of nationality for ERC applicants. The proposal must be backed by a European institution (or from a H2020 associated countries) and there is a 50% time constraint (less for advanced grants) to be spent in the European lab. We know there have been exceptions to this territorial rule justified by the research topic (e.g. research on tropical biodiversity in South America...), but whether a Singapore-based UMI does in fact qualify as a “European” lab or not is still unclear.

[More information on ERC grants here](#)

MARIE SKLODOWSKA-CURIE

[Marie Skłodowska-Curie Actions](#) support researcher mobility and career development. They are open to all fields of research and support researchers of all ages, nationalities and skill sets. Mobility, gender mainstreaming and public engagement are the driving principles of this programme, as well as a bottom-up approach that allows researchers to freely select the topic of their research.

The MSCA also support industrial doctorates, combining academic research study with work in companies, and other innovative training that enhances employability and career development. In addition to generous research funding, scientists have the possibility to gain experience abroad and in the private sector, and to complete their training with competences or disciplines useful for their careers.

There are 5 types of MSC actions: ITN, RISE, IF, COFUND, NIGHT.

INNOVATIVE TRAINING NETWORKS

For young researchers (<4 years of experience, during PhD):

- **European Training Networks (ETN):** Joint research training, implemented by at least three partners from in and outside academia. The aim is for the researcher to experience different sectors and develop their transferable skills by working on joint research projects.
- **European Industrial Doctorates (EID):** Joint doctoral training delivered by at least one academic partner entitled to award doctoral degrees, and at least one partner from outside academia, primarily enterprise. Each participating researcher is enrolled in a doctoral programme and is jointly supervised by supervisors from the academic and non-academic sector, where they spend at least 50% of their time. The aim is for the doctoral candidates to develop skills inside and outside academia that respond to public and private sector needs.
- **European Joint Doctorates (EJD):** A minimum of three academic organisations form a network with the aim of delivering joint, double or multiple degrees. Joint supervision of the research fellow and a joint governance structure are mandatory. The aim is to promote international, intersector and multi/interdisciplinary collaboration in doctoral training in Europe.

The organisations should be from different [EU or associated countries](#). The participation of additional organisations from anywhere in the world, including from the non-academic sector, is encouraged.

[More information on ITN here](#)

RESEARCH AND INNOVATION STAFF EXCHANGE (RISE)

RISE funds short-term staff exchanges between three or more partner institutions, from three or more different countries, including at least two from the EU. Cross-border mobility is a must; cross-sectorial mobility is encouraged. Projects can last up to four years, and each staff secondment from one month to one year. Calls are advertised on the [participant portal](#), but it is up to the institutions to apply. Check with your organisation and your international research partners if they have an undergoing RISE agreement, and suggest applying if it is relevant to your work.

[More information on RISE here](#)

INDIVIDUAL FELLOWSHIPS (IF)

One-year to three-year mobility funding for researchers with at least 4 years of experience, in all fields except those that fall under the EURATOM treaty (check [annex I to art.4 p.58-61](#) if your topic is related in any way to nuclear energy).

Cross-border mobility (inbound, outbound, or within the EU) is a must, and cross-sectorial mobility a plus.

It provides an allowance to cover living, travel and family costs, through a grant awarded to the host organisation (university, research centre, or company in Europe), which also receives support for research costs and overheads.

A joint-proposal written by the researcher with the host organisation and including the researcher's CV must be submitted in reply to a call to proposals advertised on the [participant portal](#).

[More information on the IF page](#)

CO-FUNDING OF REGIONAL, NATIONAL AND INTERNATIONAL PROGRAMMES (COFUND)

This action is meant for organisations (research centres, universities, various levels of government) running existing research programmes requiring extra funding.

[More information on COFUND here](#)

EUROPEAN RESEARCHER'S (NIGHT)

European Researcher's NIGHT is an annual event taking place in hundreds of European cities on the last Friday on September that aims at attracting people to research and foster public engagement.

[More about NIGHT here](#)

Here is a recap of when Marie Skłodowska-Curie actions require a European organisation to back applications. See the "[How to apply?](#)" section for more information on how CNRS can come in at this stage.

	Host	Individuals with an organisation	Funder
<4 years research experience (PhD student)	ITN RISE		COFUND
>4 years PhD experience	RISE	IF	COFUND
Managerial and technical staff	RISE		
Events	NIGHT		

FUTURE AND EMERGING TECHNOLOGIES (FET)

Also under section I, [FET actions](#) are expected to initiate radically new lines of technology through unexplored collaborations between advanced multidisciplinary science and cutting-edge engineering. There are three types of FET actions: FET Open, FET Proactive and FET Flagships.

The calls are organised through bi-annual work programmes ([see WP 2016-2017 here](#)).

FET OPEN

[FET Open](#) supports the early-stages of the science and technology research and innovation around new ideas towards radically new future technologies (FET Open RIA). It also funds coordination and support actions for such high-risk forward looking research to prosper in Europe (FET Open CSA). The FET Innovation Launchpad comes in at a later stage for further innovation related work.

The call “targets the unexpected” and is therefore almost free of restrictions. Applications are selected through a bottom-up process that aims at producing a diversified portfolio of projects. The emphasis is on the early detection of promising area, development and trends.

FET PROACTIVE

[FET Proactive](#) helps new research communities to be developed by encouraging researchers from different disciplines to work together on new technologies in specific domains. In the WP 2016-2017, these are:

Emerging Themes and Communities

- Area 1: Future technologies for societal change (Being human in a technological world, New science for a globalised world)
- Area 2: Biotech for better life (Intra- and inter-cell bio-technologies, Bio-electronic medicines and therapies, Cognitive neuro-technologies)
- Area 3: Disruptive information technologies (New computing paradigms and their technologies, Quantum engineering, Hybrid opto-electro-mechanical devices at the nano-scale)
- Area 4: New technologies for energy and functional materials (Ecosystem engineering, Complex bottom-up construction)

ERANET Cofund: support to integrated regional, national and international grant systems in FET topics

ERANET Cofund in Quantum Technologies

High Performance Computing

- co-design of HPC systems and applications
- transition to exascale computing
- exascale HPC ecosystem development

FET FLAGSHIPS

[FET Flagships](#) are visionary, science-driven, large-scale research initiatives addressing grand Scientific and Technological challenges. They are long-term initiatives bringing together excellent research teams across various disciplines, sharing a unifying goal and an ambitious research roadmap on how to achieve it.

Currently running (WP 2016-2017) flagships are the [Graphene](#) and the [Human Brain Project](#) flagships. A new Flagship has been announced in [Quantum Technologies](#).

RESEARCH INFRASTRUCTURES

State-of-the-art research infrastructures become increasingly complex and costly, often requiring integration of different equipment, services and data sources, as well as extensive transnational collaboration. This part of H2020 section I does just that, including for e-infrastructures. [More on research infrastructures here](#)

2ND SECTION: INDUSTRIAL LEADERSHIP

[This pillar](#) aims at speeding up development of the technologies and innovations that will underpin tomorrow's businesses – it targets mainly SMEs and PPPs (public-private partnerships) through its programmes (e.g. [Access to risk finance](#), [Innovations in SMEs](#)), but its [Leadership in Enabling and Industrial Technologies](#) may be relevant.

LEADERSHIP IN ENABLING INDUSTRIAL TECHNOLOGIES

[This part of H2020](#) is organized in 3 programmes:

- [Key enabling technologies](#):
 - Nanotechnologies
 - Advanced Materials
 - Advanced Manufacturing and Processing
 - Biotechnology
- [ICTs](#)
- [Space](#)

Please refer to each programme's WP 2016-2017 if this is relevant to you (available through the links above).

3RD SECTION: SOCIETAL CHALLENGES

Programmes that fall under the [societal challenges section](#) include various grants, project funding, prizes, events and policy shaping initiatives in the following fields:

- Health, demographic change and wellbeing;
- Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bioeconomy;
- Secure, clean and efficient energy;
- Smart, green and integrated transport;
- Climate action, environment, resource efficiency and raw materials;
- Europe in a changing world - inclusive, innovative and reflective societies;
- Secure societies - protecting freedom and security of Europe and its citizens.

Each of these fields has its own work programme, available through the section link above.

SOME TRANSVERSAL TOOLS AND PROGRAMMES UNDER HORIZON 2020

Most of the time, the programmes presented above exclude all topics that fall under the EURATOM treaty. If your topic is related to nuclear research, please see the [EURATOM pages here](#) for specific calls.

Several other cross-cutting sections are part of the H2020 programme, including public engagement and **fast track to innovation programmes**. You can find the [full list here](#).

One of them, “[Cross-cutting activities](#)” for instance, advertises calls for Industry 2020 in the Circular Economy (Factories of the Future, Sustainable Process Industries), Internet of Things, and Smart and Sustainable Cities.

The [European Institute of Innovation and Technology EIT](#) and its Knowledge Innovation Communities are worth checking out if you want to take part in the business-research-education triangle of innovation in the following fields: climate, health, digital, sustainable energy, raw materials, food, urban mobility, and manufacturing.

THE EUROPEAN RESEARCH AREA AND ERA-NET TOOL

The vision behind the [European Research Area](#) is a unified area open to the world, in which scientific knowledge, technology and researchers circulate freely.

[ERA-NET](#) is one of the ERA tools, and it has been integrated within Horizon 2020 as a complementary tool. ERA-NET calls and events can be found in several sections of Horizon 2020.

ERA-NETs were initially designed to form and support transnational networks. In Horizon 2020, the funding goes less to the networks, and more to the joint calls these networks have set up and manage, in the form of top-up funds from the Commission.

Examples of ERA-NETs include [CHIST-ERA](#) (Coordinated Research on Long-term Challenges in Information and Communication Sciences & Technologies) and the ERA-NET Cofunds on quantum technologies and other FET topics under the Future & Emerging Technologies branch of section I.

THE COST PROGRAMME

The [COST framework](#) is originally a non-EU, intergovernmental programme – it includes many neighbouring countries of the EU. Within H2020 though, it has been made to fit into the “Europe in a Changing World” societal challenge (section III) and “Spreading Excellence & Widening Participation” cross-cutting section, with a €300 million grant for the H2020 period. An annual Specific Grant Agreement lays out more specific work plans.

Key philosophy: establishing dynamic researcher communities across countries, genders and generations

- ➔ Openness: a network, once established, remains open to newcomers
- ➔ Inclusiveness: promotes the participation of young and women researchers and less connected research communities

The COST approach:

- Pan-European networks of researchers and scientists
- Bottom-up actions (content of the actions is defined by the actors themselves)
- Open to all fields, focused on excellence
- At least 5 members from COST countries at first, with room for expansion
- Involvement of academia, industry, public and private labs in one team

NB: Singapore is an international partner country: Singaporean entities can take part in a network on the basis of *ascertained mutual benefit*. However the international partner country member shall not have a voting right in the action management committee, nor become an action chair/ vice chair / working group leader.

Applications can be submitted on the COST website throughout the year. The submission process is detailed in the “COST Open Call SESA guidelines document”. It is an online process through an authentication portal.

More information on the cost website: http://www.cost.eu/participate/open_call.

COMPLEMENTARY CALLS ON THE FRENCH SIDE

The French Agence Nationale de la Recherche has a specific call for “[Setting up European or International Research networks](#)” (MRSEI), to help researchers from French institutions be more represented and take the lead in networks funded by the EU or international funding. Do scan through the ineligibility criteria first, since many H2020 calls, such as COST, are actually excluded...

HOW TO APPLY?

FIND H2020 CALLS DEADLINES AND RELEVANT INFORMATION

If you are interested in one of the H2020 programmes mentioned above, [this table](#) keeps track of past, current and upcoming calls.

CNRS & YOUR APPLICATION

Some of the calls do not require an affiliation to a European host institution (from an EU Member State or Associated countries), and you can submit your proposals directly following the call's guidelines – but chances are you will have to mention CNRS at some point; in any case, **do inform your UMI's director** and the person in charge of European affairs for your UMI's institute at CNRS.

In most cases, a host institutions (HI) is required to back the proposal anyway. If you are part of a UMI (e.g. entered in the Reseda database – check with your UMI's director), CNRS can be this host institution.

If you'd like to have CNRS' assistance with your application, here are the next steps:

- 1. At least 6 weeks before your call's deadline**, inform the UMI's director. He will then [contact the Direction for European and International Affairs](#) (DERCI) and send [this form](#) to demandeipe@cnrs-dir.fr. They will inform the relevant persons from your UMI's institute of affiliation and from the Partnerships and Valorisation Service in Paris ([SPV DR16](#)). If your request is accepted, a European Projects Engineer will be in touch.
- 2.** We advise you to contact the person in charge of European affairs for your UMI's institute as well. They also are the go-to persons for the most up-to-date information. [Full list here](#)
- 3.** Depending on the type of call, you may want to contact the national contact points (NCPs, who are, in fact, actual people) for information and advice. Do check [the main NPCs AND the full list of people in the consortium](#) – there is a good chance that one of them is a CNRS staff. For instance:
 - Philippe Roussignol, our colleague in charge of European programmes at DERCI, is the main NCP for ERC calls
 - Subbarao Bassava, director for IR at Institute of Physics, and Pascale Massiani from the Institute of Chemistry, are also members of the FET consortium...

OTHER EU RESSOURCES

The [EURAXESS LINKS ASEAN](#) portal is updated daily with calls and events for European and local scientists in ASEAN. Do subscribe to their newsletter for weekly recaps and reports, and a more comprehensive quarterly publication.

The [EU IPR Helpdesk for Southeast Asia](#) can help you with intellectual property matters.

The [EU Delegation to Singapore](#) is part of the European External Action Service and handles diplomatic relations. Research and science matters fall under the economic & trade section, headed by Mr Bruno-Julien Malvy. The section organizes regular meetings with the scientific attachés of all the member states represented in Singapore (+ Switzerland & Norway) to coordinate activities and share policy concerns. If you think an issue or question you encounter is relevant to the EU/SG research community (either Singaporean working in/with Europe or Europeans/foreigners working here), please do contact the person in charge of research at your Embassy as well, so that we can raise the issue together.

USEFUL LINKS

EC Research directorate (pilots research policy): <http://ec.europa.eu/research/index.cfm>

EU research executive agency (executes research policy): http://ec.europa.eu/rea/index_en.htm

FET WP 2016-2017 http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-fet_en.pdf#page=6

Fostering: a programme in Grenoble with lots of tips and advice on ERC/MSCA applications: <http://fostering-science.com/en/>

Horizon 2020 portal:

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/index.html>

CNRS DERCI page on H2020 (FR): <http://www.cnrs.fr/derci/spip.php?rubrique261>