



HELLENIC REPUBLIC  
MINISTRY OF DEVELOPMENT AND INVESTMENTS  
GENERAL SECRETARIAT FOR RESEARCH AND TECHNOLOGY  
**HELLENIC FOUNDATION FOR RESEARCH AND INNOVATION**

**185 Syngrou Ave. & 2 Sardeon St., 171 21 N. Smyrni**

**Information:** [researchdepartment@elidek.gr](mailto:researchdepartment@elidek.gr)

**Contact tel.: 210 6412410, 210 6412420**

**Athens, 28.12.2020**

**Ref. No. 32000**

**3rd Call**  
**for H.F.R.I. Research Projects to support**  
**Postdoctoral Researchers**

**Submission Start-date:** January 25th 2021, 12:00 (GMT+2)  
**Submission End-date:** March 8th 2021, 17:00 (GMT+2)

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**The Director of the Hellenic Foundation for Research and Innovation, having regard to:**

1. Law 4429/2016 on “Hellenic Foundation for Research and Innovation and other provisions”, and especially Articles 2(1), 5(2-9), 8(9-10) and 9(7, case b’) therein,
2. Decision no. 2195245/15.11.2018 issued by the Alternate Minister of Education, Research and Religious Affairs and Administrative Reform on “Internal Regulation of the Hellenic Foundation for Research and Innovation (H.F.R.I.)” (5252/B), as in force,
3. Decision no. 29898/26.2.2019 issued by the Alternate Minister of Education, Research and Religious Affairs “Annual planning of actions and resource allocation of the Hellenic Foundation for Research and Innovation (H.F.R.I.) for 2019” (B’ 809), as in force, following its amendment by Decision no. 32397/23.3.2020 issued by the Alternate Minister of Development,
4. Decision with Ref. No. 22202/24.02.2020 issued by the 73rd Meeting of the H.F.R.I. Scientific Council on the “Operational Planning of H.F.R.I. Actions for year 2020” (IUN: ΩMTΔ46M77Γ-NI6), as in force following its amendment by Decision with Ref. No. 31798/21.12.2020 issued by the 94th Meeting of the H.F.R.I. Scientific Council (IUN: 6ΨΛ446M77Γ-1ME),
5. Decision with Ref. No. 7886/21.12.2018 issued by the 39th Meeting of the H.F.R.I. Scientific Council on the approval for undertaking long-term commitment, as in force following its amendment by Decision with Ref. No. 25119/25.05.2020 issued by the 78th Meeting of the H.F.R.I. Scientific Council (IUN: Ψ0ΣI46M77Γ-ZΦO),
6. the fact that the budget of the Action burdens the H.F.R.I. budget and that the Action is funded through the agreement dated 15.07.2016 between the Hellenic Republic and the European Investment Bank,
7. Decision with Ref. No. 288/03.04.2017 issued by the Alternate Minister of Education, Research and Religious Affairs on the establishment of the H.F.R.I. Scientific Council (YODD 173), as in force after its amendment by Decision no. 68183/01.07.2020 issued by the Minister of Development and Investments (YODD 490),
8. Decision with Ref. No. 301/04.08.2017 issued by the 6th Meeting of the H.F.R.I. Scientific Council, appointing Dr. Nektarios Nasikas as H.F.R.I. Director (YODD 436),
9. Decision with Ref. No. 12105/23.04.2019 issued by the 52nd Meeting of the H.F.R.I. Scientific Council regarding the allocation of duties to the Foundation Director,
10. Decision with Ref. No. 31799/21.12.2020 issued by the 94th Meeting of the H.F.R.I. Scientific Council on the approval of the 3rd Call for H.F.R.I. research projects to support Postdoctoral Researchers (IUN: 96ΛΨ46M77Γ-9ΨΣ),

**CALLS**

Postdoctoral Researchers who are interested to submit proposals under the “3rd Call for H.F.R.I. Research Projects to support Postdoctoral Researchers”, in line with the terms and conditions presented below.

## **1 ACTION OBJECTIVE AND GENERAL INFORMATION**

The Call aims to support the implementation of selected, following evaluation, research projects of high scientific quality and excellence, for which Principal Investigators (PIs) are Postdoctoral Researchers (PR-PI). The Action has been designed so as to support Postdoctoral Researchers in directing research Project implementation as Principal Investigators and forming their own independent Research Team.

The action ultimate objective is to create new prospects in the scientific and professional progression of both the PR-PI and project Research Team (RT) members, to form conditions appropriate for utilizing existing scientific potential in the country and attracting young scientists working abroad.

The proposed research Project (“Proposal”) shall be original, refer to a cutting-edge research field and have a significant scientific impact, while meeting high scientific quality and excellence criteria.

The Principal Investigators of research projects shall be Postdoctoral Researchers (article 24(12) Law 4386/2016). PR-PIs are invited to demonstrate the spearheading character, ambition and feasibility of their scientific proposal. PR-PI obligation shall be the continuous monitoring of the project and ensuring its correct implementation, both as to its physical and financial scope, in line to all that is proposed in the Proposal. Other than the PR-PI, the project Research Team may include other Postdoctoral Researchers, PhD Candidates, Post-graduate Students, scientific and technical associates, as well as other personnel, either belonging to the Host Institution (HI) or a Collaborating Organization (CO).

The Project may be implemented in a Host Institution, which can be a Higher Educational Institution (including Higher Military Educational Institutions) headquartered in Greece, a research or technological institution as provisioned in article 13a of Law 4310/2014 (Is. A’ 258), a University Research Institute as provisioned under Laws 2083/1992 and 3685/2008 and the Hellenic Foundation for European & Foreign Policy (ELIAMEP) (Law 4429/2016 article 2(2a)). In case the research Project is to be funded, the Host Institution shall provide a letter of acceptance for the project.

Research Projects to be funded shall be selected following an evaluation process. Proposals shall be evaluated by Topic-specific Committees (TCs) comprised of acclaimed scientists, specializing in the Scientific Areas (SAs) of research that the Call covers and by independent experts, if deemed necessary, as provisioned accordingly in article 5(6) of Law 4429/2016, as amended and in force. The whole process is governed by strict rules of confidentiality, binding for all participating parties.

## 2 SCIENTIFIC AREAS (SAs)

Each Proposal shall be submitted under a scientific field included in one (1) of the following broad Scientific Areas:

- SA.1. Physical Sciences**
- SA.2. Engineering Sciences and Technology**
- SA.3. Life Sciences (Medicine and Health Sciences)**
- SA.4. Agricultural Sciences – Food Science and Technology**
- SA.5. Mathematics and Information Sciences**
- SA.6. Social Sciences**
- SA.7. Humanities and Arts**
- SA.8. Environment and Energy**
- SA.9. Management and Economics of Innovations**

Separate scientific fields and subfields of Scientific Areas are listed in [Annex I](#).

## 3 BUDGET

The total public cost of this Call amounts to **€8,000,000.00**. The maximum funding limit for each research Project, depending on the Scientific Area to which it is included, is determined according to [Table 1](#) as follows.

**Table 1. Maximum funding limits for each research Project as per Scientific Area**

<b>Scientific Area</b>	<b>Maximum funding limit</b>
SA.1. Physical Sciences	€120,000
SA.2. Engineering Sciences and Technology	€120,000
SA.3. Life Sciences (Medicine and Health Sciences)	€120,000
SA.4. Agricultural Sciences – Food Science and Technology	€120,000
SA.5. Mathematics and Information Sciences	€120,000
SA.6. Social Sciences	€100,000
SA.7. Humanities and Arts	€100,000
SA.8. Environment and Energy	€120,000
SA.9. Management and Economics of Innovations	€100,000

The distribution of the available budget per Scientific Area shall be determined by a relevant decision of the H.F.R.I. Scientific Council.

It is noted that the total funding budget for each Scientific Area is not affected by the maximum funding limit for each research Project.

## 4 DEONTOLOGY

### 4.1 Prevention of double funding

A necessary condition for a project to be funded, is that it shall not have received or is to receive funding by any means from any other institution for its full scope or part thereof.

### 4.2 Ensuring research integrity

In all stages of Proposal evaluation, funding and implementation, PIs and RT members shall exhibit conduct in line with rules of ethics and deontology, in respect to scientific truth, academic freedom, human dignity, the environment, intellectual and industrial property.

Any case of unethical scientific behavior shall be examined and may lead to the Proposal being excluded from the evaluation process or the Funding Award Decision being revoked.

In particular, the embezzlement, falsification, plagiarism and misleading presentation of third-party scientific data and achievements, is prohibited.

## 5 ELIGIBILITY

Terms and conditions for participating in this Call are the following:

### 5.1 Principal Investigator (PI) and project Research Team (RT)

Eligible to participate as project Principal Investigators are Postdoctoral Researchers who have been awarded their PhD in Greece or abroad, provided that by submission start-date, **no more than ten (10) years shall have elapsed from date 1.1 of the year they were declared a doctor\***. The above period is increased for male candidates who have fulfilled their military obligations by their military service duration and for female candidates who have become pregnant, by nine (9) months per child and for as many as (2) children.

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*\*Eligible to participate as Research Proposal PR-PIs are PRs who have been awarded a doctorate from 01.01.2011 onwards.*

Eligible to participate as well, are any persons proven to have successfully defended their doctoral thesis up to Proposal submission deadline but have not as yet been declared a doctor, provided that they submit a pertinent certificate from the competent department of the relevant Institution. In the case of a foreign Institution, the certificate in question shall be submitted in its original form attached with its formal translation in Greek.

Additionally, a necessary condition for Call eligibility that the PR-PI is not employed on Proposal submission date and has not been employed at any time during the twelve (12) months preceding said date, under any capacity or fee at the project HI (i.e., at the same Higher Educational Institution Department/ School or Research Centre - Institute).

*Failure to meet above conditions implies Proposal ineligibility for evaluation.*

PhD diplomas awarded from foreign institutions must be accompanied by a title recognition certificate by NARIC. If the PhD diploma has not been certified by Proposal submission, the relevant application to NARIC may be submitted instead.

**In order for the Project to be funded, it is necessary to present both the PhD Diploma and the its act of recognition by NARIC.**

**It is noted that the PR-PI can only submit one (1) Proposal as a PI and cannot participate as a Research Team member in any other Proposal.**

Ineligible to participate in this Call (either as PIs or Research Team members) are PR-PIs whose Proposal has been funded under the 1st or 2nd Call for H.F.R.I. research projects to support Post-doctoral Researchers.

*Failure to meet above conditions implies Proposal ineligibility for evaluation.*

Should the PR-PI be appointed as a Faculty member to a Higher Educational Institution or as a researcher to a research/technological institute in the country, during research Project evaluation process or implementation, they may continue to implement the project as a PI, without receiving remuneration. They shall also be included in the list of Non-remunerated members from the date that their appointment has been published in the Government Gazette, being entitled to travel and dissemination cost eligibility for actions directly related to the project's physical scope.

The Proposal cannot be funded, if the PR-PI is to occupy a Faculty member or researcher position in a foreign educational, research or technological institution, at any time before the funding award decision date of issue. In case they should take a position after the funding award decision date of issue, the possibility or not for project funding to continue as well as related terms, shall be specified in the Management and Implementation Guide.

To the project **Research Team**, other than the PR-PI, may participate:



- As **Remunerated members** (Table 2): Post-doctoral Researchers, scientific (i.e., PhD Candidates, Post-graduate Students) and technical staff to be contracted with the HI for project implementation.
- As **Non-remunerated members** (Table 3): Scientific and technical staff belonging to domestic or foreign Collaborating Organizations, other Host institution or/ and Collaborating Organization staff working under a public law employment relationship or an Open-term Private Law employment Relationship (Special Educational Staff, Lab Teaching Staff, Technical Scientists, etc.).

**Table 2. Remunerated Research Team member categories**

<b>Categories of Remunerated Project Research Team members</b>
<b>1.</b> Post-doctoral Researchers (PR)
<b>2.</b> Scientific staff (PhD candidates, post-graduate students, scientific associates)
<b>3.</b> Technical staff

The remunerated Research Team member (denominated during Proposal submission), who during the evaluation process or Project implementation, shall be appointed as a Faculty member or researcher, or appointed in the broader public or private sector, or lose the capacity by which they were included in the RT, may continue working in the research Project as a Non-remunerated RT member.

Remunerated Research Team members not denominated during Proposal submission, will be selected following a Call for the expression of interest being issued for the respective positions by the HI, in line with current legislation.

**Table 3. Indicative Non-remunerated Research Team member categories**

<b>Categories of Non-remunerated Project Research Team members (indicative)</b>
<b>1.</b> Post-doctoral Researchers of the Host Institution or/ and the Collaborating Organizations
<b>2.</b> PhD Candidates and Post-graduate Students of the Host Institution or/ and the Collaborating Organizations
<b>3.</b> Other Staff of the Host Institution or/ and the Collaborating Organizations working under a public law employment relationship or an Open-term Private Law employment relationship (Special Educational Staff, Lab Teaching Staff, Technical Scientists, etc.)

**Remunerated (the PR-PI excluded) and Non-remunerated members to any Research Team can only participate to a maximum of two (2) Proposals in total.**

*Failure to meet above conditions implies Research Proposal ineligibility for evaluation.*

Other than Remunerated and Non-remunerated Project Research Team members, as listed in Tables 2 and 3, there is a provision for establishing a research Project Advisory Board (optional). Listed in Table 4 are indicative member categories eligible to participate in the Advisory Board. Advisory Board members are non-remunerated and may only receive travel allowance.

**Table 4. Indicative Categories of Advisor Committee members**

<b>Categories of Advisor Committee members (Indicative)</b>
<b>1.</b> Faculty members, domestic or foreign
<b>2.</b> Research Centre Researchers, domestic or foreign
<b>3.</b> Professors Emeritus

### **5.1.1 Fulfillment of military obligations or legal exemption (regarding male PR candidates of greek descent)**

Greek male PR-PI Candidates shall have fulfilled their military obligations or have been legally exempt of them or have had their rank postponed. The duration of ranking postponement should cover the duration of research Project implementation. Conditions in this section must be met when the Funding Award Decision is issued. In case of non-fulfillment, the research Proposal cannot be funded.

### **5.1.2 Non-possession of dependent employment position**

Upon the Funding Award Decision being issued and for the duration of the funded project, the project PR-PI and Research Team Remunerated members shall not:

- be civil servants or employed under a Private Law and Open-term dependent employment relation in the Public or broader Public Sector [article 14(1, case a') Law 4270/2014] or in the private sector,
- be retirees,
- hold any employment not allowing them to carry out the task assigned to them in line with the project Technical Bulletin.

## **5.2 Host Institution (HI) – Funding Beneficiary**

Defined as Host Institutions for the Research Project are:

- Higher Educational Institutions (AEI) in the Country as provisioned under article 1 of Law 4485/2017 (Is. A' 114/2017), as in force,

- Higher Military Educational Institutions (ASEI) of Law 3187/2003 (Is. A' 233/2003).
- Research Centres – Institutes (R.C.-I.) of article 13a of Law 4310/2014 (GG Is. A' 258/2014), as in force,
- University Research Institutes (U.R.I.), i.e., private law legal entities established by virtue of provisions in Laws 2083/1992 (Is. A' 159/1992) and 3685/2008 (Is. A' 148/2008),
- the Hellenic Foundation for European & Foreign Policy (ELIAMEP).

All potential HI's shall be available for selection on the online submission platform, in the form of a drop-down menu, allowing for only one selection.

**Upon Proposal submission the PR-PI shall attach a letter of intent<sup>†</sup> to collaborate from the HI,** whereby it is certified that the institution holds the intent of collaborating with the PR-PI under the proposal, and that the above-mentioned (Section 5.1, p.8) condition regarding non-employment to the HI is fulfilled.

*Not submitting the relevant HI letter of intent to collaborate with the PR-PI, renders the Proposal non-eligible for evaluation.*

### **5.3 Collaborating Organization (COs)**

In the context of research Project implementation, it is possible to collaborate with academic/ research Institutions as well as public or private organizations of any kind or form, domestic or foreign. Collaboration with these organizations must relate to supporting project implementation and may (indicatively) consist of conducting experiments, accessing archives, etc. and requires (in order to be evaluated) the existence of a relevant letter of intent to collaborate from the organization, affirming its intent to collaborate with the PR-PI under the research Proposal.

## **6 PROJECT FUNDING LIMITS**

- Duration for research Projects may extend **from 12 to 24 months**.
- The project start-date is set by the HI upon its inclusion in the HI budget, which cannot exceed 30 calendar days from the date of inclusion.

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<sup>†</sup> A template for the HI letter of intent shall be available from H.F.R.I.'s website, [www.elidek.gr/call](http://www.elidek.gr/call).

- The postponed start of the research Project is possible, following a relevant reasoned request by the PR-PI, which is approved by the H.F.R.I. Director.
- The implementation of costs for each research project begins on its start-date.

## 7 BUDGET AND COST CATEGORIES

The research Project budget per cost category, as well as funding limits per category, are presented in [Table 5](#).

**Table 5. Funding percentages per cost category**

Cost Categories	Percentage as the total project budget
<b>DIRECT COSTS</b>	<b>≥ 92%</b>
Salary costs (PR-PI and Research Team)	≥ 50%
Consumables Dissemination and travel costs Costs for using or accessing equipment, infrastructure or other resources Equipment Other Costs	≤ 42%
<b>INDIRECT COSTS</b>	<b>≤ 8%</b> of total costs for all other categories

### 7.1 Direct Costs

Project direct costs include PR-PI and Research Team salary costs, consumables, dissemination and travel, using or accessing equipment, infrastructure or other resources, equipment and other costs.

#### 7.1.1 Personnel remuneration

##### 7.1.1.1 PR-PI remuneration

**For the duration of research Project implementation, the PR-PI shall be contracted with the HI under a private law fixed-term contract or a project lease contract.**

Under the contract held by the PR-PI with the HI, the PR-PI shall hold **full-employment** status.

Gross monthly salary for full-employment for the project **PR-PI**, is calculated as follows:

1. In case of a fixed-term private law employment contract, gross monthly income shall in the least be equal to the minimum limits set in article 18(12 case a) of Law 4310/2014. The maximum limit is defined in line with Chapter B' provisions of Law 4354/2015, as in force, for full employment.
2. In case of a project lease contract, gross monthly income shall in the least be equal to the gross monthly income that the PR would have received under a fixed-term private law employment contract as above (under 1) specified (in addition to employer contributions, if any, and corresponding VAT).

#### **7.1.1.2 Research Team member remuneration**

Project Research Team members with the right to remuneration can be Postdoctoral Researchers, PhD Candidates, Post-graduate Students, specialized scientific and technical staff to be contacted with the HI under project implementation.

PRs to be employed in the Research Team shall be contracted with the HI under a dependent employment relationship (private law, fixed-term) or a project lease contract and their income shall be determined in line with the above (under 7.1.1.1) provisioned.

In regard to **scientific staff** (PhD Candidates, Post-graduate Students) or/and other **extraordinary technical/auxiliary staff** to be contracted with the HI under project implementation, gross monthly income for full employment is calculated as follows:

1. In case of a fixed-term private law employment contract, gross monthly income shall be equal to that provisioned in Chapter B' of Law 4354/2015, as in force, gross income for full employment.
2. In case of a project lease contract, gross monthly income shall be equal to the gross monthly income that said Research Team member would have received under a fixed-term private law employment contract as above (under 1) specified (in addition to employer contributions, if any, and corresponding VAT).

In case a Post-graduate Student included in the Research Team is to conclude their post-graduate studies and is registered as a PhD Candidate during project implementation, it is possible to be included in the PhD Candidate category with a corresponding increase in monthly remuneration, provided the related project budget provision exists. Respectively, a PhD Candidate who has been awarded their PhD may be included in the PR Category, with a corresponding increase in monthly remuneration, provided the related project budget provision exists.

**It is noted that in case the Project is funded, Remunerated RT members cannot be receiving remuneration by another H.F.R.I. action, for the period of their remunerated employment in the project funded under this action, and for full-employment status.**

The following [Table 6](#), lists above terms and remuneration limits in summary.

**Table 6. Maximum remuneration limits for the PR-PI and Remunerated Research Team Members**

Remunerated RT member Categories	Gross Remuneration Determination
<b>1. PR (PR-PI)</b> <i>Principal Investigator</i>	<b>Maximum Remuneration limits (gross) for full employment</b>
<b>2. PR (for conducting research work)</b>	<b>a) Private law fixed term employment contract:</b> Private law fixed term employment contract: gross monthly income shall in the least be equal to the minimum limits set in article 18(12 case a) of Law 4310/2014. The maximum limit is defined in line with Chapter B' provisions of Law 4354/2015, as in force, for full employment. <b>b) Project lease contract:</b> gross monthly income shall be equal to the gross monthly income said Research Team member would have received under a fixed-term private law employment contract as above (under a) specified (in addition to employer contributions, if any, and corresponding VAT).
<b>3. Scientific or Technical staff</b>	<b>a) Private law fixed term employment contract:</b> In line with Chapter B' provisions of Law 4354/2015. <b>b) Project lease contract:</b> Project lease contract: gross monthly income shall be equal to the gross monthly income said Research Team member would have received under a fixed-term private law employment contract as above (under a) specified (in addition to employer contributions, if any, and corresponding VAT).

The above are gross amounts, upon which all legal deductions and employee contributions are calculated, as applicable in each case. For calculating the total amount of staff remuneration charged to the project, legal employer contributions are added to the above amounts, which are eligible project costs. To the above amounts shall be added, when so provisioned by law, Value Added Tax (VAT), which is an eligible project cost.

**Remuneration costs for the project PR-PI ([Section 7.1.1.1](#)) and remaining Research Team ([Section 7.1.1.2](#)), must be at least 50% of the total research project budget.**

In addition to Remunerated members, the project Research Team may include staff categories such as Non- remunerated members, as defined in [Table 3](#).

It is noted that Non-remunerated Research team members may receive, for project needs, daily remuneration and travel allowance for transit directly linked to the Project natural scope.

In similar, project Advisory Board members may receive, for project needs, daily remuneration and travel allowance for transit directly linked to the Project natural scope.

### **7.1.2 Consumables**

Costs for consumables are eligible when pertaining exclusively to Project implementation and are recorded separately. Indicatively, they involve the purchase of direct consumption materials (e.g., lab consumables, reagents etc.) that are necessary for Project implementation. This category does not include general office supply costs, such as paper, stationery, PC consumables, etc., as these are commonly included in the overhead and may be eligible only when research project particularities require an unusual amount of relevant costs for its implementation. In this case, sufficient relevant substantiation is required.

### **7.1.3 Dissemination and travel costs**

Indicatively, these include scientific journal publication costs, registration costs in conferences relating to speech - communication or poster, costs for organizing and conducting seminars or/ and conferences, costs for publishing monographs and books, costs for producing audiovisual material, for website development and publicity in social networking media. Additionally, this category includes costs for patent submission in domestic institutions and in corresponding institutions abroad, as well as different cost types for registering research findings, etc. For all of the above to be considered eligible, they have to be related to Research Project implementation.

Additionally, this category includes costs pertaining to the PI and RT members travelling in Greece or abroad for participating in conferences to present Research Project outcomes, for conducting field research or collaborative research with Research Team members belonging to other Organizations in Greece or abroad. In case of research collaboration, a necessary condition for cost eligibility is the submission of a pertinent letter of intent from the Collaborating Organization, as part of the submitted Proposal.

### **7.1.4 Costs for usage or access to equipment, infrastructure or other resources**

This category includes costs that must be reimbursed for using or gaining access to lab research equipment, research infrastructure or other resources necessary for research Project implementation. Indicatively, apart from the costs for using or accessing lab research equipment or infrastructure, this category may include eligible costs for accessing resources necessary for research Project implementation, such as: access to databases, subscriptions to libraries, archives and collections of domestic and foreign Institutions, procurement of software for specialized research purposes, costs for updating existing software, for digitization of printed and audio-visual archives and their further capitalization, costs for acquiring satellite data etc.

### **7.1.5 Equipment**

The procurement of small lab equipment (new or used) is provisioned when considered necessary for Project implementation. In order for this cost to be considered eligible, documentation as to the usefulness of this equipment in relation to Research Proposal implementation is required. Especially in regard to personal computer procurement, (desktop or laptop) the necessity of purchase must be substantiated in direct link to the Research Proposal.

### **7.1.6 Other costs**

This category includes costs that cannot be included in other categories. Indicative costs included in this category are: special telecommunication costs (such as use of satellite communications), repair costs of important equipment etc.

Costs are eligible provided they have been mentioned in the submitted Proposal or its imminent amendment during Project implementation, as well as adequately reasoned in regard to the research Project being successfully implemented.

Especially pertaining to costs for servicing and repairing research equipment, in addition to the above, the request should also be substantiated by a simple cost-benefit analysis and relate to equipment deemed important for research Project implementation. Costs regarding necessary accessories and replacement parts, labor costs and possible shipping costs, are eligible.

**The total of direct costs excluding salary costs (Sections 7.1.2 to 7.1.6) shall not exceed 42% of total Project budget.**

### **7.2 Indirect Costs**

Considered as indirect costs, are Research Project management costs and overhead for the HI. These include costs of financial management support, office supply costs (stationery, PC consumables etc.) and main utilities (telecommunications, electricity, internet access, etc.). **Indirect Costs may amount to as much as 8% of the total cost of all other categories and are included in the research Project budget.**



## 8 PROPOSAL SUBMISSION

Upon Proposal submission the following information is to be included:

- General information (Section A)
- Research Proposal (Section B1 and Section B2)
- Additional documents [Doctorate Diploma or a certificate regarding the successful support of the Doctorate from the relevant Institution (with its formal translation attached in the case of a foreign Institute certificate), a Letter of intent to collaborate from the HI and the CO(s), the title recognition act issued by NARIC in the case of a PhD awarded abroad or the recognition application addressed to NARIC and other documents].

### 8.1 Section A: General information

Section A includes PR-PI data and information regarding the research Proposal, including the project duration, title, acronym and a (brief) Proposal summary. The summary shall provide a clear presentation of research Proposal objectives and the way these are to be achieved. It is noted that in case the Project is funded, this summary may possibly be published (a fact that the PI and other team members accept expressly and unreservedly through Proposal submission) and therefore, should be brief and precise, not containing confidential information. Furthermore, in this section, the Proposal PR-PI selects the Scientific Area (SA)<sup>‡</sup> to which he considers that his research Proposal falls under. Specifically, the following information is completed in Section A:

- **Proposal General Information**
  - Scientific Area (SA), scientific field and subfield<sup>§</sup>
  - Proposal title (in Greek and English)
  - Proposal Acronym
  - Proposal summary (up to 2.000 characters, in Greek and English)
  - Keywords
  - Project duration (in months)
    - Detailed project Budget (σε €)
    - Work Packages
    - Deliverables
    - Milestones
- **PR-PI information** (Full name, contact details, VAT, etc.)
- **Host Institution** (School, Department, Institute, etc.)

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<sup>‡</sup>The Scientific Area (SA) to which the Project falls under is selected by the PR-PI and cannot be changed in the electronic platform after the Proposal submission deadline has expired.

<sup>§</sup>See [Annex I](#).

- **Collaborating Organizations** (School, Department, Institute, Country, etc.)
- **Research Team Members** (Full name, Capacity, VAT, etc.)
- **Advisory Board Members** (when applicable)

The table of ethics is also completed in this Section, which serves to identify possible ethical aspects of the research Project. This table should be filled-out even if there are no issues.

The PR-PI shall also be able to mention up to two (2) scientist names that they wish to be excluded from submitted Proposal evaluation.

Information in Section A is submitted in the **English** (excluding the Proposal title and summary, which shall be submitted in Greek and English).

## 8.2 Section B: Research Proposal

Section B is comprised of two (2) separate sections, Section B1 and Section B2.

Templates to these two separate sections will be available on the H.F.R.I. webpage, [www.elidek.gr/call](http://www.elidek.gr/call), listing the sections and fields that must correspondingly be included in Proposal Sections B1 and B2. Each Proposal page shall include a header listing the PR-PI name, the proposal acronym and the corresponding Proposal Section (Section B1, Section B2.1 etc.), as well as a footer, listing the corresponding Scientific Area (SA1, SA2, etc.) and the total number of pages.

Table 7 lists the technical specifications that all submitted documents are suggested to follow. Limits regarding page length must be strictly observed. Only information recorded within these limits will be evaluated.

**Table 7. Text technical specifications**

Page Size	Font	Font Size	Spacing	Page Margins
A4	Times New Roman, Arial, Calibri or similar	11 pt (at least)	Single (at least)	Top-Bottom: 1,5 cm Left-Right: 2 cm

### 8.2.1 PI CV & Scientific achievements (maximum: 4 pages)

Section B1 includes the detailed curriculum vitae and scientific achievements of the Proposal's PR-PI, i.e., all elements depicting the research and academic course of the PI.

Additionally, to this Section shall be included the PR-PI list of publications as well as research Projects to which the PR-PI is participating or/and has participated, under any capacity. Also to be mentioned, are any other research Proposals which are related to the Proposal and have been submitted to national or international research funding actions, to which the PR-PI is participating as a project Research Team member.

Section B1 is submitted in English and may be up to four (4) pages in length. Text in excess of these limits shall not be considered during evaluation. Section B1 is exclusively submitted as a PDF ("Portable Document Format") file.

## 8.2.2 Section B2: Detailed presentation of research Proposal

Section B2 shall list detailed descriptions of the scientific, technical or /and academic aspects of the research Projects, which prove the innovative character of the research, its potential impact and research methodology. This section should include a full estimate of the Project's actual cost, as also a description of the role engaged by the PR-PI and all Research Team members in Project implementation.

Section B2 includes the following two (2) separate sections (►Section B2.1. Research Proposal, ►Section B2.2. Curriculum vitae of Research Team members).

### Section B2.1. Research Proposal (maximum: 10 pages)

By minimum, the research Proposal detailed presentation should list the following:

#### ▪ Excellence, State-of-the-art and Objectives

This section shall clearly define Proposal objectives in relation to current state-of-the-art. The Proposal description should record why and how the research project is important for the scientific sector it is implemented in, as well as its broader impact to society or/ and technology or/ and arts/ culture or/ and society and also to the career of the project PR-PI and Research Team members. Also identified in this section, are (if any) the Proposal's particularly innovative or non-conventional aspects.

Indicative segments that may be included in this section are:

- Proposal objectives and challenges
- State-of-the-art and innovation
- Scientific or/ and social impact
- Impact on PR-PI and Research Team member career prospects

#### ▪ Methodology and Implementation

This section provides a detailed description of the methodology proposed, including key milestones, as per case. The methodology proposed shall be described and substantiated in correlation with current state-of-the-art, including any particularly innovative or non-conventional aspects, relating to the "high risk/high gain" balance. Moreover, any intermediate stages where results may require project schedule adjustments should be mentioned. The participation of all Research Team members, as well as the participation of any Collaborating Organizations proposed, shall be fully justified, emphasizing on the scientific added value they bring to the project.

Indicative sections that may be included in this section are:

- Research Methodology
- Work plan: Work Packages, Gantt Chart, Deliverables and Milestones Table, Table of Risks and Contingency plan.
- Research Team composition: Roles and competencies
- Advisory Board\*\*.

▪ **Budget**

The project budget shall include:

- Direct costs
  - Man-effort and salaries
  - Consumables
  - Travel (for conferences, meetings, research collaborations, etc.)
  - Access to or purchase of equipment
  - Others
- Indirect costs

The research Proposal first page (cover) (Section B2.1) shall list:

i) The PR-PI's full name, ii) the title, iii) the acronym, iv) the Scientific Area, the proposal scientific field and subfield, v) the project duration (in months), vi) the project budget (in €), vii) the proposed Host Institution for the project and viii) the Collaborating Organizations (if any).

Section B2.1 is submitted in the **English** and may be up to ten (10) pages in length, cover pages and bibliography index included. Text exceeding these limits will not be taken into consideration under evaluation. Section B2.1 is submitted exclusively as a PDF file.

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\*\* Establishing a Project Advisory Board is optional.

## **Section B2.2. Curriculum vitae of Research Team members** (maximum: 1 page/member)

Brief curriculum vitae of denominated Research Team members are submitted in Section B2.2, which may include selected scientific publications in scientific journals related to the research Project Scope.

The section in question is submitted in English and can be no more than one (1) page per RT member. Section B2.2 is submitted exclusively as a single PDF file.

**Proposal submission is concluded by the project PR-PI  
electronically in exclusive on H.F.R.I.'s web portal (<http://hfri.grnet.gr/>).**

**Call Opening:** January 25th 2021, 12:00 (GMT+2)

**Deadline:** March 8th 2021, 17:00 (GMT+2)

*The PR-PI holds exclusive responsibility for the validity of data submitted to the on-line submission platform.*

## **9 CHECK AND EVALUATION**

Evaluation of Proposals is conducted by Topic-specific Committees (TCs) **in one (1) phase** and, independent experts if deemed necessary, in line with the special provisions of article 5(5-8) of Law 4429/2016, as in force.

**The main criterion for Proposal evaluation is the degree of scientific quality and excellence, Proposal originality and implementation potential, as well as the PR-PI's scientific profile.**

### **9.1 Admissibility and eligibility check**

Proposals are checked as to the inclusiveness of all data and documents required, the observance of participation terms and limitations as well as other terms in this Call, as described in detail in [Section 5](#). If at any stage of the screening and evaluation process it is verified that a proposal fails to meet any of the relevant criteria, it shall be excluded from the evaluation process.

Responsible for checking the admissibility and eligibility for each proposal is the Topic-specific Committee to the corresponding Scientific Area. To this end, Topic-specific Committees cooperate with the H.F.R.I. Department of Research Projects.

### **9.2 Evaluation**

By decision of the H.F.R.I. Scientific Council, a Topic-specific Committee (TC) is established and constituted for each Scientific Area, comprised of acclaimed scientists within said Scientific Area. Provided it is deemed necessary and according to the judgment of each Topic-specific Committee, a non-binding evaluation of one or more Proposals may be requested from one or more independent experts, appointed by decision of the H.F.R.I. Scientific Council. The final decision for the evaluation of each proposal shall be made by the Topic-specific Committee.

Said experts, independent or Topic-specific Committee members, are included in the Register of Certified Evaluators of Article 27 of Law 4310/2014 (258/A) and hold qualifications related to the object of the Project to be evaluated. Topic-specific Committee members and experts are nominated by the H.F.R.I. Scientific Council. If expert scientists required for a specific evaluation are not available or existing ones do not meet the needs of a specific evaluation, expert scientists from Greece or abroad not included in the Certified Evaluator Register may be appointed as members or independent experts, pursuant to the SC's decision, and all other provisions under Article 5(6 & 7) of Law 4429/2016 provided.

### **9.3 Confidentiality**

The whole process is governed by the rule of confidentiality. Topic-specific Committee members and independent experts sign a confidentiality and non-conflict of interest declaration. All Topic-specific Committee members and independent experts owe full confidentiality before, during and after the evaluation, as to the entire evaluation process.

### **9.4 Evaluation Process**

The evaluation of proposals shall be conducted in one Phase, during which the Proposal shall be evaluated for each of the two basic Proposal evaluation criteria: The Principal Investigator and the Research Project.

In detail, the full research Proposal (Section B1 and Section B2) shall be evaluated as to the PR-PI's scientific profile (accomplishments and project guidance maturity), Proposal scientific quality and excellence, as well as Project originality and implementation feasibility, both in terms of the PR-PI and Research Team members, as in terms of Proposal budget allocation.

Grading takes place on a scale from 0 - 100.

**0-19.** The Proposal cannot be evaluated due to inadequate or incomplete information.

**20-39 Weak.** The Proposal only meets the criteria in part or there are serious inherent difficulties.

**40-59 Moderate.** While the Proposal does meet the criteria in general, there are significant weaknesses.

**60-79 Good.** The Proposal does meet the criteria on a good level, but there are certain shortfalls.

**80-89 Very Good.** The Proposal does meet the criteria on a very good level, although there is a limited number of shortfalls.

**90-100 Excellent.** The Proposal meets all relevant aspects of the criteria successfully. Any shortfalls are minor and are described as of secondary importance.

Evaluation criteria are mentioned in detail in [Section 9.5](#), while their corresponding weighting factor is distributed as follows:

**PR-PI Scientific profile (Weighting factor: 40 %)**

- PR-PI Scientific accomplishments.
- PR-PI Scientific maturity in research project implementation.

**Research Proposal (Weighting factor: 60 %)**

- Scientific originality and objectives.
- Scientific methodology and implementation.

## 9.5 Evaluation Criteria

Evaluation criteria are presented in detail in [Table 9](#).

**Table 9. Evaluation criteria.**

<b>1. Principal Investigator Evaluation</b>	
<p><b>A. Scientific Accomplishments</b></p> <ul style="list-style-type: none"> <li>▪ Scientific work (scientific publications, conference participation, distinctions, awards)</li> <li>▪ Experience/Participation in international and national research programmes</li> <li>▪ Level of scientific autonomy</li> <li>▪ Level to which the PI holds the necessary scientific expertise/ experience and ability to successfully implement the proposal</li> <li>▪ PI role in project implementation</li> </ul>	<p><b>Weighting factor</b> 0,4</p>
<b>2. Research Proposal Evaluation</b>	
<p><b>A. Project objectives, originality and potential impact</b></p> <ul style="list-style-type: none"> <li>▪ Clarity and relevance of proposal objectives</li> <li>▪ Degree to which objectives are ambitious and beyond current state-of -the-art (i.e., development of new techniques, tools, concepts, theories or/ and approaches)</li> <li>▪ Degree to which the proposal addresses important challenges</li> <li>▪ Degree to which the proposed research is of “high risk/high gain” if applicable)</li> <li>▪ Innovative nature and potential impact of the proposal</li> </ul>	<p><b>Weighting factor</b> 0,3</p>
<p><b>B. Methodology and Implementation</b></p> <ul style="list-style-type: none"> <li>▪ Degree to which the proposed scientific approach is feasible</li> <li>▪ Degree to which the proposal entails the development or implementation of a new methodology which shall lead to progress beyond current scientific/ technological state-of-the-art</li> </ul>	<p><b>Weighting factor</b> 0,3</p>

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>▪ Degree to which the proposed research methodology is appropriate for achieving project goals</li> <li>▪ Degree to which the project implementation plan, time schedules and budget are necessary and justified</li> <li>▪ Ability, expertise level and complementarity of Research Team members, in relation to the proposal</li> </ul> |  |
|--|--|

## 9.6 Budget partial approval possibility

The Topic-specific Evaluation Committee may, by a reasoned decision, partially approve the proposed budget of the research project.

## 10 EVALUATION RESULTS

Following the Proposal evaluation completion, results are communicated to the project PR-PI by a personalized report, which shall include Proposal grading marks and the evaluation report drafted by the Topic-specific Committee.

PR-PIs have the right to lodge a **substantiated objection on decision legality grounds** within a deadline of ten (10) days from the notification of evaluation results. Objections are judged by three-member committees, to an exclusive deadline of ten (10) days (Article 5(8) of Law 4429/2016). The Objections Committee decision is forwarded to the H.F.R.I. Director and the objecting party.

Following the evaluation of research Proposals, the H.F.R.I. Director issues the funding decision (list of research projects to be funded), according to the available budget. Said decision is an enforceable administrative act and is subject to petitions for annulment filed with the Administrative Court of Appeals.

Once the research projects to be funded are posted, potential beneficiary PR-PIs receive a letter via email, whereby they are invited to submit necessary supporting documents to H.F.R.I., so that the Funding Approval Decision may be issued.

**The project PR-PI accepts that messages sent via email and particularly to the email address they had provided when submitting the proposal online are considered notifications and signal the initiation of all legal processes and deadlines.**

## 11 PUBLICITY

The Call and the Implementation guide to this Call will be posted on the websites of H.F.R.I. ([www.elidek.gr](http://www.elidek.gr)), GSRT ([www.gsrt.gr](http://www.gsrt.gr)) and the Ministry of Development and Investments.



## **12 COMMUNICATION - INFORMATION**

Detailed information and briefing on this Call will be provided by the H.F.R.I. Department of Research Projects via electronic correspondence

through email: [researchdepartment@elidek.gr](mailto:researchdepartment@elidek.gr)

and telephone numbers 210-6412410, 210-6412420.

The Director of H.F.R.I.

**Dr. Nektarios Nasikas**

## ANNEX I. Scientific Areas, Scientific fields and subfields<sup>††</sup>

### SA1. Physical Sciences

#### 1.1. Physical Sciences

- 1.1.1. Acoustics
- 1.1.2. Atomic Physics
- 1.1.3. Molecular and chemical physics
- 1.1.4. Condensed matter physics
- 1.1.5. Nanosciences and nanotechnology
- 1.1.6. Fluids and plasma physics
- 1.1.7. Nuclear physics
- 1.1.8. Optics
- 1.1.9. Quantum optics
- 1.1.10. Laser Physics
- 1.1.11. Particles and field Physics

#### 1.2. Chemical Sciences

- 1.2.1 Analytical chemistry
- 1.2.2 Applied and industrial chemistry
- 1.2.3 Colloid chemistry
- 1.2.4 Inorganic and nuclear chemistry
- 1.2.5 Organic chemistry
- 1.2.6 Physical chemistry
- 1.2.7 Electrochemistry
- 1.2.8 Nanotechnology
- 1.2.9 Molecular architecture
- 1.2.10 Chemical theory

#### 1.3. Material sciences

- 1.3.1. Material synthesis
- 1.3.2. Structure-Property relation
- 1.3.3. Functional and Advanced materials
- 1.3.4. 2D Materials
- 1.3.5. Materials properties (e.g. thermal, electrical, mechanical)
- 1.3.6. Polymer science
- 1.3.7. Composite materials

#### 1.4. Earth and related environmental sciences

- 1.4.1 Climatology
- 1.4.2 Geochemistry and geophysics
- 1.4.3 Geology
- 1.4.4 Hydrology
- 1.4.5 Atmospheric sciences
- 1.4.6 Mineralogy
- 1.4.7 Marine sciences
- 1.4.8 Paleontology
- 1.4.9 Physical geography

<sup>††</sup> Τα επιστημονικά πεδία και υποπεδία είναι ενδεικτικά και ενδέχεται να υπάρχουν διαφοροποιήσεις στην ηλεκτρονική πλατφόρμα υποβολής.

1.4.10 Water resources

**1.5. Universe Sciences**

- 1.5.1 Astronomy
- 1.5.2 Astro-physics/chemistry/biology
- 1.5.3 Solar system
- 1.5.4 Stellar
- 1.5.5 Galactic and extragalactic astronomy
- 1.5.6 Planetary systems
- 1.5.7 Cosmology
- 1.5.8 Space science
- 1.5.9 Instrumentation

**1.6. Other physical/natural sciences**

**SA2. Engineering Sciences & Technology**

**2.1 Civil, Surveying & Architectural engineering**

- 2.1.1 Civil engineering
- 2.1.2 Architecture engineering
- 2.1.3 Construction engineering
- 2.1.4 Municipal and structural engineering
- 2.1.5 Transport engineering
- 2.1.6 Structural Engineering
- 2.1.7 Other

**2.2 Electrical, electronic & communication engineering**

- 2.2.1 Electrical and electronic engineering
- 2.2.2 Optical and systems engineering
- 2.2.3 Communication engineering and systems
- 2.2.4 Telecommunications
- 2.2.5 Computer hardware and architecture
- 2.2.6 Robotics and automatic control
- 2.2.7 Automation and control systems
- 2.2.8 Other

**2.3 Mechanical engineering**

- 2.3.1 Applied mechanics
- 2.3.2 Thermodynamics and thermal engineering
- 2.3.3 Fluid mechanics and turbomachinery
- 2.3.4 Aerospace engineering (aeronautics & astronautical engineering)
- 2.3.5 Manufacturing engineering and machine design
- 2.3.6 Automotive engineering
- 2.3.7 Naval engineering
- 2.3.8 Nuclear related engineering
- 2.3.9 Other

**2.4 Environmental engineering & biotechnology**

- 2.4.1 Environmental engineering
- 2.4.2 Ocean and coastal engineering
- 2.4.3 Other environmental engineering
- 2.4.4 Environmental biotechnology

- 2.4.5 Bioremediation
- 2.4.6 Bioprocessing technologies, biocatalysis
- 2.4.7 Bioproducts, biomaterials, biofuels etc.
- 2.4.8 Bio-derived novel materials
- 2.4.9 Other

## **2.5 Computer and telecommunications engineering**

- 2.5.1 Information and intelligent systems engineering
- 2.5.2 Computer engineering
- 2.5.3 Computational methods in engineering
- 2.5.4 Other

## **2.6 Chemical and materials engineering**

- 2.6.1 Chemical process engineering
- 2.6.2 Other chemical engineering
- 2.6.3 Petroleum engineering (fuels, oils)
- 2.6.4 Energy and fuels
- 2.6.5 Materials engineering
- 2.6.6 Mining and mineral processing
- 2.6.7 Nanotechnology
- 2.6.8 Catalysis
- 2.6.9 Energy production/processes (fuel cells, batteries, etc.)
- 2.6.10 Other

## **2.7 Medical engineering**

- 2.7.1 Medical engineering
- 2.7.2 Medical laboratory technology
- 2.7.3 Biomedical engineering
- 2.7.4 Other

## **2.8 Other engineering sciences and technology (e.g. security)**

### **SA3. Life Sciences**

#### **3.1 Molecular and Structural Biology, Biochemistry and Molecular biophysics**

- 3.1.1 Molecular synthesis, modification, mechanisms and interaction
- 3.1.2 Biochemistry
- 3.1.3 Molecular Biophysics
- 3.1.4 Structural Biology
- 3.1.5 Metabolism
- 3.1.6 Signalling pathways

#### **3.2 Genetics, 'Omics', Bioinformatics and System Biology**

- 3.2.1 Molecular and population genetics
- 3.2.2 Quantitative genetics
- 3.2.3 Genomics
- 3.2.4 Metagenomics
- 3.2.5 Transcriptomics
- 3.2.6 Proteomics
- 3.2.7 Metabolomics
- 3.2.8 Glycomics
- 3.2.9 Bioinformatics

3.2.10 Computational Biology

3.2.11 Biostatistics

3.2.12 System Biology

3.2.13 Genetic Epidemiology

3.2.14 Epigenetics

### **3.3 Cellular and Developmental Biology**

3.3.1 Cell Biology

3.3.2 Cell Physiology

3.3.3 Signal transduction

3.3.4 Organogenesis

3.3.5 Developmental genetics

3.3.6 Pattern formation in plants and animals

3.3.7 Stem cell Biology

### **3.4 Physiology, Pathophysiology and Endocrinology**

3.4.1 Organ physiology

3.4.2 Pathophysiology

3.4.3 Endocrinology

3.4.4 Metabolism

3.4.5 Ageing

3.4.6 Tumorigenesis

3.4.7 Cardiovascular disease

3.4.8 Metabolic syndrome

### **3.5 Neurosciences and Neural Disorders**

3.5.1 Neural cell function and signalling

3.5.2 Neural bases of cognitive and behavioral processes

3.5.3 Neuroanatomy and neurophysiology

3.5.4 Neurochemistry and neuropharmacology

3.5.5 Neuroimaging

3.5.6 Systems neuroscience

3.5.7 Neurological and psychiatric disorders

### **3.6 Oncology and Cancer Research**

3.6.1 Cancer biology

3.6.2 Cancer diagnosis research

3.6.3 Cancer treatment research

### **3.7 Immunity and Infection**

3.7.1 The immune system and related disorders

3.7.2 Biology of Infectious agents and infection

3.7.3 Biological bases of prevention and treatment of infectious diseases

### **3.8 Applied Medical Technologies, Diagnostics, Therapies and Public Health**

3.8.1 Diagnostic tools

3.8.2 Diagnosis and treatment of disease

3.8.3 Epidemiology and public health

3.8.4 Pharmacology

3.8.5 Clinical medicine

3.8.6 Regenerative medicine

3.8.7 Medical ethics

### **3.9 Ecology, Evolution, Population and Environmental Biology**

- 3.9.1 Evolutionary biology
- 3.9.2 Population, community and ecosystem ecology
- 3.9.3 Animal behavior
- 3.9.4 Biodiversity
- 3.9.5 Biogeography
- 3.9.6 Marine Biology
- 3.9.7 Eco-toxicology
- 3.9.8 Microbial ecology

### **3.10 Applied Life Sciences, Biotechnology, and Molecular and Biosystems Engineering**

- 3.10.1 Applied plant and animal sciences
- 3.10.2 Fishery
- 3.10.3 Forestry
- 3.10.4 Applied biotechnology
- 3.10.5 Environmental and marine biotechnology
- 3.10.6 Genetic engineering
- 3.10.7 Synthetic and chemical biology
- 3.10.8 Industrial biosciences
- 3.10.9 Applied Bioengineering

### **3.11 Other Life Sciences**

## **SA4. Agricultural Sciences–Food Science & Technology**

### **4.1 Agriculture, forestry, and fisheries**

- 4.1.1 Agriculture
- 4.1.2 Forestry
- 4.1.3 Fishery
- 4.1.4 Soil science
- 4.1.5 Horticulture
- 4.1.6 Viticulture
- 4.1.7 Agronomy
- 4.1.8 Plant breeding

### **4.2 Animal and Veterinary science**

- 4.2.1 Animal breeding
- 4.2.2 Animal nutrition
- 4.2.3 Animal physiology
- 4.2.4 Other animal and veterinary sciences

### **4.3 Agricultural biotechnology**

- 4.4.1 Agricultural biotechnology
- 4.4.2 Food biotechnology
- 4.4.3 Molecular and genomic plant breeding, market assisted selection
- 4.4.4 Biomass feedstock production technologies
- 4.4.5 Agricultural biotechnology and food biotechnology related ethics

### **4.4 Food sciences and Technology**

- 4.5.1 Dairy science and technology
- 4.5.2 Food chemistry
- 4.5.3 Food engineering

- 4.5.4 Food microbiology
- 4.5.5 Food packaging
- 4.5.6 Food processing
- 4.5.7 Food technology
- 4.5.8 Molecular gastronomy
- 4.5.9 New product development
- 4.5.10 Quality control

#### **4.5 Other agricultural sciences and Food sciences and Technology**

### **SA5. Mathematics & Information Sciences**

#### **5.1 Mathematics**

- 5.1.1 Logic and foundations
- 5.1.2 Algebra and number theory
- 5.1.3 Algebraic and complex geometry
- 5.1.4 Geometry and topology
- 5.1.5 Lie groups, Lie algebras
- 5.1.6 Analysis
- 5.1.7 Operator algebras and functional analysis
- 5.1.8 ODE, PDE and dynamical systems
- 5.1.9 Mathematical physics
- 5.1.10 Probability and statistics
- 5.1.11 Discrete mathematics and combinatorics
- 5.1.12 Numerical analysis
- 5.1.13 Mathematical aspects of computer science
- 5.1.14 Scientific computing, computational science and symbolic computation
- 5.1.15 Control theory, optimization and mathematical finance
- 5.1.16 Application of mathematics in sciences, industry and society

#### **5.2 Computer and information sciences**

- 5.2.1 Computer architecture, pervasive computing, ubiquitous computing
- 5.2.2 Computer systems, parallel/distributed systems, sensor networks, embedded systems, cyber-physical systems
- 5.2.3 Software engineering, operating systems, computer languages
- 5.2.4 Theoretical computer science, formal methods, and quantum computing
- 5.2.5 Cryptology, security, privacy, quantum crypto
- 5.2.6 Algorithms, distributed, parallel and network algorithms, algorithmic game theory, computational geometry
- 5.2.7 Computer graphics, computer vision, multimedia, computer games
- 5.2.8 Human computer interaction and interface, visualization, robotics
- 5.2.9 Web and information systems, database systems, information retrieval and digital libraries, data fusion
- 5.2.10 Machine learning and data processing
- 5.2.11 Natural language processing and signal processing (e.g. speech, image, video)
- 5.2.12 Scientific computing, computational methods, simulation and modelling tools
- 5.2.13 Bioinformatics, computational biology, systems biology, biocomputing and DNA and molecular computation

#### **5.3 Other mathematics**

#### **5.4 Other Computer and information sciences**

## SA6. Social Sciences

### 6.1 Anthropology, Ethnology

- 6.1.1 Anthropology of gender
- 6.1.2 Anthropology of religion
- 6.1.3 Cultural anthropology
- 6.1.4 Economic anthropology
- 6.1.5 Medical anthropology
- 6.1.6 Political anthropology
- 6.1.7 Visual anthropology

### 6.2 Economics and Business

- 6.2.1 Economics
- 6.2.2 Finance
- 6.2.3 Management/Marketing
- 6.2.4 (Applications of) quantitative methods to economics and business
- 6.2.5 (Economy of) Sustainable growth/economic alternatives (circular economy, social and solidarity economy)

### 6.3 Educational Sciences

- 6.3.1. Life long learning
- 6.3.2. New technologies in education
- 6.3.3. Non formal education/museum education
- 6.3.4. Politics of education
- 6.3.5. Sociology of education
- 6.3.6. Sociology of education
- 6.3.7. Special education
- 6.3.8. Teaching and learning art and humanities
- 6.3.9. Teaching and learning natural sciences

### 6.4 Law, Organization Theory, Public Administration

- 6.4.1. Civil law
- 6.4.2. Commercial law
- 6.4.3. Comparative law
- 6.4.4. Constitutional law
- 6.4.5. Criminal law/Criminology
- 6.4.6. International law
- 6.4.7. Philosophy/History of law
- 6.4.8. Public administration law

### 6.5 Media and Communications

- 6.5.1. Computational media studies
- 6.5.2. Cultural media studies
- 6.5.3. Journalism
- 6.5.4. Semiotics
- 6.5.5. Visual communication
- 6.5.6. Visual semiotics



## **6.6 Political Science**

- 6.6.1. Comparative politics
- 6.6.2. Contentious politics
- 6.6.3. Greek politics
- 6.6.4. International relations
- 6.6.5. Political sociology
- 6.6.6. Political theory

## **6.7 Psychology and Cognitive Sciences**

- 6.7.1. Clinical/Counseling psychology
- 6.7.2. Cognitive psychology/Neurosciences
- 6.7.3. Critical psychology
- 6.7.4. Cross-cultural psychology
- 6.7.5. Developmental psychology
- 6.7.6. Educational/School psychology
- 6.7.7. Health psychology
- 6.7.8. Organizational/Occupational psychology
- 6.7.9. Political psychology
- 6.7.10. Social psychology

## **6.8 Social and Economic Geography**

- 6.8.1. Applied economic geography
- 6.8.2. Critical geography
- 6.8.3. Cultural geography
- 6.8.4. Theoretical economic geography
- 6.8.5. Urban geography
- 6.8.6. Urban sociology

## **6.9 Sociology**

- 6.9.1. Applied sociology
- 6.9.2. Community informatics/social network
- 6.9.3. Critical sociology
- 6.9.4. Cultural/leisure sociology
- 6.9.5. Demography
- 6.9.6. Educational sociology
- 6.9.7. Ethnographic sociology
- 6.9.8. Sociology of work
- 6.9.9. Sociology of youth
- 6.9.10. Visual/Cyber sociology

**SA7. Humanities & Arts****7.1 History and archaeology**

- 7.1.1 Classical archaeology
- 7.1.2 Byzantine archaeology
- 7.1.3 Archaeometry
- 7.1.4 Prehistory and protohistory
- 7.1.5 Ancient history
- 7.1.6 Medieval history
- 7.1.7 Early modern history, modern and contemporary history
- 7.1.8 Colonial and post-colonial history, global and transnational history, entangled histories, history of international relations
- 7.1.9 Social history, economic history
- 7.1.10 Oral history, public history
- 7.1.11 Institutional history, political history
- 7.1.12 Military history, war history
- 7.1.13 Gender history, history of ideas, intellectual history and history of sciences and techniques, cultural history, history of collective identities and memories
- 7.1.14 Historiography, theory and methods of history
- 7.1.15 Other

**7.2 Languages and literature**

- 7.2.1 General Language Studies
- 7.2.2 Specific languages
- 7.2.3 General literature studies
- 7.2.4 Literary theory
- 7.2.5 Specific literatures
- 7.2.6 Linguistics

**7.3 Philosophy, ethics and religion**

- 7.3.1 Philosophy, history and philosophy of science and technology
- 7.3.2 Philosophy of mind, epistemology and logic
- 7.3.3 Ethics (except ethics related to specific subfields)
- 7.3.4 Theology
- 7.3.5 Religious studies

**7.4 Arts (arts, history of arts, performing arts, music)**

- 7.4.1 Arts, art history
- 7.4.2 Architectural design
- 7.4.3 Performing arts studies (Musicology, Theater science, Dramaturgy)
- 7.4.4 Folklore studies
- 7.4.5 Studies on Film, Radio and Television

**7.5 Other humanities**

## **SA8. Environment & Energy**

### **8.1 Climate change**

- 8.1.1. Observations and remote sensing
- 8.1.2. Modelling and projections
- 8.1.3. Impact studies
- 8.1.4. Adaptation and mitigation strategies

### **8.2 Ecology**

- 8.2.1. Molecular ecology
- 8.2.2. Organismal ecology
- 8.2.3. Population ecology
- 8.2.4. Community ecology
- 8.2.5. Human ecology

### **8.3 Meteorology**

- 8.3.1. Weather forecasting
- 8.3.2. Experimental meteorology
- 8.3.3. Hydrometeorology
- 8.3.4. Agricultural meteorology
- 8.3.5. Environmental meteorology

### **8.4 Oceanography**

- 8.4.1. Chemical oceanography
- 8.4.2. Marine biology – Ichthyology
- 8.4.3. Coastal morphodynamics and marine geology
- 8.4.4. Physical oceanography

### **8.5 Energy resources**

- 8.5.1. Fossil and nuclear energy
- 8.5.2. Energy grids
- 8.5.3. End use efficiency
- 8.5.4. Policies and economics

### **8.6 Renewable energy resources and systems**

- 8.6.1. Bioenergy
- 8.6.2. Geothermal energy
- 8.6.3. Hydraulic energy
- 8.6.4. Solar energy
- 8.6.5. Wind energy
- 8.6.6. Hydrogen and fuel cells
- 8.6.7. Wave and tidal energy
- 8.6.8. Hybrid systems
- 8.6.9. Energy storage
- 8.6.10. Emerging technologies

**8.7 Energy and the built environment**

- 8.7.1. Sustainable building design
- 8.7.2. Sustainable urban living
- 8.7.3. Energy technologies for buildings
- 8.7.4. Smart innovative materials
- 8.7.5. Smart buildings in smart cities

**8.8 Sustainable mobility and logistics**

- 8.8.1. Sustainable urban mobility
- 8.8.2. Freight transport and logistics

**8.9 Circular economy**

- 8.9.1. Bioeconomy
- 8.9.2. Sustainable industry and manufacturing systems
- 8.9.3. Waste and resource management
- 8.9.4. Water in the circular economy

**SA9. Management & Economics of Innovations**

**9.1 Innovation Systems, Innovation Policy, Innovation Governance and Metrics**

**9.2 Innovation and Entrepreneurship**

**9.3 Innovation Strategy, Organization and Management at the Business, Industry and sectoral Level.**

**9.4 ICT enabled Innovation, Digitisation and Industrial Renewal.**

**9.5 Globalization of Innovation, global value chains, and catch-up processes.**

**9.6 Innovation and Finance**