HELLENIC REPUBLIC
MINISTRY OF DEVELOPMENT AND INVESTMENTS
GENERAL SECRETARIAT FOR RESEARCH AND TECHNOLOGY
HELLENIC FOUNDATION FOR RESEARCH AND INNOVATION
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Athens, 08.01.2020

Ref. No. 20741

2nd Call

for H.F.R.I.'s Research Projects to Support

Faculty members & Researchers

Submission Start-date: Monday, February 17th 2020, 12:00 (GMT+2)
Submission End-date: Tuesday, March 31st 2020, 17:00 (GMT+2)

1 CONTENTS

The Director of the Hellenic Foundation for Research and Innovation, in accordance with:

1. Law 4429/2016 on "Hellenic Foundation for Research and Innovation and other provisions" (199/A) as amended and in force, and particularly Articles 2(1), 5(2-9), 8(9), 10, 9(7) thereof;
2. Decision with Ref. No. 29898/2019 issued by the Alternate Minister of Education, Research and Religious Affairs on "Annual planning of actions and resource allocation of the Hellenic Foundation for Research and Innovation (H.F.R.I.) for 2019" (809/B);
3. Decision no. 195245/15.11.2018 issued by the Ministers of Education, Research and Religious Affairs, Economy and Administrative Reform on "Internal Regulation of the Hellenic Foundation for Research and Innovation (H.F.R.I.)" (5252/B), as in force;
4. Decision with Ref. No. 288/03.04.2017 issued by the Alternate Minister of Education, Research and Religious Affairs on establishing the H.F.R.I. Scientific Council, (YODD 173), as in force following the 1st amendment by decision with Ref. No. 29705/22.2.2018 issued by the Alternate Minister of Education, Research and Religious Affairs (YODD 138), the 2nd amendment by decision with Ref. No. 123829/25.7.2018 issued by the Alternate Minister of Education, Research and Religious Affairs (YODD 427) and the 3rd amendment by decision with Ref. No. 217130/28.12.2018 issued by the Alternate Minister of Education, Research and Religious Affairs (YODD 777);
5. Decision with Ref. No. 301/04.08.2017 issued by the 6th meeting of the H.F.R.I. SC, by which Dr. Nektarios Nasikas was appointed H.F.R.I. Director (436/YODD);
6. Decision with Ref. No. 12105/23.04.2019 issued by the 52nd Meeting of the H.F.R.I. Scientific Council on assigning duties to the Director of the Foundation;
7. Decision with Ref. No. 3336/05.09.2018 issued by the 25th Meeting of the H.F.R.I. Scientific Council, by which Prof. Xenofon Verykios was elected President to the SC;
8. Decision with Ref. No. 20378/19.12.2019 issued by the 70th Meeting of the H.F.R.I. Scientific Council, on the 2nd Call for H.F.R.I. Research Projects to Support Faculty members & Researchers (IPN: Ψ6Η746Μ77Γ-5ΝΜ),
9. Decision with Ref. No. 34354/Β2/05.03.2019 issued by the Alternate Minister of Education, Research and Religious Affairs on "Budget Approval for the Hellenic Foundation of Research and Innovation (H.F.R.I.), for fiscal year 2019" (IPN: 6Φ1Ζ4653ΠΣ-ΞΗΣ),
10. the fact that the Action budget is funded by the H.F.R.I. budget, and is specifically covered by funds from the Agreement dated 15.07.2016 between the Hellenic Republic and the European Investment Bank;
11. Decision with Ref. No. 7886/21.12.2019 issued by the 39th Meeting of the H.F.R.I. Scientific Council on "Approval for undertaking long-term commitment", as amended by Decision with Ref. No. 15224/24.07.2019 issued by the 59th Meeting of the H.F.R.I. Scientific Council;

CALLS

Faculty members (DEP) and Researchers interested to submit their proposals in the framework of the 2nd Call for H.F.R.I. Research Projects to Support Faculty members & Researchers, in line with the terms and conditions presented below.

2 OBJECTIVE AND GENERAL INFORMATION OF THE ACTION

The objective of this Call is to support the implementation of selected research projects of high scientific quality and excellence, as part of the effort to support research activities in the Country.

Principal Investigators (PIs) may be Faculty Members (Article no 2[k] of the Law 4485/2017) of Greek Higher Educational Institutions and Higher Military Educational Institutions, Researchers of Research Centres and Institutes (Article no 8 of Law 4310/2014), as well as University Research Institutes of the Country.

The proposed research Project ("Proposal") has to be original, related to cutting-edge research fields and produce significant scientific impact internationally, meeting high scientific quality and excellence standards. Depending on the tier attained by the PI's research Project -, this will be included in one of the two (2) following categories:

Category I: Research projects to be implemented by academic and research staff holding a position as Faculty members or Researchers in the two entry tiers in Universities (AEI), Research Centres (EK-I), University Research Institutes (EPI) and Higher Military Educational Institutions (ASEI), respectively.

Category II: Research projects to be implemented by academic and research staff holding a position as Faculty members or Researchers in the two highest tiers in Universities (AEI), Research Centres (EK-I), University Research Institutes (EPI) and Higher Military Educational Institutions(ASEI), respectively.

The proposed Project can be implemented at a Host Institution, which can be a Higher Educational Institution (AEI) or a Research Centre (EK-I) or a University Research Institute (EPI) or a Higher Military Educational Institutions (ASEI). In case where the research Project is to be funded, the HI has to issue a Certification of its Commitment.

The Action has been adapted to the research effort particularities in each of the Scientific Areas it covers without any - topic or geographical restriction.

Projects to be funded will be selected through an evaluation process. Research Proposals will be judged by Topic-specific evaluation Committees (TCs), comprised of reputable scientists, specializing in the Scientific Areas (SAs) of the research covered by the Call, and independent experts, if this is deemed necessary, according to the provisions of the Article no 5(6) of the Law 4429/2016, as amended and in force. The entire process is governed by strict confidentiality rules, binding for all participating parties.

This Call forms part of the H.F.R.I.'s action plan, according to the Decision No. 29898/2019 issued by the Alternate Minister of Education, Research and Religious Affairs on "Annual planning of the Hellenic Foundation for Research and Innovation (H.F.R.I.)'s actions and resource allocation for year 2019" (809/B).

3 SCIENTIFIC AREAS (SAs)

Each Proposal can be submitted to one (1) scientific field/subfield of one (1) of the following Scientific Areas:

SA.1. Physical Sciences

SA.2. Engineering Sciences & Technology

SA.3. Life Sciences (Medicine & Health Sciences)

SA.4. Agricultural Sciences–Food Science & Technology

SA.5. Mathematics and Information Sciences

SA.6. Social Sciences

SA.7. Humanities & Arts

SA.8. Environment & Energy

SA.9. Management & Economics of Innovations

Annex 1, lists separate scientific fields and subfields of Scientific Areas.

4 BUDGET & PROJECT FUNDING LIMITS

Total public expenditure for this Call amounts to **€24.500.000**.

The maximum funding limit for each research Project is specified according to the Scientific Area it is submitted to, portrayed in Table 1, as follows:

***Table 1**. Research Project maximum funding limit, as per Scientific Area*

Scientific Area	Maximum funding limit
SA.1. Physical Sciences	€200.000
SA.2. Engineering Sciences & Technology	€200.000
SA.3. Life Sciences (Medicine & Health Sciences)	€200.000
SA.4. Agricultural Sciences – Food Sc. & Tech.	€200.000
SA.5. Mathematics and Information Sciences	€200.000
SA.6. Social Sciences	€150.000
SA.7. Humanities and Arts	€150.000
SA.8. Environment and Energy	€200.000
SA.9. Management and Economics of Innovations	€150.000

The distribution of the available funding, as per Category (I and II) and Scientific Area, will be specified by a H.F.R.I. Scientific Council's decision.

The total funding budget of each Scientific Area is not affected by the maximum funding limit of each research Project.

Double Funding Prevention

It is not allowed for the proposed research Project scope to have been funded or to be funded, in whole or in part, by any other institution.

5 DURATION OF THE PROJECTS

- The proposed research Project duration may range from 24 to 36 months.
- The starting date for the research Project's implementation shall be the date whereupon the HI accepts the Project's management and includes it into its budget, as provisioned in the Law 4485/2017.
- The eligibility of the costs for every research Project begins on its starting date.

6 ELIGIBILITY CONDITIONS

Participation terms and conditions to this Call are the foregoing:

6.1 Principal Investigator (PI)

Each proposal must have one (1) Principal Investigator (PI), who belongs to the HI's regular staff.

In specific, for research Project proposals under **Category I**, the PI must hold one of the following positions:

- Assistant Professor
- Lecturer
- Researcher or Staff Research Scientist Grade C
- Researcher or Staff Research Scientist Grade D

For research project proposals under **Category II**, the PI must hold one of the following HO positions:

- Professor
- Associate Professor
- Researcher or Staff Research Scientist Grade A
- 2nd Level Researcher or Staff Research Scientist Grade B

Eligible to participate as a PI is anyone elected to a relevant position at the HI until the proposal submission date, regardless of whether or not the decision of their appointment has been issued until that date. Upon submitting their proposal, they are obligated to submit the pertinent election decision to the HI. Whereas until the research Proposal starting date they have to adduce the decision of their

appointment. Inability to fulfil said condition will result in non-compliance and, consequently, in non-eligibility of their Proposal.

Faculty members (DEP) conducting research projects in EK-I as collaborating research staff, or in EPI, may nominate the EK-I or EPI they are collaborating with, respectively, as the HI.

Emeritus Professors and Researchers can participate in this Call only as Research Team members.

The PI may only submit one (1) Proposal. The PI may not participate under any other capacity to another proposal.

PIs of Proposals funded in the context of the "1st Call for H.F.R.I. Research Projects to Support Faculty members & Researchers and the procurement of high-value equipment" may not participate in this Call (neither as PIs nor Research Team members)

Not fulfilling above conditions results in the Research Proposal not being eligible for evaluation.

6.2 Research Team (RT)

To the **Research Team (RT)**, other than the PI, may participate academic and research staff; post-doctoral researchers; PhD candidates; postgraduate students; other staff working for the HI with a public law contract of employment or with an open-term private law employment contract (e.g. special educational staff, lab teaching staff, technical scientists, specialised scientific associates, technicians, auxiliary staff etc.); or other temporary staff who shall be contracted to the HI exclusively for the purposes of implementing the research Project.

Any RT member (the PI excluded) may participate (as a member) in two proposals at the most, under any category.

There is no restriction as to the maximum number of members who may comprise the RT of a proposal.

It is not necessary for all RT members to be stated by name upon proposal submission. In case where a RT member has not been named, the qualifications required to fill that position must be specified upon proposal submission. These positions will be filled according to said qualifications following a Call for expression of interest, as provisioned in the Laws 4386/2016 and 4485/2017.

Academic and research staff working under any employment contract in Academic and Research Institutes abroad may only participate in the Research Team as non- remunerated staff.

6.3 Host Institution (HI) – Funding Beneficiary

The following may be Host Institutions (HI) for the research projects:

- Greek Higher Educational Institutions (AEI) as specified in Article no 1 of the Law 4485/2017 (114/A), as in force;
- Research Centres/Institutes (EK-I) under Article no 13a of the Law 4310/2014 (258/A) as in force;

- University Research Institutes (EPI), i.e. private law legal entities that have been formed pursuant to the provisions of Laws 2083/1992 (199/A) and 3685/2008 (148/A);
- Higher Military Educational Institutions (ASEI) under the Law 3187/2003 (233/A);

The PI must declare the HI's information upon the Proposal submission.

All potential HIs shall be available through a drop-down menu on the online submission platform, allowing the possibility for only one selection.

In case of funding, the PI is obligated to submit the HI's Letter of Commitment

Failure to submit the HI's Letter of Intent, the research Proposal won't be eligible for funding.

6.4 Collaborating Organizations (CO)

Implementing the research Project, it is possible to cooperate with Research and Educational Institutions and any type of organization, public or private, in Greece or abroad. This collaboration will aim at the support/aid of the research Project's implementation; whereas depending on the Scientific Area and the particular features of the research Project, it may refer to (indicatively) conducting experiments, access to archives, collections and libraries, training on the use of equipment etc. and requires (in order to be evaluated) a Letter of Intent on the Collaborating Organization (CO)' s behalf. In the Letter of Intent, the CO's legal representative shall confirm their intention to cooperate with the PI during the implementation of the proposed research Project, as well as describe sufficiently the type of the collaboration, i.e. the staff involved, the equipment, the infrastructure or the specific resources that will be used, as well as the estimated duration of their collaboration.

If the collaboration does not regard access to infrastructure and/or resources of an Organization, but collaboration between Professors/Researchers, it is not necessary for the Organization to which the respective RT member belongs to be designated as a CO. In this case, the Letter of Intent has to be signed only by the respective RT' s collaborating member.

The PI shall justify in the Proposal the reasons for which the specific Organization was selected, based on objective information such as: the existence of high-level technical know-how in methodology relevant to the implementation of the proposed research Project, the actual and extensive experience in the use of exclusive research equipment or other resources (library, archives, collections, etc.) and the international acceptance and recognition of the Organization, as demonstrated by the accomplishments of the Organization's scientific staff they will be collaborating with, etc.

7 BUDGET & ELIGIBLE COSTS CATEGORIES

The research Project budget can be analyzed into direct and indirect costs.

Every cost in order to be considered eligible must fall under the terms described herein and provisioned in the Proposal. Forwarding of eligible costs for each funded Proposal begins on the research Project start-date.

The research Project budget as per cost category and correlating limits per cost are presented in Table 2.

Table 2*. Funding percentages per cost category*

<table>
<tr><th>Cost Categories</th><th colspan="2">Limitations by percentage</th></tr>
<tr><td>DIRECT COSTS</td><td colspan="2">≥ 90%</td></tr>
<tr><td>Salary costs (PI and Research Team)</td><td colspan="2">≥ 50%</td></tr>
<tr><td>Consumables</td><td></td><td rowspan="6">≤ 40% percentage limits</td></tr>
<tr><td>Travel costs</td><td>≤ 10 %</td></tr>
<tr><td>Dissemination</td><td></td></tr>
<tr><td>Use and/ or Access to Equipment, Infrastructure & Other Resources</td><td></td></tr>
<tr><td>Equipment</td><td>≤ 20 %</td></tr>
<tr><td>Other costs</td><td>≤5 %</td></tr>
<tr><td>INDIRECT COSTS</td><td colspan="2">≤ 10 %
of total cost of all other categories</td></tr>
</table>

7.1 Direct Costs

The Research Project's direct costs include the PI's and the RT members' remuneration, costs for consumables, travel, dissemination, use of and/or access to equipment, infrastructure or other resources, equipment as well as other costs.

7.1.1 Salary costs

Includes the PI's and the RT members' remuneration, as follows:

7.1.1.1 PI's remuneration

The PI's salary cannot exceed the sum of € 800,00 per month and is subject to the maximum limit of earnings and additional fees provisioned in Article 2 of the Law 3833/2010 combined with provisions of the Laws 4354/2015 (Articles no 13 and 28) and 4472/2017 (Articles no 130-135 and 156).

7.1.1.2 Research Team Members' s remuneration

The Faculty members (DEP) and the Researchers may participate to the RT only as non- salaried members.

As salaried Research Team members may be included Post-Doctoral Researchers, PhD Candidates, Post-Graduate Students and other scientific and technical staff.

The Post-Doctoral Researchers members of the Research Team will hold a fixed-term private law employment contract or project lease contract with the HI.

The gross monthly payments for **Post-Doctoral Researchers** participating in the research Project as full time employers are calculated as follows:

1. In the case of a fixed-term private law employment contract, gross monthly earnings must be equal to the minimum limits specified in Article 18(12) case a) of the Law 4310/2014.
2. In the case of a project lease contract, gross monthly earnings must be equal to the gross monthly earnings the Post-Doctoral Researcher would have received on the basis of a fixed-term private law employment contract as noted (under 1) above (the corresponding VAT being added).

The gross monthly payments for full employment for the **PhD Candidates**, the **Post-Graduate Students** and **other scientific and technical staff** participating in the RT, are calculated as follows:

1. In the case of a fixed-term private law employment contract, gross monthly earnings are equal to gross payments for fulltime employment provisioned in Chapter B of the Law 4354/2015, as in force.
2. In the case of a project lease contract, monthly gross payments must be equal to the gross monthly earnings the said RT member would have received on the basis of a fixed-term private law employment contract as noted (under 1) above (the corresponding VAT being added).

The RT members belonging to the HI's staff (by Public Law or an open-term private law employment contract) may receive an additional monthly fee of €400,00 for additional work, exceeding their timetable, in accordance to the legal framework in force.

Auxiliary staff payments costs for research Project administrative/financial services are not eligible.

In case where the Project is funded and for the time that their full time employment contract within the research Project of the present Action is in force, the salaried RT members cannot be receiving payments in the context of any other H.F.R.I.'s Action.

Above conditions and remuneration limits are grouped in Table 3, as follows.

Table 3. *Compensation of salaried RT members*

Categories of RT salaried members	Gross Payments Determination
1. Post-Doctoral Researchers	Monthly gross payments: a) for fixed-term private law employment contract: equal to minimum limits specified in Article 18(12) case a) of the Law 4310/2014. b) for project lease contract: equal to minimum limits specified in Article 18(12) case a) of the Law 4310/2014 (plus VAT).
2. Scientific faculty (PhD Candidates, Post-Graduate	Monthly gross payments:

Students) Technical and Other staff	a) for fixed-term private law employment contract: equal to gross payments for full employment provisioned in the Chapter B of the Law 4354/2015, as in force. b) for project lease contract: equal to those provisioned for full employment in the Chapter B of the Law 4354/2015, as in force (plus VAT).
3. HI's Staff employed by Public Law or an open-term private law contract	In accordance to pertinent legal framework in force, as an additional fee for additional work, by maximum limit of €400 per month.

Above figures are gross amounts over which all legitimate duties and employee's contributions are calculated, as per case, as they apply. To calculate the total amount of staff remuneration charges for the project, there have to be added to the aforementioned amounts the legal employer contributions, which constitute eligible project costs. In case of project lease contracts, VAT is also added to aforementioned amounts, provided it is provisioned in the legislation, and also constitutes an eligible project cost.

All salaried Research Team members are required to keep timesheets, irrespective to the type of the employment contract held with HI.

The Salary costs for the Research Team members working abroad under any employment agreement, are not eligible.

All non-salaried Research Team members' s travel allowances (e.g. transport costs, overnight lodging and daily allowance) for Project's needs may be eligible as long as they are carried out in the context of Project's implementation.

Remuneration costs for the PI and other Research Team members must make up at least 50% of the Project's total budget.

7.1.2 Consumables

Costs for consumables are eligible when pertaining exclusively to Project's implementation and are stated separately in the Proposal. These apply indicatively to the purchase of direct consumption materials (e.g. lab consumables and reagents etc.) that are necessary for Project's implementation. This category does not include costs for general office supplies, such as paper, stationery, PC consumables etc., as these are included in the overhead costs; these may be eligible only if research Project's features require an unusual amount of such costs for its implementation. In this case, sufficient relevant documentation in the Project's budget is required.

7.1.3 Travel allowances

These involve expenses incurred by the PI and Research Team members for travelling in Greece or abroad in order to participate in conferences so as to present the research Project's results, to conduct

fieldwork and to facilitate the research collaboration with Research Team members belonging to other organizations, universities or research centres in Greece or abroad. In the case of research collaboration, a compulsory condition for costs to be eligible is to be submitted a pertinent Letter of Intent by the Collaborating Organization, as part of the submitted proposal.

This category also includes eligible costs for covering travel and accommodation allowances of the non-salaried Research Team members belonging to Collaborating Organizations abroad. This category forms part of research collaboration and a compulsory condition for these costs to be eligible is to be submitted a pertinent Letter of Intent by the Collaborating Organization.

7.1.4 Dissemination costs

Indicatively, these costs include publication fees in scientific journals, registration fees in conferences for oral or poster presentations, costs for organising and hosting scientific meetings and/ or conferences, costs for publishing monographs and books, as well as costs for audio-visual productions, developing websites and communicate the research through social media networking. In addition, this category includes costs for patenting in Greek Organizations and corresponding foreign Organizations, as well as costs for any type of protection of the research results etc. In order for all of above to be considered eligible, they must be connected to the Project's implementation.

7.1.5 Use of and/ or Access to Equipment, Infrastructure & Other Resources

This category includes costs that must be paid for using or getting access to lab research equipment, research infrastructure or other resources that are necessary for the research Project's implementation. Indicatively, apart from costs for using or accessing the lab research equipment or infrastructure, this category may include further eligible costs for accessing to resources that are necessary for the research Project's implementation, such as: access to databases, subscriptions to libraries, archives and collections of organizations in Greece and abroad, procurement of software for specialized research purposes, costs for updating existing software, for digitalization of document and audio-visual archives and their further exploitation, costs for acquiring satellite data etc. Concluding, this Category includes eligible costs pertaining to the supply of services on the part of Greek and foreign Academic or Research Organizations or/and private companies, that are considered necessary for the Project's implementation.

7.1.6 Equipment

The procurement of new or used small lab equipment is provisioned when necessary for the Project's implementation. The total eligible amount **must not exceed 20%** of the total Proposal's budget. For this cost to be considered eligible, it requires that the submitted Proposal includes specific documentation as to the usefulness of this equipment to the Project's implementation and that the equipment is purchased at the latest within the first half of the duration of the research Project's implementation.

7.1.7 Other costs

This category includes costs that cannot be included in other categories. Indicatively, costs included in this category may be: special telecommunication expenses (such as use of satellite communications), costs for repairing of important equipment etc.

These costs are considered eligible, provided they are specifically mentioned in the submitted Proposal and there is sufficient relevant justification as to the successful implementation of the research Project.

Especially in the case of costs for repairing of research equipment and in addition to the above, the request must be documented with a simple cost/benefit analysis and need to pertain to equipment significant to the research Project's implementation. Costs for necessary components and replacement parts, labour costs and possible transport expenses, are also eligible.

Direct costs in total, excluding staff's remuneration, must not exceed 40% of the total research Project's budget.

7.2 Indirect Costs

The Research Project's management and overhead costs for the HI are considered as indirect costs. These are paid to the Special Account for Research Funds (SARF) or HI' s respective department. These include costs for supporting financial management, costs for office supplies (stationery, PC consumables etc.) and main utilities (telecommunications, electricity, internet access, etc.). **Indirect costs may amount up to 10% of the total expense sum of all the other categories and are included in the research Project's budget.**

8 PROPOSAL SUBMISSION

Upon the Proposal submission, the following fields are to be filled:

- General information (Section A)
- Additional documents [Collaborating Organization(s) Letter of Intent, and other documents].
- Research Proposal (Section B1 and Section B2)

8.1 Section A: General Information

The Section A contains information on the PI and the Research Proposal, including the title, the acronym, the duration and a (brief) summary of the Proposal. The summary must provide a clear presentation of the research Proposal objectives and the way of achieving them. In the case that the research Project is funded, this summary may be published (a term that the PI and all the RT members accept expressly and unconditionally by submitting the Proposal) and therefore, must be brief and precise and not containing confidential information. Furthermore, in this section, the Proposal's PI

selects the Scientific Area (SA)* to which he or she considers that the Proposal falls into. Specifically, the following information is filled-out in the Section A:

- **Proposal's General Information**
  - Scientific Area (SA), scientific field and subfield†
  - Proposal Title (in Greek and in English)
  - Proposal acronym
  - Proposal summary (up to 300 words, in Greek and English)
  - Key-words (up to 10)
  - Project duration (in months)
  - Project budget (in €)
- **PI' s Information** (Full name, contact details, VAT number, etc.)
- **Host Institution** (School, Department, Institute, etc.)
- **Collaborating Organizations** (School, Department, Institute, Country, etc.)

This Section includes the table of ethics related issues, aimed at identifying possible ethical aspects of the research Project. This table must be completed even if no ethical issues exist.

The PI may also specify up to two (2) names of scientists he/she wishes to be excluded from the evaluation of the submitted Proposal.

Information in Section A is submitted in **English** (except for the Proposal's summary, to be submitted both in Greek and in English).

8.2 Section B: Research Proposal

Section B is comprised of two (2) separate sections: Section B1 and Section B2 are submitted in **English.**

Templates to these two separate Sections will be available on the H.F.R.I.'s website, www.elidek.gr/call/, where the parts and fields to be included in Sections B1 and B2 of the Proposal respectively are listed. Each page of the Proposal must include a header, featuring the PI's full name, the Proposal's Acronym and the corresponding Proposal Section (Section B1.1, Section B1.2, Section B2.1, etc.), as well as a footer, containing the corresponding Scientific Area (SA1, SA2, etc.) and the total number of pages.

Table 4 lists the technical specifications that all submitted documents are suggested to follow. Page margin limits of each section must be strictly respected. Information and text in excess of the page limits will not be taken into consideration by the evaluators.

* The Scientific Area (SA) to which the research project falls into is at the PI's discretion and cannot be changed after the deadline of the Proposal submission to the electronic platform.
† See Annex 1.

Table 4. *Text technical specifications*

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

8.2.1 Section B1: Principal Investigator's CV and Proposal's Extended Synopsis

Section B1.1: Principal Investigator's CV (maximum 6 pages)

The Section B1.1 includes the PI' s detailed Curriculum Vitae and his/her scientific achievements; in effect, all those elements depicting the PI' s research and academic career.

Furthermore, this Section should include:

i. The research Projects to which the PI is participating and/or has participated under any capacity, as well as other research proposals relevant to the proposed research Project that have been submitted within the framework of other national or international research funding Actions and the PI is participating to;
ii. The number of post-graduate and doctoral theses the PI has supervised;
iii. The complete list of the PI' s publications in international peer-reviewed journals or/and books, chapters in books or/and publications/papers in conference proceedings, or/and patent rights, or/and monographs, etc.

The Section B1.1 is submitted in **English** and the maximum total length of this document is six (6) pages in length. The Section B1.1 is submitted exclusively in PDF ("Portable Document Format"). Text in excess of these limitations will not be taken into consideration by the evaluators.

Section B1.1.1.: PI's Achievements Sheet (maximum 3 pages)

This Section lists PI's achievements of the last 10 years which are relevant to the proposed research Project. The Section B1.1.1. is submitted in **English** as a PDF ("Portable Document Format") file and the maximum total length of this document is three (3) pages. Text in excess of these limitations will not be taken into consideration by the evaluators.

Section B1.2. Proposal's Extended Synopsis (maximum 6 pages)

The Proposal extended synopsis constitutes a stand-alone text and should be a brief presentation of the research Proposal particularly emphasizing on the innovative character of the research Project and the feasibility of the described scientific approach. It is important that the extended synopsis includes all basic information of the proposed research Project, given that only the Section B1 is evaluated during the Phase 1 of the Evaluation.

The initial page (cover page) of the Proposal extended synopsis (Section B1.2) must lists: i) the PI's full name, ii) the title, iii) the acronym, iv) the Scientific Area (SA), the scientific field and subfield of the Proposal, v) the project duration (in months), vi) the project's budget (in €), vii) the suggested project Host Institution, and viii) the Collaborating Organizations (if any).

The extended synopsis is submitted in **English** and the maximum total length of this document is six (6) pages, including the cover page and the bibliographical citations. Text in excess of these limitations will not be taken into consideration by the evaluators. The extended synopsis is submitted exclusively as a PDF file.

8.2.2 Section B2.: Detailed presentation of the research Proposal

Detailed scientific, technical and/or academic aspects of the research Project which verify the innovative character, the probable impact and the research methodology are described in the Section B2. This section should include a full estimation of the actual Project's cost and of the roles that the PI and all Research Team members will be undertaking during the Project's implementation.

The Section B2 is comprised of the following two (2) separated sections (Section B2.1. Research Proposal, Section B2.2. Research Team CVs).

Section B2.1. Research Proposal (maximum 16 pages)

The detailed presentation of the research Proposal must include descriptions of the following:

- **Excellence, State-of-the-art and Objectives**

The Proposal objectives and their relation to the current State-of-the art are to be clearly specified in this section. In the description of the proposed research Project must be mentioned in what way and why the research Project is important for the scientific domain it is implemented in and its broader impact to science or/and technology or/and arts/culture or/and society. This section will include the particularly innovative or non-conventional aspects (if any) of the proposed research Project.

Indicative sub-sections that may be included in this section, are:

- Proposal objectives and challenges of the research Proposal
- State-of-the-art & Innovation
- Scientific and/or social impact

- **Methodology and Implementation**

This section provides the detailed description of suggested methodology, including, as per case, the basic interim objectives. The suggested methodology must be described and justified in relation to the current state-of-the-art, including any particularly innovative or non-conventional aspects, relating to the "high risk/high gain" balance. Also mentioned, should be any middle stages where the results may impose adjustments in the project planning. The participation of the Research Team members and this of the Collaborating Organizations that may be suggested, must be fully justified, holding an emphasis on the scientific added value provide to the Project.

Indicative components that may be included in this section are:

- Research Methodology;
- Working plan: Work Packages, Gantt Chart, Deliverables and Milestones Table, Table of Risks and Contingency plan;

- Structure of the Project's Research Team: Roles and responsibilities of the Research Team members;

- **Budget**

The project's budget includes:

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

The initial page (cover page) of the research Proposal (Section B2.1) must list: i) the PI's full name, ii) the title, iii) the acronym, iv) the Scientific Area, the scientific field and subfield of the Proposal, v) the Project's duration (in months), vi) the Project's budget (in €), vii) the suggested Project's Host Institution, and viii) the Collaborating Organizations (if any).

The Section B2.1 is submitted in **English** and the maximum total length of this document is sixteen (16) pages, including the cover page and the bibliographical citations. Text in excess of these limitations will not be taken into consideration by the evaluators. The Section B2.1 is submitted exclusively as a PDF file.

Section B2.2. Research Team Members (1 page per member)

The Section B2.2 provides the brief CVs of all RT members who have been stated by name in the Proposal; in these CVs selected scientific publications in scientific journals relevant to the object of the research Project may be included.

For each of the Research Team's position that has not been assigned to a person by name, the list of qualifications required for a person to fill that position shall be supplied.

The submission of this section is in English and the maximum length of this is one page per RT member. The Section B2.2 is submitted exclusively as one integrated PDF file.

The proposals should be submitted through the H.F.R.I. portal by the Proposal PIs exclusively via internet,

Submission start-date: Monday, February 17th 2020, 12:00 (GMT+2)

Submission end-date: Tuesday, March 31st 2020, 17:00 (GMT+2)

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

9 CHECKING AND EVALUATION

The Proposals' evaluation is implemented in two (2) phases by Topic-specific Committees (TCs) and independent experts, if deemed necessary, and according to provisions of Article 5(5-8) of the Law 4429/2016, as in force.

9.1 Admissibility and eligibility check

Proposals are checked as to the inclusiveness of all required and necessary data and documents, the observance of the terms and of the participation limitations along with others described in detail in Section 5. The Proposal is excluded from the evaluation process at any stage if it is verified that any requirement is not being met.

Responsible for checking the proposal in terms of admissibility and eligibility is the Topic-specific Committee of the respective Scientific Area. To this end, Topic-specific Committees cooperate with the H.F.R.I.'s Research Department.

9.2 Evaluation

By decision of the H.F.R.I. Scientific Council, one or more Topic-specific Committees are established and constituted for each Scientific Area, comprised of acclaimed scientists of the Scientific Area in question. If deemed necessary owing to subject particularity of proposals, according to judgment of each Topic-specific Committee, a non-binding evaluation of one or more proposals may be requested from one or more independent experts. The evaluation decision for each proposal shall be taken 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 the Law 4310/2014 (258/A) and hold the qualifications related to the object of the research Project to be evaluated. TC members and experts are nominated by the H.F.R.I.'s Scientific Council, according to the provisions of Articles 5(6) and 8(13) of the Law 4429/2016, as in force. If expert scientists required for a specific evaluation are not available or existing ones do not meet the needs of the specific evaluation, expert scientists from Greece or abroad not included in the Certified Evaluator Register may be appointed as Committee members or independent experts, pursuant to the Scientific Council's decision, provided all the other provisions under Article 5(6 & 7) of the Law 4429/2016, as in force, apply.

9.3 Confidentiality

The whole process is governed by the rules of confidentiality. The TC members and the independent experts sign a confidentiality and non-conflict of interest declaration. All the TC members and the independent experts are bound by strict confidentiality about the entire evaluation process, before, during and after the evaluation.

9.4 Evaluation Process

The evaluation process will be completed in two (2) Phases. In both Phases, the research Proposal will be evaluated for each one of two basic Proposal evaluation criteria: the PI and the Research Project

1st Phase: Evaluation of Principal Investigator and Extended Proposal Synopsis

In Phase 1, only the Section B1 of the Proposal is evaluated. This Phase includes the evaluation of PI's Curriculum Vitae (Section B1.1.), the Achievements Sheet (Section B1.1.1.) and the Extended Proposal Synopsis (Section B1.2.). Evaluation criteria are listed in detail in section 8.5 below.

In Phase 1 the proposals are listed by order of scale A – B, as portrayed in the table below (Table 5), where only Proposals graded with an A move on to Phase 2.

Table 5. Evaluation 1st Phase - Section B1

Grade	Remark
A	The Proposal fully covers the criteria of Phase 1's evaluation (based only on Section B1).
B	The proposal does not fully cover criteria of Phase 1's evaluation (based only on Section B1).

2nd Phase: Full Proposal's evaluation

The Phase 2 holds evaluation for the full research Proposal (sections B1 and B2) as to the PI scientific profile (achievements and maturity to guide the research Project) and as to Proposal scientific quality and excellence, originality, as well as the Project's implementation possibility/feasibility and its budget's distribution.

In 2nd Phase evaluation's score makes use of the '0 – 100' scale.

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

20-39 Weak. The Proposal meets partly the criteria and 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 at a good level, but there are certain shortfalls.

80-89 Very Good. The Proposal does meet the criteria at a very good level, but there is a small number of shortfalls.

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

In case where two proposals have received the same total score, the one that received higher marks on the criterion "1. Principal Investigator Evaluation" ranks highest.

The minimum acceptable total score for a Proposal to be included on the table of projects to be funded after the Phase B evaluation is 70 units.

Evaluation criteria and corresponding weighting factors are mentioned in detail in the following Section 8.5.

9.5 Evaluation Criteria

Evaluation criteria for each Phase are mentioned in detail in the following Tables 6 and 7.

Table 6: *The 1st Phase's Evaluation Criteria*

1. Principal Investigator's Evaluation
A. Scientific Achievements ▪ Scientific work (scientific publications, conference participations, distinctions, awards, participation to international and national research programmes etc.) ▪ Extent of scientific scope and international impact
B. Maturity to Guide ▪ Extent of scientific autonomy ▪ Experience in the supervision of post-graduate and doctoral theses ▪ Participation in national and international research programmes as a coordinator or / and associate
C. PI's ability and role in Project's implementation ▪ The extent to which the PI holds necessary scientific expertise/experience and the ability for the successful implementation of the proposed Project
2. Research Proposal's Evaluation
A. Project's objectives, originality and potential impact ▪ Clarity and relevance of the objectives of the proposed research Project ▪ The extent to which objectives are ambitious and transcend the current scientific/technological state-of-the-art (i.e. development of new techniques, tools, concepts, theories or/and approaches) ▪ The extent to which the proposed Project addresses important challenges ▪ The innovative nature and the potential impact of the proposed research Project
B. Methodology and Implementation ▪ The extent to which the research methodology is suitable in achieving the Project's objectives ▪ The extent to which the proposed scientific approach is feasible

Πίνακας 7. *Criteria and Weighting Factors of the 2nd Phase's evaluation.*

1. Principal Investigator's Evaluation	
A. Scientific Achievements ▪ Scientific work (scientific publications, conference participations, distinctions, awards, participation to international and national research programmes etc.) ▪ Extent of scientific scope and international impact	**Weighting factor** 0,2
B. Maturity to Guide ▪ Extent of scientific autonomy ▪ Experience in the supervision of post-graduate and doctoral theses	0,1

▪ Participation in national and international research programmes as a coordinator or/and associate	
C. PI's ability and role in the Project's implementation ▪ The extent to which the PI holds necessary scientific expertise/experience and the ability for the successful implementation of the proposed Project ▪ PI role in the Project's implementation	0,1
2. Research Proposal's Evaluation	
A. Project's objectives, originality and potential impact ▪ Clarity and relevance of the objectives of the proposed research Project ▪ The extent to which objectives are ambitious and transcend the current scientific/technological state-of-the-art (i.e. development of new techniques, tools, concepts, theories or/and approaches) ▪ The extent to which the proposed Project addresses important challenges ▪ The extent to which the proposed research is of "high risk/high gain" [if applicable] ▪ The innovative nature and the potential impact of the proposed research Project	0,3
B. Methodology and Implementation ▪ The extent to which the proposed scientific approach is feasible ▪ The extent to which the proposal implies a new methodology development or development application that will lead to progress beyond the current scientific/technological state-of-the-art ▪ The extent to which the proposed methodology is suitable in achieving project objectives ▪ The extent to which the implementation plan, the timelines and the budget of the Project are necessary and substantiated ▪ The ability, the level of expertise and the complementarity of the Research Team members in relation to the proposed project (based on the full scientific Proposal – Sections B1 και B2)	0,3

9.6 Possibility of budget's partial approval

The evaluation Topic-specific Committee, by justified decision, may partially approve or amend the proposed budget of the research Project, having regard to the terms and the conditions of the Call.

10 EVALUATION RESULTS

Following the Proposal evaluation completion for each Phase, results are notified to the Project's PI by personalized report, which includes the Proposal's grading marks and the Topic-specific Committee evaluation report.

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

The Foundation's Director issues the funding decision by which final Ranking Lists are approved and a list containing proposals to be funded according to the available budget is issued. This decision is an enforceable administrative act and is subject to petitions for annulment filed with the Administrative Court of Appeals.

Once the proposals to be funded are posted, PIs receive a letter of approval 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's PI accepts that messages sent via email to the email address they supplied when submitting the Proposal online are considered notifications and signal the initiation of all legal processes and deadlines.

11 PUBLICITY

The Call and the Management Guide of this Call will be posted on the H.F.R.I website: www.elidek.gr. The call shall also be posted on the website: www.gsrt.gr.

12 COMMUNICATION – INFORMATION

Detailed information and updates for this Call will be supplied by the H.F.R.I. Department of Research Projects by e-mail: askelidekdep@elidek.gr

and phone numbers: 210-6412410, 210-6412420.

Technical support for the internet submission of the Proposals will be supplied exclusively through the email: helpelidekdep@elidek.gr

The H.F.R.I.'s Director

Dr. Nektarios Nasikas

ANNEX 1. SCIENTIFIC AREAS (SAs), SCIENTIFIC FIELDS AND SUBFIELDS‡

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

‡ Scientific fields and subfields are designative and there may be alterations to the digital submission platform.

1.4.7 Marine sciences
1.4.8 Paleontology
1.4.9 Physical geography
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 Inflection

- 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. Contenious 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