



Ministry of Science &
Technology



Ministère de l'Europe et des Affaires Etrangères
Ministère de l'Enseignement Supérieur,
de la Recherche et de l'Innovation

Israeli-French High Council for Scientific & Technological Cooperation

Call for Proposals 2021

Research Program "Maimonide-Israel"

- 1. New methods and approaches for mental health disorders diagnosis**
- 2. Development of new algorithms for artificial intelligence**

Within the framework of the Israeli-French agreement on scientific cooperation, the Ministry of Science and Technology (MOST) of the State of Israel, as well as the Ministry of Europe and Foreign Affairs (MEAE) and the Ministry of Higher Education, Research and Innovation (MESRI) of France have decided to provide financial support for Research Network Projects carried out jointly by researchers from both countries.

A. Objectives

The aim of this program is to support the development of scientific and technological cooperation between French and Israeli researchers and to strengthen the scientific partnership between research groups from both countries by establishing bilateral research networks, enhancing research cooperation and promoting the exchange of knowledge between Israeli and French scientists.

French and Israeli research teams are hereby invited to submit proposals for research projects in the fields of:

1. New methods and approaches for mental health disorders diagnosis

According to the World Health Organization, mental disorders comprise a broad range of problems, with different symptoms. However, they are generally characterized by some combination of abnormal thoughts, emotions, behavior, and relationships with others. Examples are depression, bipolar disorder, schizophrenia, and other psychoses, dementia, and developmental disorders including autism. As correct diagnosis is a major factor for effective treatment, joint proposals should address the development of new methods and approaches for mental health disorders diagnosis.

2. Development of new algorithms for artificial intelligence

The No Free Lunch Theorem in Artificial Intelligence states that there is no one algorithm that can be the best to solve any kind of problems. It is especially relevant for supervised learning. For example, neural networks are not always better than decision trees or vice versa. As a result, it is necessary to try different algorithms, taking into account the size and structure of the data set, to determine which one is the best to solve a specific problem. Therefore, innovations in the architecture of algorithms used for artificial intelligence could enable new applications and impacts to the most crucial contemporary issues.

B. Mode of Cooperation

Cooperation will take the form of planning and conducting joint research as well as conducting mutual visits between laboratories for the purpose of facilitating the research. It is also recommended to include the funding of young researchers' stay (PhD students and/or Post-doctorates) – in particular Israelis in French laboratories - as part of the Joint project research.

Each joint research team may submit one project only.

C. Level of Funding

It is the intention of the Parties to this Call to fund research proposals selected hereunder for a term of two years. However, funding must be approved on an annual basis, with the funding for the second year to be approved in accordance with the provisions of the research contract.

It is the intention of the program's sponsors to support **6 joint projects**. However the final number of projects to be sponsored will be determined based on such factors as scientific evaluation and budgetary considerations. Research projects should be planned on a two-year basis. Contracts will be signed accordingly.

The total maximum project funding for all research projects approved under this Call is 480,000 Euro for the French side and 480,000 Euro for the Israeli side, over a two-year period. The allocation for each approved research proposal will be up to 80,000 Euro for the French side and 80,000 Euro for Israeli side for the two-year project period.

Expected starting date of the approved projects is the first semester of 2021.

Funding for the approved projects depends on the approval of State budget and the availability of funds on each side.

D. Eligibility

Proposals must meet the following preconditions. Proposals that do not meet the preconditions will be automatically rejected, and will not be passed on to the scientific committee for review and evaluation.

1. Projects must be conducted by collaborating French and Israeli scientific research teams.
2. Each joint research team must be led by a Principal Investigator (PI) from each country.
3. The Principal Investigator (PI) on each side must be affiliated with an academic institution, meaning – in Israel:
 - i. An accredited institution of higher education in Israel, according to the Council for Higher Education Act, 1958.
 - ii. A research institute recognized as such by the Israel Science Foundation (ISF).
 - iii. A research institute, which is a nonprofit organization.
 - iv. A research institute, which is a government company or a governmental unit.

For the purposes of this Call a "research institute" means an institute whose main activity is the advancement of cutting-edge scientific knowledge, which possesses appropriate infrastructure and equipment and which employs researchers who, inter alia, publish articles related to their research in leading scientific journals and who present their research at international symposia.

Industrial partners are encouraged to participate in research teams headed by Principal Investigators from an academic institution.

4. Israeli applicants will use the new online submission system of MOST to submit the proposals. This system will be launched in February 2020, and the relevant link will be published accordingly. For the French side, the application procedure follows that of the "Program Hubert Curien" (PHC) rules available on the Campus France website at <https://www.campusfrance.org/fr/maimonide>.
5. French and Israeli Principal Investigators (and affiliated academic institution) are respectively responsible to French MEAE/MESRI and to Israeli MOST for the execution of the project.
6. Proposals for which funding is approved, which include experiments with animals, must submit the approval of the relevant Committee for Experimentation on Animals before the project can commence.
7. Proposals for which funding is approved, which involve human subjects, must submit the approval of the relevant Helsinki Ethics Committee before the project can commence.

D1. Additional Provisions

More information (in French only) on the selection criteria and the arrangements for dissemination of the results can be found on the Campus France website at:

<https://www.campusfrance.org/fr/presentation-generale-des-phc>

It is strongly recommended that the French and Israeli research teams and their institutions enter into agreements regarding intellectual property rights prior to the start of collaborative activities.

D2. Submission of Research Proposals

Joint deadline for applications: Monday May 11th, 2020 by 15:00.

Proposals will not be accepted under any circumstances after the specified date and hour.

For Israeli research teams:

Israeli Principal Investigators (PI) should submit the proposals in English: on MOST online submission system. The new system will be launched in February 2020, and the relevant link will be published accordingly.

E. Funded expenses

Generally, funding may be assigned to costs related to the bilateral nature of the project (travel expenses of the researchers, scientific meetings, etc.) as well as to defray costs incurred by the approved research projects (disposables, publication costs, etc.). It is recommended that funding will be dedicated also to support the mobility of young researchers between the institutions involved in the approved projects and joint labs.

For the Israeli side only, project funds may be used to finance monthly salaries of research staff members retained specifically for the project. Specific provisions regarding permissible use of project funds are set out in the research contract.

For the **French side**, project funds utilization is divided:

- **Up to 20000€/year from the MESRI can be used to finance materials and salaries**

- **Up to 20000€/year from the MEAE can be used to finance travel** (French researchers' travel to Israel) and hosting expenses (Israeli researchers' hosting in France and French researchers' hosting in Israel); a small part of this budget can also be used for some logistical expenses.

Participating scientists are encouraged to plan extended visits to their counterparts' institutions. As long as the visits are an integral part of research collaboration, international travel and in-country living expenses of visiting scientists should be included in the project's budget. International travel costs should be included in the budget of the visiting side, while in-country living expenses should be included in the budget of the French side for both visits to France or to Israel. The visits must take place in France or in Israel only. Visits to third countries may not be financed by project funds.

For the French Side, mobility is strongly encouraged as the amount of money dedicated to it is significant. It is then greatly advised to plan a long-term (3 to 6 months) Israeli young researcher visit as part of the project and to specify it in advance in the application.

F. Status Seminar

A status seminar will be held in Israel on November 2022 in order to evaluate the progress/results of this program. At the status seminar every Israeli-French research group will present its research results, including each side's contribution to the research, the overall result, and the cooperation between the two research groups. The relevant expenses for travel and accommodations for the seminar should be included in the project proposal.

G. Renewal of funding

Renewal of project funding for a second year is subject to the submission, separately by the French and Israeli PIs, of the relevant documents.

Israeli and French PIs must submit these documents in English to the MOST and to the French Embassy respectively two months before the end of the first year's contract. The Israeli team should submit the application on the appropriate forms together with the annual scientific report. The applications should be submitted by the Israeli PIs to: Applications@most.gov.il and by the French PIs to the **French Scientific and Academic Attaché** at the French Embassy in Israel: p.furia@ambfr-il.org and to the Scientific Officer at the French Embassy in Israel: n.barrutia@ambfr-il.org.

H. Proposal Review

A scientific committee on each side will evaluate proposals. A joint Israeli-French scientific committee, composed of expert scientists from each country, will then jointly evaluate the proposals and formulate recommendations as to which proposals will be funded.

Evaluation of the proposals will be based on:

1. Conformity with the definition of the program research topics presented above;
2. Significance (quantitative whenever relevant) of the problem being addressed, and the potential impact of the proposed approach on solving it. Proposals should address these issues explicitly and provide as much evidence as possible;
3. Scientific merit, with emphasis upon the originality and novelty of the proposed research;

4. Clarity and quality of the research proposal itself – presentation of the topic, definition of research objectives, presentation of research methodology and detailed program of work;
5. Feasibility of the research program;
6. Practical applicability of expected research results;
7. Extent of genuine collaboration between the French and Israeli research teams;
8. Level of involvement of young researchers (PhD students and/or post-doctorates);

I. Contracts, Payments and Reports

1. Contracts

Upon approval of a project proposal, contracts will be signed in Israel and in France between relevant Ministries and the Principal Investigators' institutions.

2. Payments

On the Israeli side, payments will be made by MOST to the PI's institution, in keeping with the provisions of the contracts referred to above.

On the French side, research funds will be managed by:

- The Ministry of Europe and Foreign Affairs (MEAE) of France through Campus France (in accordance with the rules of financial managements established by funders);
- The Ministry of Higher Education, Research and Innovation (MESRI) of France.

3. Final Reports

Within three months of the conclusion of the project, Israeli PIs must submit a final report in English to MOST at: Reports@most.gov.il

These include a final scientific and financial report covering the work and cooperation carried out during the entire two-year project period, in accordance with the contract's requirements.

French PIs must submit a final report based on the site below:

https://www.campusfrance.org/sites/default/files/medias/documents/2017-11/rapport_final_phc.doc

and attach it to their Campus France file online within three months and also send it to the **French Scientific and Academic Attaché**: p.furia@ambfr-il.org and to the Scientific Officer at the French Embassy in Israel: n.barrutia@ambfr-il.org.

J. Special Provisions Regarding the Israeli Applicant

All procedures and activities under this Call or the projects approved hereunder, including the eligibility of institutions via which applications must be filed, are subject to the standard MOST Procedures regarding Scientific Projects and Scholarships Funded by MOST and to the MOST Standard Contract for Scientific Projects (the document referred to hereinafter as "the standard terms").

Applicants are required to familiarize themselves with the standard terms before filing an application under this Call; filing an application constitutes a declaration that the applicant has done so and agrees to be bound by the provisions thereof.

Please refer to MOST Regulations 2019 appendix on MOST website.

K. Additional Information in France

Additional **scientific information** may be obtained from:

Mr. Paul FURIA

Scientific and Academic Attaché

French Embassy in Israel, Tel-Aviv, ISRAEL

Tel: +972 (0)3 796 80 39

p.furia@ambfr-il.org

Ms. Nathalie Barrutia

Scientific Officer

French Embassy in Israel, Tel-Aviv, ISRAEL

Tel: +972 (0)3 796 80 41

n.barrutia@ambfr-il.org

L. Additional Information in Israel

Additional scientific information on "New methods and approaches for mental health disorders diagnosis":

Dr. Sharon Yagur-Kroll

Director, for Medical Research

Ministry of Science and Technology

02-5411862

SharonYK@most.gov.il

Additional scientific information on "Development of new algorithms for artificial intelligence" may be obtained from the following:

Dr. Fadil Salih

Director for Mathematics and Physics Applied Division

Ministry of Science and Technology

02-5411816

Fadils@most.gov.il

Additional **administrative information** may be obtained from the following:

Mrs. Meira Binyamin

Head of Scientific Assistance

Department for General for Planning & Control

Ministry of Science and Technology

Tel: 02-5411170/173/800/829

meirab@most.gov.il

Mrs. Claire Levaton

Director for Israel-France Scientific Relations

Division for International Relations

Ministry of Science and Technology

claire@most.gov.il

M. Application Forms

This call for proposals and application forms are available at the following Internet addresses:

For the Israeli team : <http://www.most.gov.il/>

For the French team : <https://www.campusfrance.org/fr/maimonide>