



AI Singapore,
Singapore



Ministry of Innovation,
Science & Technology

Ministry of Innovation, Science
& Technology (MOST)
Israel

Singapore-Israel Scientific Research Program
CALL FOR JOINT PROJECT PROPOSALS, 2023

**Deadline for Submissions: 19 June 2023, Monday, 15:00 Israel time
(GMT+3)**

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Within the framework of the Singapore-Israel agreement on scientific cooperation, the Singapore Smart Nation and Digital Government Office (SNDGO), AI Singapore (AISG) and the Ministry of Innovation, Science and Technology of the State of Israel (MOST) have decided to provide financial support and are pleased to invite researchers and scientists to submit joint proposals for research projects carried out jointly by researchers from both countries.

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

The joint research shall focus on the main areas of cooperation detailed in Section A and concentrate on applied research which could lead to technological applicability and the development of new products (Technology Readiness Level [TRL] 2-5).

Qualifying scientific applicants in this framework may receive research grants from AISG and MOST, respectively, according to the applicable national funding procedures, regulations, and the requirements as detailed in this Call for Proposals (CfP).

A. AREA OF COOPERATION

Singapore-Israeli research teams are hereby invited to submit joint proposals for applied research projects in the areas of AI in Security and Fraud prevention:

B. MODE OF COOPERATION

Cooperation will take the form of planning and performing joint research as well as conducting mutual visits between laboratories for the purpose of facilitating the research. Each joint research team may submit only one project within this program.

Cooperation may also take the form of:

- a) Joint research activities in which interdependent sub-projects of a single project are conducted in Singaporean and Israeli laboratories;

- b) Complementary methodological approaches to a common problem;
- c) Joint use of research facilities, materials, equipment and/or services by cooperating scientists;
- d) Mutual visits between laboratories for the purpose of facilitating the research.

C. LEVEL OF FUNDING AND DURATION OF PROJECTS

It is the intention of the Parties to fund research proposals selected hereunder for a term of 18 months and research contracts will be signed accordingly. The funding mechanisms for the project should be managed and approved in accordance with the provisions of the research contracts and protocols in each country. In Israel, funding shall be approved for the first 12 months of research, with the funding for the subsequent six months to be approved following submission of a progress report on the first research year. In Singapore, the project budget is approved for the proposed project term. For funds supported under AISG, direct and/or indirect research costs are disbursed on a half-yearly reimbursement basis, subject to the submission of accompanying details, such as but not limited to approved schedules of expenditure, to AISG.

The Parties intend to support **up to 3 joint projects**. The final number of projects to be funded will be determined based on such factors as merits of the proposals upon scientific evaluation, and budgetary considerations.

The total maximum funding for all research projects approved under this CfP is **1,500,000 NIS for the Israeli side (equivalent to approx. \$ 441,176 US), for an 18 month program**. On the Singapore side, the total maximum funding for all research projects approved under this CfP is **SGD 750,000 for the Singapore side (equivalent to approx. \$ 550,000 US) for an 18 month period**.

The maximum funding for each project will be up to **500,000 NIS for the Israeli side (equivalent to approx. \$147,059 US) for an 18-month program**. On the Singapore side, the maximum funding for each single project will be up to **SGD 250,000 (equivalent to approx. \$ 180,000 US), for an 18-month program**.

In accordance, research projects should be planned on an 18-month basis beginning approximately in the fourth quarter of 2023. Contracts will be signed accordingly in each country.

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

D. ELIGIBILITY

Proposals must meet the following preconditions. Proposals that fail to 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 Singapore and Israeli scientific research teams.
2. Proposals must be for research projects in the area of cooperation as specified in Section A, as well as meet the required Technology Readiness Level (TRL2-5).
3. Each joint research team must be led by a Principal Investigator (PI) from each country.
4. The PI on each side must be affiliated with an academic institution or a research institute ("Affiliated Institution"), or be a professor emeritus who continues working on research in affiliation with the Affiliated Institution. An Affiliated Institution is determined in each country as follows:

In Israel:

- a) An accredited Institution of Higher Education, according to the Council for Higher Education Law, 5718-1958; or
- b) A Research Institute which is a non-profit organization, a government company or a governmental unit. For the purposes of this CfP, a "Research Institute" in Israel is a research institute whose main activity is the advancement of cutting-edge scientific knowledge, which possesses appropriate infrastructure and equipment, which employs researchers who, inter alia, publish articles related to their research in leading scientific journals, and who present their research at international symposia.

In Singapore:

- a) At the point of application, PI must fulfil the following requirements:
 - Hold a full-time appointment (at least 9 months of service a year or 75% appointment) and be salaried in a Singapore-based Institute of Higher Learning, or A*STAR Research Institutes. The six (6) Singapore-based Institute of Higher Learning are: National University of Singapore (NUS), Nanyang Technological University (NTU), Singapore Management University (SMU), Singapore University of Technology and Design (SUTD), Singapore Institute of Technology (SIT), Singapore University of Social Sciences (SUSS).;
 - Must have extensive background and qualifications in the field of Artificial Intelligence.

- b) At the point of application, Co-PI(s) must fulfil the following requirements:
- Hold an appointment and be salaried in a Singapore-based Institute of Higher Learning or Research Institutions.
 - At least one of the Co-PIs must be a subject matter expert in the domain detailed in Section A if the PI is not already one.
- c) Any members that bring value to the team, but do not fall under the Lead-/Co-PI eligibility, are eligible to apply as Collaborators. This includes the following, but not limited to:
- Collaborators from public or private sector (with presence in Singapore)
 - Overseas collaborators or visiting experts.

Special eligibility provisions for Israeli Researchers:

1. In compliance with MOST's Procedures Regarding Scientific Projects Funded by MOST ("[MOST Regulations](#)"), an Israeli PI that has or will have an active grant from any of MOST's international cooperation programs, whose funding will be concurrent to the funding of this program, is not eligible to apply. No parallel funding is allowed in the international cooperation program. A researcher who is not eligible to submit a proposal as PI due to an active grant may submit one additional proposal in the international cooperation program as co-PI, if he does not have an active grant in the international program in which he acts as co-PI.
2. A researcher who has submitted a proposal for any MOST international cooperation call for funding in the 2024 calendar year, **may not submit another proposal for any other MOST international cooperation call for funding in 2024.**
3. Please be advised that after a proposal has been submitted, the status of the members of the research team as PI and/ or Co-PI may not be changed for the purposed of compliance with the eligibility requirements listed above.

Special eligibility provisions for Singapore teams:

1. PI and Co-PIs should note that **parallel submissions are not allowed** – i.e., applicants must not send similar versions or part(s) of the current proposal application to other agencies or grants for funding (or vice versa).
2. Details of all grants currently held or being applied for by the PI and Co-PIs, in related areas of work, must be declared in the submission.
3. If any of the currently held grants fund research topics related to the current proposal application, please include a one-page supplementary write-up as an annex (template provided). The one-page supplementary write-up should describe the research funded

by these grants, and how the objective and research differ from that in the current proposal.

E. SUBMISSION OF PROPOSALS

Joint project proposals must be prepared and carried out jointly by the Singaporean and the Israeli project partners and should be submitted simultaneously by both the Singaporean and Israeli PIs, to AISG in Singapore and to MOST in Israel. Each joint proposal should be written in English and must be identical for both PIs. A completed application should include items detailed in Section H.

Joint deadline for applications: 19 June 2023, Monday at 15:00 Israel time (GMT+3). Proposals will not be accepted under any circumstances after the said date and hour.

Further submission instructions for Israeli research teams:

- a) The Israeli PI shall submit the proposal through the Science Forefront system, at <https://kf.most.gov.il>.
In order to apply for the first time, the applicant needs to fill an "account request" at the Science Forefront system. The request should be approved by the Research Authority of the Affiliated Institution. Once approved, the applicant will be notified by email that the account is active. The approval process may take time and therefore should be done well in advance of the application deadline.
- b) **Deadline for researchers submission:** The PI must submit the proposal in English via the Science Forefront system by **12 June 2023, Monday at 15:00 Israel time (GMT+3)**. **The online system will be closed for submissions after the said date and hour and no researcher submissions will be accepted after that time. Israeli researchers who have not submitted their proposals by 12 June 2023, Monday at 15:00 Israel time (GMT+3) will not be allowed to submit their proposal.**
- c) A proposal that has been submitted can be edited by the PI, in coordination with the Affiliated Institution, until the final joint submission deadline.
- d) The Affiliated Institution must submit the proposal not later than by the final deadline on, **19 June 2023, Monday at 15:00 Israel time**. Proposals that are not submitted by the Affiliated Institution through the Science Forefront system by this time, **will not be accepted**.
- e) Please be advised that as technical problems are possible, and the submission process may take a significant amount of time.
- f) Therefore, it is **strongly recommended to fulfil the above steps well in advance of the applications deadlines**.

Further submission instructions for Singapore research teams:

- a) All applications must be submitted through AI Singapore's Grant Management System (GMS). Email submissions will not be accepted unless exception is granted by AI Singapore.
- b) The GMS will be available from **3 May 2023, Wednesday, 12:00 (GMT+8)**, and the portal link shared with all institutions' research offices once ready. Researchers should look to their respective research offices for more information regarding the submission process.
- c) Interested applicants should submit the Grant Call application form with all the sections duly filled by the stipulated deadline in two formats:
 - Input values through the portal fields, and;
 - AI Singapore Application Form (PDF) and Annexes (PDF) in ZIP form.
- d) Only one member from the team needs to submit the application. The applicant will be the primary contact for the team.
- e) Please note that respective institution's application deadline may differ from AI Singapore's deadline.
- f) Research support office from the IHLs and/or RIs are required to ensure that information submitted by their researchers is complete and compliant with the requirements outlined in the application guidelines. Failure to do so will result in rejection without review.
- g) Only complete applications with the endorsement of the relevant institutional authority / director of research (or equivalent), received before the closing date for submission, will be accepted by AI Singapore.
- h) Late submissions or submissions from individual applicants without endorsement from the relevant institutional authority / director of research (or equivalent) (by the deadline stipulated above) will not be entertained.

For both countries:

A valid project application consists of the appropriated application form **duly filled in and signed**, together with all the necessary application documents required from each side of a joint research team as detailed above, submitted respectively to AI Singapore in Singapore and to MOST in Israel. **If the applications are not duly received both in Singapore and in Israel by the date and hour indicated above and in accordance with the submission instructions, the proposal will be rejected in both countries.**

F. FUNDED EXPENSES

Funding provided by this CfP is intended to enhance joint collaboration between Singaporean and Israeli researchers. Therefore, funding may be assigned to costs related to support of the collaboration vectors, such as 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.).

In any case, each budget item or expenditure for which reimbursement is requested must conform to the respective national rules of each applicant.

Participating researchers are encouraged to plan significant visits to their counterparts' institutions and labs, given that such visits are an integral part of the research collaboration. International travel costs and in-country living expenses of visiting scientists, including accommodation, per diem and any other relevant expenses for each visiting scientist, should be included in their project's budget. In this regard when preparing the budget for each team, please note that each side funds their own travel expenses and should budget accordingly. Funding provided under this CfP may only be used for visits taking place in Singapore or Israel; visits to third countries are not eligible for financing by project funds.

Further funding provisions for the Israeli side:

Please see full funding provisions on MOST [Procedures Regarding Scientific Projects](#) Funded by MOST ("[MOST Regulations](#)"). All activities and funding pursuant to this CfP must be in accordance with MOST Regulations unless otherwise specified.

Further funding provisions for the Singapore side:

For AI Singapore's funding, only activities conducted in Singapore may be funded under the programme. The proposal should be based on a realistic budget with appropriate justifications that correspond to the scope of work to be accomplished. The total cost of each project includes all approved direct costs and indirect research costs/overheads. All expenditure budgeted should be inclusive of any applicable Goods and Services Taxes (GST) at the prevailing rates. Please refer to Annex A – Guidelines for the Management of Research Grants (AISG) for more information, including the list of "Non-fundable Direct Costs".

G. FUNDING PERIOD

In Israel, funding shall be approved for the first 12 months of research, with the funding for the subsequent six months to be approved following submission of a progress report on the first research year. Research should cover 18 months. A summary report for the project should be submitted within three months of the completions of the project.

H. INSTRUCTIONS FOR WRITING JOINT PROPOSALS

Each joint proposal should be written in English and must be identical. The format of application is different in Singapore and Israel but the contents should be the same.

In Israel a proposals should be submitted to the Science Forefront system, and the template provided for submission of Sections 1 through 5 in accordance with the format restrictions outlined below. In Singapore a template is provided with similar entries to Sections 1 through

5 below as well as all other submission items. All necessary forms are available at each side's websites.

Please use the following format: Font: Times New Roman 11; line spacing: 1 (justified); Margins: 2.5cm all around.

1. **Full proposal** should be up to 10 pages, including figures (not including the separate sections of the work plan, risk assessment and ethical considerations, bibliography, nor CV) and should comprise the following sections:
 - 1.1. Abstract (max 1500 characters including spaces)
 - 1.2. Scientific background and state of the art: Scientific background, including an overview of the field of research around the world, noting the relative advantage of the proposed research;
 - 1.3. Research objectives and specific aims: The purpose of the research;
 - 1.4. Detailed description of the proposed research: The working hypothesis, research program and methods, and preliminary results. Details should be provided on the scientific and technological challenges to be addressed and the proposed methodology/approach to solving these challenges. Please include a link to the recorded presentation as described in Section 9 below.
 - 1.5. Significance, importance, innovation, and potential benefits of the proposed research: The significance, importance, innovation, and potential impact and benefits of the proposed research to both Singapore and Israel. As much as possible, the potential impact and benefit should be specific and quantified
 - 1.6. Desired outcomes: Deliverables, KPIs, expected applicability and future technological development.
 - 1.7. Cooperation vectors between the research groups: Proposed modes of cooperation, their benefits and how they contribute to the research.
 - 1.8. Data Strategy: Details about the types and sources of data the team will be using and/or collecting, and the governance frameworks and protocols in place between them and the data owners.
2. Test plans: Details about the functional metrics and relevant outcome indicators adopted by the team in measuring, evaluating, and validating the proposed AI approaches, and how they compare with existing state-of-the-art.
Work plan and Gantt: The work plan will be summarized in a schedule diagram. A verbal description of the work steps must be included. Each stage will be defined by a start time and an end time.
3. **Risk Assessment and Ethical Considerations** (Maximum 1 page): What are the significant project risks? Please include descriptions of project risks, risk classification, potential impact to project, and mitigation plans. This section should include a statement of the potential negative ethical/societal impacts of the proposed research, and how these can be mitigated. **Contents within this section are for information only, and will not be used during the evaluation of the proposal.**
Please note, submission of this statement is a mandatory part of the application and an application that does not include such a statement will be rejected. However, the

content of the statement will not be judged or have any impact on the evaluation of the proposal.

4. **Bibliography:** A complete bibliographic list should be attached to the proposed research. The five most relevant items for the proposed research should be marked with an asterisk.
5. **Curriculum Vitae:** A short CV for each researcher involved in the research of up to 2 pages each, including: personal statement (brief description of why the investigator is well-suited for the role on the proposed project); list of ongoing and completed research projects from the last three years that the investigator wishes to highlight; citation of up to five publications or research products that highlight the investigator's experience and qualifications for the proposed project; positions, scientific appointments, and honors. Please use the format in the template provided for Sections 1 through 5 in Israel and all sections in Singapore.
6. **Letter of intent** from the research PIs in both countries affirming their intent to collaborate on the proposed research.
7. **Additional authorizations needed depending on the type of research** (e.g. Helsinki Committee, animal experiments) shall be submitted along with the proposal. In case the required authorization is still not available at the time of submission, a statement in free text should be attached including the researcher's commitment that if their proposal is approved, the required authorization will be submitted as soon as possible.
8. Please specify 5 researchers from outside Israel with expertise in the field of the proposal, who could serve as potential external reviewers.
9. **Recorded Presentation:** A recorded presentation that introduces the project focusing on the defining or exceptional qualities of the proposal that the team wants to demonstrate to reviewers. The duration is strictly limited to 10 mins. To submit the presentation, please attach a link to the presentation on YouTube or Google Drive within the Section d) of the Proposed Research within the full proposal.
10. **In Singapore only**
Key performance Indicators: Indication as to the contribution of the technology to be developed to a potential product or service, the potential of manpower and technology transfer to industry and an estimate of the potential added value of the project as further detailed in the application template.
11. **In Israel only** (Additional data for the Science Forefront system):
 - a. Short abstract (up to 1500 characters in Hebrew and English).
 - b. Applicability up to 1000 characters in Hebrew.
 - c. Importance of the research up to 500 characters in Hebrew/English
 - d. In the section pertaining to the requested budget and when filling out the budget breakdown of the Science Forefront system, please refer to the length of the of the research project as 2 years, even though the second year is only 6 months long.

Do not add additional documents beyond what is specified above and in the attached guidelines for submission to the Science Forefront system.

I. PROPOSALS REVIEW

The parties will establish a Joint Singapore-Israeli Scientific Committee, composed of 3-7 expert scientists from the academia and industry from each country ("The Committee"). The Committee will review the proposals, and in appropriate cases may pre-select proposals to be sent to external reviewers for evaluation. The Committee will evaluate the proposals and formulate recommendations as to which proposals will be funded.

All decisions are **final** and no appeals will be entertained.

The proposals will be evaluated based on the following criteria:

1. Scientific level (20%): scientific and technological excellence, the scientific basis of research;
2. Innovation (20%): the degree of innovation and originality of the proposed research in comparison to the state of the art;
3. Methodology (20%): the extent to which the proposed method of conducting the research is qualitative, feasible and consistent with the proposed objectives;
4. Applicability potential (30%): the research contribution to the development of new applied scientific and technological advancement in the field;
5. Capability of the researcher and level of bi-national cooperation (10%): based on the experience, previous achievements and skills of the researchers and level of collaboration and compatible skills of partners.

J. CONTRACTS, PAYMENTS AND REPORTS

1. **Contracts:**

Upon approval of a particular project proposal, separate contracts will be signed in Singapore and Israel, between AI Singapore and the Affiliated Institution of the Singapore PI and between MOST and the Affiliated Institution of the Israeli PI.

2. **Payments:**

Payments will be made by AI Singapore and MOST to the Affiliated Institution of each Principal Investigator, respectively, in keeping with the provisions of the contracts referred to above, according to the regulations and practices in force in each country.

3. **Final reports:**

In Israel: 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 or through the Science Forefront system. It should include a final scientific and financial report covering the work and cooperation carried out during the entire 18 months project period, in accordance with the contract's requirements.

In Singapore: Singapore PIs must submit to AI Singapore a **Yearly Progress Report** within (1) month from the end of each relevant Financial Year (by 30 April) to grantadmin@aisingapore.org. AI Singapore may also request for additional project review materials if they are deemed inadequate or unsatisfactory. AI Singapore shall also have the right to request for the PI and/or Co-PI to present their project's progress and impact at respective meetings as specified by AI Singapore or its grantors.

Each PI and each Affiliated Institution is accountable to MOST or AI Singapore, respectively, for the execution of the project.

K. MISCELLANEOUS PROVISIONS

It is strongly recommended that the Singapore and Israeli research teams and their Institutions enter into an agreement regarding Intellectual Property rights from the output of the financed project prior to the commencement of the collaborative activities.

Researchers and research institutions should recognise that they have an ethical obligation to weigh societal benefits against risks inherent in their work. All research must be conducted responsibly and honestly. Researchers should also refer to their own research institution's guidelines on ethical conduct/research integrity.

For Israeli Applicants:

All procedures and activities under this CfP or the projects approved hereinafter, including the eligibility of Affiliated Institutions via which applications must be filed and the eligibility of PI's and co-PI's, are subject to MOST Regulations and to MOST Standard Contract for Scientific Projects ("[Standard Terms](#)").

Applicants are required to familiarize themselves with the Standard Terms before filing an application under this CfP. Filing an application constitutes a declaration that the applicant has done so and agrees to be bound by the Standard Terms' provisions thereof. Please note any updates made to the standard terms made before the final submission date will apply to proposals submitted to this CfP.

For Singapore applicants:

Projects funded and approved under this CfP are further subject to the terms and conditions listed in the following supporting documents listed below:

- a) Annex A: Guidelines for Management of Research Grants (AISG)
- b) Annex B: Agreed-upon Procedures (AUP) on Financial Audit
- c) Annex C: Harmonized Terms and Conditions.

L. ADDITIONAL INFORMATION

Additional information can be obtained as follows:

ISRAEL:

On administrative matters:

Israeli researchers should consult administrative matters directly with the Research Authority at their Affiliated Institution. The Institution will contact the Ministry in case of necessity.

On scientific matters:

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