

CALL FOR PROPOSALS IN A JOINT NSF-BSF PROGRAM IN Foundational Research in Robotics

The U.S. – Israel Binational Science Foundation (BSF) is accepting applications in joint funding programs in Foundational Research in Robotics, with the Computer and Information Science and Engineering (CISE); Engineering (ENG) Directorates of the U.S. National Science Foundation (NSF).

Synopsis of the Program:

The Foundational Research in Robotics (Robotics) program supports research on robotic systems that exhibit significant levels of both computational capability and physical complexity. For the purposes of this program, a robot is defined as intelligence embodied in an engineered construct, with the ability to process information, sense, and move within or substantially alter its working environment. Here intelligence includes a broad class of methods that enable a robot to solve problems or make contextually appropriate decisions. Research is welcomed that considers inextricably interwoven questions of intelligence, computation, and embodiment. Projects may also focus on a distinct aspect of intelligence, computation, or embodiment, as long as the proposed research is clearly justified in the context of a class of robots.

The focus of the Robotics program is on foundational advances in robotics. Robotics is a deeply interdisciplinary field, and proposals are encouraged that explore the full range of fundamental engineering and computer science research challenges arising in robotics. However, all proposals must convincingly explain how a successful outcome will enable transformative new robot functionality or substantially enhance existing robot functionality. The proposal should clearly articulate how the intellectual contribution of the proposed work addresses fundamental gaps in robotics. Meaningful experimental validation on a physical platform is strongly encouraged. Projects that do not represent a direct fundamental contribution to robotics should not be submitted to the Robotics program.

For more details please follow the
link: https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505784

The terms of participation in this program are as follows:

General:

- 1. This NSF-BSF program is not a “special” program with the NSF setting aside money for potential grants. Rather, it is an integral part of the regular NSF programs in this discipline, with no “extra” funds. Clear understanding of this on part of the U.S. partner is essential before embarking on proposal writing.**
- 2. Prior to submission, the U.S. applicant should contact the appropriate NSF program manager to discuss the research focus of the international project.**
- 3. These programs have no deadlines and submission is welcome throughout the year. Please note that the Israeli PIs have to submit their proposals to the BSF within 7 days after the U.S. PIs submit to the NSF**
4. Applications must be submitted jointly by an Israeli, and an U.S. scientist from a U.S. research institution.
5. The NSF accepts applications only from U.S. scientists. Submission to the NSF should be made by the U.S. PI alone, but they have to note in the research title on the cover page that it is an “NSF-BSF Application” (the Israeli does not appear as a formal co-PI on the application). In the submission by the US PI, the role of the Israeli partner(s) must be described. Furthermore, it should be clearly explained why the contribution of the Israeli PI to the research project is important/essential.
6. If awarded a grant, the U.S. scientist will receive a grant from the NSF, while the Israeli scientist will receive a grant from the BSF.
7. The size of the BSF grant to the Israeli is expected to be up to \$80,000/year for experimental programs and up to \$55,000/year for theoretical or computer based research, **subject to the availability of funds**. If more than a single Israeli group is involved in the research, the budget may be increased by up to 50%.
8. BSF will follow the decision by the U.S. funding agency regarding the length of the project.
9. We have put together a short presentation with tips for Israeli PIs who are interested in submitting an NSF-BSF proposal. We advise that you read it carefully before starting to look for a partner. You can download it [here](#)

Eligibility

- **U.S. scientists** that apply with an Israeli colleague to the NSF are subject to the NSF rules only.
- **Israeli scientists without an active NSF-BSF grant** can submit **up to two** NSF-BSF applications per year. At least one of the applications must be to an NSF-BSF program **with no deadline**.
- **Israeli scientists with an active NSF-BSF grant** are allowed to submit **one** additional research proposal to the NSF-BSF program, provided that either the grant or the new submission is to an NSF-BSF program **with no deadline**. Otherwise, a submission is allowed only in the last year of the active grant.
- Israeli scientists can hold **no more than two** NSF-BSF awards at any point in time.
- **Both US and Israeli scientists** can simultaneously submit research proposals to the NSF-BSF program and the traditional BSF program. In the event that proposals are recommended for funding in both programs, they will each be awarded, unless there is significant overlap in the scientific question and research objectives (to the sole distinction of the BSF office). In the latter case BSF will only fund the application under the NSF-BSF program.
- In case of **similar or overlapping applications to both NSF-BSF and traditional BSF programs**, where the BSF proposal is recommended for funding but evaluation of the NSF-BSF application has not yet been completed, the BSF will defer its funding decision until the NSF-BSF awards for that program are announced.

Evaluation

1. Proposals will be evaluated by the NSF, using its [criteria](#). The BSF will create a small screening panel to quickly examine the role of the Israelis in the applications, and ascertain that it is meaningful, and that they have the knowhow and facilities to perform their part in the research. This panel will also advise the BSF regarding the budget requests, but will not evaluate the scientific merit of the applications. However, Israelis may possibly take part in the NSF evaluation process as panel members and/or external reviewers.
2. BSF is likely to fund any Israeli whose partner in this program is funded by the NSF.
3. NSF uses a conventional peer review system with expert panels and ad-hoc (external) reviews for full proposals. However, unlike the practice in Israel, panel members serve in



an advisory capacity, and final decisions lie with the program managers and their management. These post-panel officials may introduce additional considerations, such as whether the research topic already has support from the U.S. government, whether support from other NSF programs may be sought, etc.

4. Israeli applicants are advised that they should pay particular attention to the NSF evaluation criteria, http://nsf.gov/bfa/dias/policy/merit_review/, which may include issues such as broader impact, data management, etc., that are either missing in BSF and ISF applications, or have a greatly different meaning (particularly the term ‘broader impact’). **Failure to appropriately refer to such topics by the U.S. partner may be detrimental to the proposal, in the worst case leading to rejection without review.**

Submission

Proposals will be submitted to the program twice:

The U.S. scientist (only) will submit to the NSF using its regulations (https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg) and submission system (<https://www.fastlane.nsf.gov/>). **The US PI submission MUST include the BIOGRAPHY (in the NSF format) and BUDGET (in BSF format) of the Israeli partner as supplementary documentation.**

The Israeli scientist (only) will submit the same proposal to the BSF, including information for the U.S. scientist(s), according to its regulations and submission system: find [here](#).

Timetable

This program has no deadlines, applications are welcomed throughout the year. Israeli PIs must submit their proposal to the BSF within 7 days after the U.S. PIs submit to the NSF.

Applicants are requested to acquaint themselves with the BSF regulations before they submit an application. In particular, they should acquaint themselves with the special document that describes the changes in the submission process from the regular (core) BSF program. The forms and regulations can be downloaded from the BSF website (<https://www.bsf.org.il/funding-opportunities/nsf-bsf-joint-research-grants/the-programs/>).

Questions regarding the applicability of the proposed research for this program should be directed by the U.S. partner to the program officer at the NSF. BSF will not respond to such inquiries. Other questions regarding this special BSF-NSF program



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can be discussed with the BSF management by mail or phone (972-2-5828239): Dr. Rachel (Heni) Haring (heni@bsf.org.il; ext 110) or Ms. Yael Dressler (yael@bsf.org.il; ext. 103). Questions regarding the online application system should be directed to Ms. Orli Rozenchwajg (orli@bsf.org.il; ext .109).

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