National Research Foundation of Korea (NRF) – Japan Science and Technology Agency (JST) Joint Call 2025

Proposal Submission Deadline 3 p.m., 16th of June 2025

1 Objective

To enhance mutual cooperation and strengthen the competitiveness of science and technology between Korea and Japan through joint research. This call aims to support joint research projects to leverage the complementary technological advantages of both countries through international collaborative research to foster new industrial innovations and address societal challenges.

The strengths of both countries, including Korea's semiconductor technology and AI basic research and Japan's precision machinery and robotics technology, will be combined, with expectations for cooperation in areas such as autonomous driving technology, industrial robots, and elderly care robots. This collaboration aims to address social challenges common to both countries, such as aging populations and labor force declines. The collaboration also aims to enhance international competitiveness through joint research that considers the intense global technological competition in these fields driven by industry needs. Furthermore, accelerating the development of technologies that link AI in the physical world, such as robotics, will promote industry-academia collaboration and create new industrial innovations. This joint research is expected to contribute to solving challenges and support sustainable industrial development through the early realization of market creation and implementation.

2 Summary

• Program Category : Joint Research

• Research Fields : AI in the Physical World

"AI in the physical world" refers to the application of AI technologies to the physical world, such as autonomous vehicles and AI robotics that can replace human activities in the physical realm. This technology includes environmental recognition using cameras and sensors, decision support employing image processing, natural language processing, and deep learning. By applying AI to the physical environment, the technology is more applicable to social implementation and industrial sectors.

Through this collaborative research, by leveraging the respective strengths in basic research and industry, including Japan's industrial robots, autonomous driving, and precision control technology, and Korea's semiconductor industry, highly skilled AI-related human resources, and venture capital investment, we aim to pursue joint research with an eye on international industry-academia collaboration. This initiative is expected to expedite the early social implementation of "AI in the physical world."

- 1) Reasoning capabilities for robots (including cognitive developments)
- 2) World models in AI (including AI models based on comprehensive knowledge)
- 3) Overcoming challenges in reinforcement learning for autonomous navigation
- Funding Period: 36 months (Korean side: 2025.10.01 -, Japanese side: 2025.11.01 -)
- Number of Projects : Up to 3 projects
- Funding Amount: 100 million KRW(10 million JPY) / from each country per project per year.

3 Funding

This program is funded by both countries on a one-to-one basis, and in principle, expenses for researchers for each country are supported by their own research funds.

• The budget available in Korea (NRF) is 100 million KRW (per project per year)

• The budget available in Japan (JST) is up to 30 million JPY (per project for 36 months) *including indirect cost

For Japanese team, contributions from industry participants are encouraged. Please note that only academic participants are eligible to receive research funding from JST.

•Eligible costs for NRF: Please refer to this URL

(https://www.law.go.kr/admRulSc.do?menuId=5&subMenuId=41&tabMenuId=183&query= %EA%B5%AD%EA%B0%80%EC%97%B0%EA%B5%AC%EA%B0%9C%EB%B0%9C %EC%82%AC%EC%97%85%20%EC%97%B0%EA%B5%AC%EA%B0%9C%EB%B0%9 C%EB%B9%84%20%EC%82%AC%EC%9A%A9%EA%B8%B0%EC%A4%80#liBgcolor0

•Eligible costs for JST:

(1) Research expenses (direct expenses)

Direct research expenses are expenses directly used for research purposes at the awarded research institution, and can be used for the following:

- Equipment costs (equipment and consumables)

- Travel costs

In principle, travel costs are incurred in accordance with the guidelines of the awarded research institution. Travel expenses are applicable to travel directly related to the execution of the research, dissemination activities, etc.

- Personnel costs
- Miscellaneous
- In addition to the above, research expenses may include, for example:
 - > Expenses for organizing and hosting events for research result dissemination
 - Outsourcing costs (excluding subcontracting)

➤ Equipment leasing costs, transportation costs, for equipment used for the research project (2) Indirect expenses

- Indirect expenses go directly to the awarded research institution for the purposes of administrative purposes and must constitute 30% of the direct cost.

4 Submission

Research proposals are to be jointly prepared by both applicants. The same research proposal in English must be submitted to both NRF and JST before the deadline.

The proposals submitted to only one side are ineligible and will not be considered for the evaluation.

The Korean applicant must submit the research proposal (Korean and English versions) through the IRIS (https://iris.go.kr).

• Korean applicants must submit all documents through the IRIS by the proposal submission deadline. Late or incomplete applications will not be considered. (The research institution must review and approve the proposal within the deadline.)

<u>Note</u>: We recommend uploading your proposal at least 5 days before the deadline due to common errors in uploading your proposal.

The Japanese PI must submit the application documents to JST through the e-Rad (<u>https://www.e-rad.go.jp/</u>) before the deadline.

5 Application Documents

• Research proposal in English

For Korean PI Only:

- Research proposal in Korean
- Other documents including applicant declaration
- Status of ongoing projects

For Japanese PI Only: •Japan-specific application form (in Japanese)

6 Eligibility and Restriction on Participation

PIs and Participants are not permitted to submit more than one application to this call. Applications may be excluded from evaluation in case such as submission after the deadline, proposals that decided ineligible by NRF or JST.

Eligibility criteria in Korea

Korean researchers must be affiliated with domestic universities, research institutes, and industrial organizations. For more information on eligible Korean host organizations, please refer to the National Research and Development Innovation Act and Korean call announcement.

Eligibility criteria in Japan

- Any independent researcher personally affiliated with (and actively conducting research at) a domestic Japanese research institution, regardless of nationality, is eligible to apply.

- 'Domestic Japanese research institution' refers to universities, independent administrative institutions, national/public testing and Research Institutions, specially authorized corporations, public-service corporations and enterprises, etc. that satisfy requirements predetermined by the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT). Please refer to the MEXT homepage for more information:

https://www.mext.go.jp/a_menu/kansa/houkoku/1324571.htm

- The Japanese applicants must also complete a research ethics training program conducted by the research institute with which the PI is affiliated, and then declare the completion of the program to JST. If it would be very difficult for the Japanese PI to undertake a program provided by his or her own affiliated institute, they should contact JST. Please note that unless applicants complete a research ethics program, his / her application will be deemed ineligible. For more details, please refer to call announcement page linked from the JST homepage.

- Japanese applicants will have to register their applications on the Cross-Ministerial R&D Management System (e-Rad: <u>https://www.e-rad.go.jp/</u>).

7 Time	etable
--------	--------

Proposal Submission	18^{th} of April 2025 – 3 p.m. 16^{th} of June 2025
Evaluation	June-July 2025
Funding decision	July-August 2025
Announcement	September 2025
Start of the project	1 st of October 2025 (Korean side)
	1 st of November 2025 (Japanese side)

* Schedules may vary depending on the progress of the evaluation process

8 Evaluation

The evaluation process consists of the following steps:

Eligibility Check: NRF and JST assesses the projects eligibility by following each countries' eligibility criteria.

Evaluation: For proposals submitted to NRF, evaluation panels are set up, composed of external experts proposed by the NRF. Based on the panel members' assessment and discussion, the evaluation panel grades and ranks the proposals based on the evaluation criteria.

For proposals submitted to JST, evaluation panel members assess the research proposals assigned by JST. Based on the members' assessment and discussion (if needed), the panel compose a recommendation list with rank.

Final Decision: The NRF and JST shares the evaluation results to discuss and finalize the selection. After the selection is finalized, each country announces the selection results according to each party's rules and procedures.

Criteria	Indication	Score
Researcher Capacity (20)	Track record and Expertise of the researchers	10
	Appropriateness of research team organization	10
Excellence (30)	Excellence and Originality of the project's objectives	15
	Appropriateness of the methodology and feasibility	15
International Cooperation (30)	Necessity and Concreteness of international cooperation	15
	Complementarity of the research partners	15
Expected Impacts (20)	Dissemination and Exploitation of research results	10
	Academic, Economic, and Social impacts	10
Total		100

9 Evaluation Criteria

* The above evaluation procedures and criteria may vary depending on the evaluation plan.

10 Application Guide

- If it turns out that the submitted proposals and relevant documents contain statements that are not true, selection could be cancelled.
- If there is no project that meets the program requirements, we might not select any project.

11 Contact Information

Korea (NRF)

Suhyun Lee / E-mail: lsh1011@nrf.re.kr

Japan (JST)

Nahoko Ando, Junko Horie / E-mail: jointkr@jst.go.jp