

# JSPS

2022-2023



JAPAN SOCIETY FOR THE PROMOTION OF SCIENCE  
日本学術振興会

# Contents

● <b>Message from JSPS President</b> .....	1
● <b>Organization</b> .....	2
● <b>Budget</b> .....	3

## 1 Comprehensive Categories

① <b>Incorporating the Views of Researchers in JSPS Operations and Programs</b> .....	4
② <b>Strengthening Screening and Evaluation Functions through the Mobilization of Frontline Researchers</b> ..	4
③ <b>Securing Diversity in Scientific Research</b> .....	6

## 2 Creating Diverse World-Level Knowledge

① <b>Grants-in-Aid for Scientific Research (KAKENHI)</b> .....	7
② <b>Internationalizing Research and Advancing International Collaboration</b> .....	14
(1) <b>Supporting Bilateral Collaboration with Partner Countries/Areas</b> .....	14
(2) <b>Advancement of Globalized Joint Research</b> .....	15
(3) <b>Building Hubs for Advancing International Research Collaboration</b> .....	17
③ <b>Advancing Research in the Humanities and Social Sciences</b> .....	19

## 3 Fostering the Next Generations of Talented Researchers Who Will Challenge the Pioneering of New Knowledge

① <b>Providing Environments for Researchers to Work Independently</b> .....	23
② <b>Fostering Researchers Who Will Play Vibrant International Roles</b> .....	25
(1) <b>Dispatching Young Researchers Abroad</b> .....	25
(2) <b>Inviting Excellent Researchers from Other Countries to Japan</b> .....	28
③ <b>Awarding Achievements, Providing Training Opportunities for Researchers</b> .....	32
④ <b>Building Researcher Career Paths</b> .....	41

## 4 Enhancing the Education and Research Functions of Japan's Universities by Leveraging Their Diverse Strengths

① <b>World Premier International Research Center Initiative (WPI)</b> .....	43
② <b>Supporting University Education Reform</b> .....	45
③ <b>Supporting the Globalization of Japanese Universities</b> .....	49

## 5 Building Robust International Research Networks and Infrastructures

① <b>Globalizing and Strategically Developing Research Programs</b> .....	51
② <b>Partnering with Science-Promotion Organizations of Other Countries</b> .....	51
③ <b>Building International Communities for Researcher Collaboration</b> .....	53
④ <b>Building a Vibrant Base for International Exchange – JSPS's Overseas Offices</b> .....	54

## 6 Creating an Overarching Platform for the Comprehensive Analysis of Science Information

① <b>Building a Centralized System for Information Collection and Management</b> .....	56
② <b>Conducting Comprehensive Science-Information Analysis</b> .....	56

## 7 Advancing Cross-Sectional Initiatives

① <b>Implementing an Electronic Application System</b> .....	57
② <b>Boosting Information Dissemination</b> .....	57
③ <b>Creating Cooperative Linkage between Science and Society</b> .....	61
④ <b>Promoting Research Integrity</b> .....	63

## 8 Appendix

List of Programs .....	64
List of JSPS Overseas Counterpart Institutions .....	66
Map of JSPS Overseas Offices and Counterpart Institutions .....	68
Number of Researchers Exchanged .....	70

## Message from JSPS President

Scientific research acts as a pioneer on the frontiers of human knowledge. Knowledge created and systematized through research in various scientific fields is passed on as valuable human cultural assets to following generations while, at the same time, it presents them with new challenges. It is through the untiring pursuit of scientific research that new technologies were developed that have contributed the improvement of human welfare and the solution of global issues while spawning new concepts that have revolutionized society. The history of scientific advances teaches us the importance of “knowledge circulation.” Knowledge generated through scientific research is the wellspring of innovation, and the motive force that impels future societal and national development. The world’s most leading scientific research is born from the free ideas of individual researchers who unconstrained by conventional concepts boldly challenges what’s thought impossible to achieve. To ceaselessly create and circulate knowledge, it will be all the more important at this time to foster the talented people who will shoulder the advancement of next-generation scientific research.

Founded in 1932 with an imperial endowment, the Japan Society for the Promotion of Science is the Japan’s sole independent funding agency dedicated to the advancement of science across a wide and diverse spectrum of program initiatives, including the funding of scientific research, the promotion of international scientific exchange, and the reform and internationalization of Japanese universities. JSPS provides stable and steady support for the activities of researchers.

In 2018, JSPS entered its fourth 5-year period of mid-term objectives, which comprise the five pillars upon which JSPS vigorously carries out programs that are essential to the advancement of science. These pillars are 1) Creating diverse genres of world-level knowledge, 2) Fostering the next generation of talented researchers who will take on the challenge of pioneering new knowledge, 3) Enhancing the education and research functions of universities by leveraging their unique strengths, 4) Building a robust international research infrastructure, and 5) Creating a comprehensive base for analyzing science information. As we approach the final year of this five-year period, we are reviewing our 4th mid-term plan as it winds down while considering the roles that JSPS will



advance in the next period.

As the COVID-19 continues to menace societies throughout the world, it is hampering the implementation of scientific research activities. In response, JSPS is taking special measures to mitigate the impact of the pandemic on researchers participating in our various programs and to prevent the situation from increasing their administrative burden. We are doing so flexibly in ways that take their needs and circumstances into account.

JSPS provides comprehensive support for researchers who boldly challenge the pioneering of new knowledge across the various fields of the humanities, social sciences, and natural sciences. While resolutely improving our programs and reforming our systems from a stronger researcher perspective, JSPS is steadfastly working to both effectively and efficiently implement its operations and to cultivate an environment in which researchers can both freely and fully pursue their activities.

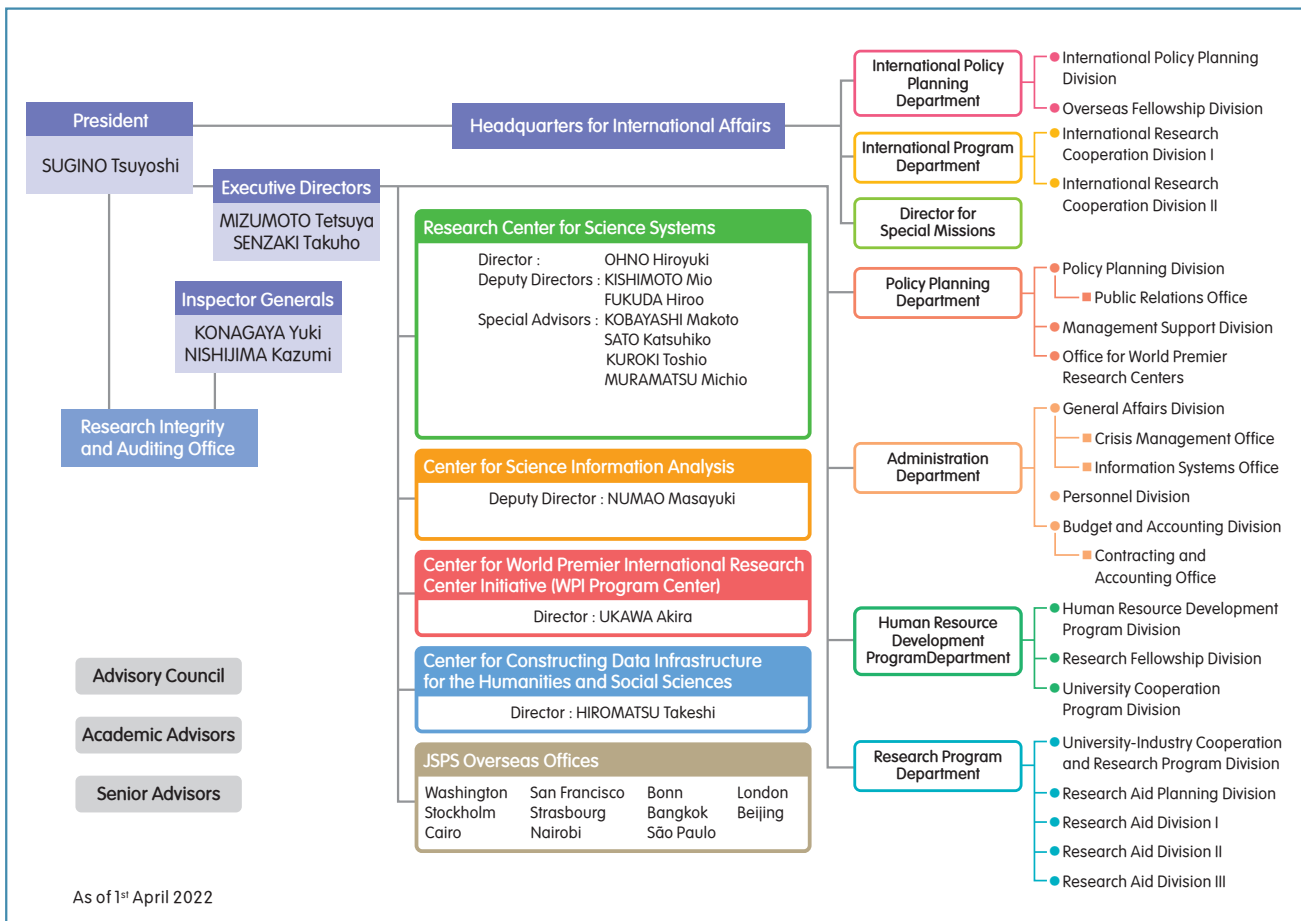
While working to meet the expectations of the public — including, of course, researchers in every field and young researchers who aspire to academic careers — JSPS will use the power of knowledge to propel Japan’s contributions to the global community.

SUGINO Tsuyoshi

# Organization

## Positioning of the Japan Society for the Promotion of Science

JSPS is Japan's sole independent funding agency with a mission to advance science. JSPS carries out a variety of programs in ways that proactively provide stable and sustained support for researchers' activities. As JSPS continues to support the advancement of scientific research, it will promote cooperation among universities and research institutions in and outside Japan and collaboration with science-promotion organizations around the world.



## History of JSPS

Based on Act on the Japan Society for the Promotion of Science, JSPS is mandated to fund scientific research, provide financial support for fostering the researchers, promote international scientific exchange, and carry out other science-advancement programs. For such purposes, JSPS was established on 1 October 2003 as an incorporated administrative agency that operates under the jurisdiction of the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

Looking back, JSPS was originally established as a nonprofit foundation in 1932 with an endowment of 1.5 million yen gifted to the Minister of Education by Emperor Showa. Then in September 1967, the Act on the Japan Society for the Promotion of Science was enacted making JSPS a quasi-governmental organization. Over the course of some 70 years from its initial establishment, JSPS had developed a wide range of programs which accrued to making it Japan's core science-promotion agency. Accordingly, JSPS was reestablished as an incorporated administrative agency in October 2003 for the purpose of enhancing the services it provides to researchers and research institutions by strengthening and streamlining its administrative capacities.

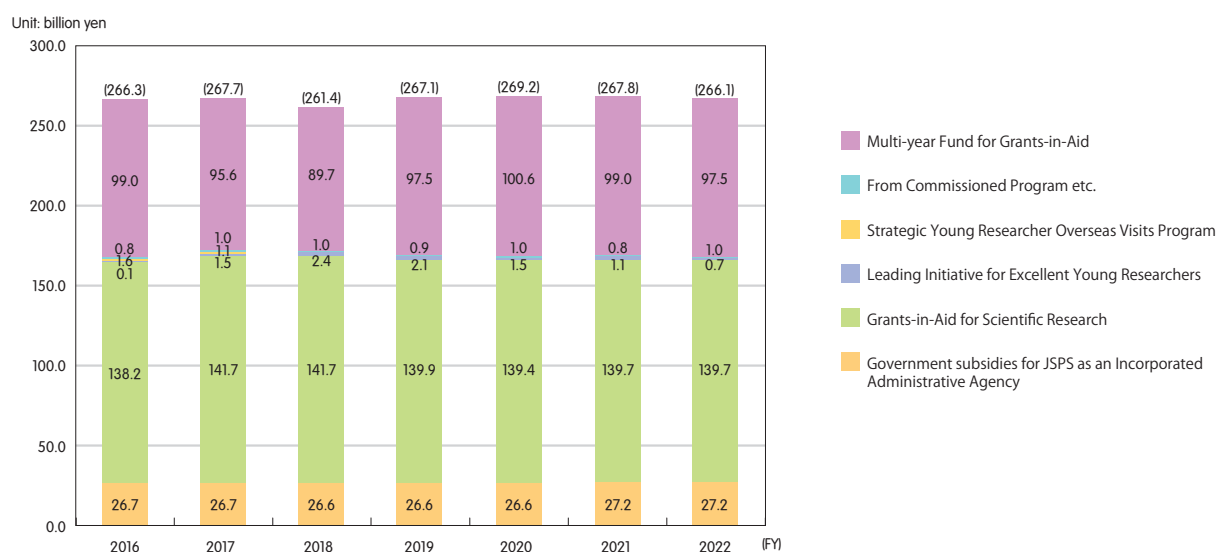
# Budget

JSPS budget for the 2022 fiscal year totaled ¥266.1 billion. This includes ¥27.2 billion in operating expense subsidies from the National Treasury, ¥139.7 billion in subsidies for Grants-in-Aid for Scientific Research, and ¥0.7 billion for the “Leading Initiative for Excellent Young Researchers” program. Also included is ¥97.5 billion Multi-year Fund for Grants-in-Aid financed by the government.

Subsidies and grants allocated by the Government of Japan constitute 99.9% of the JSPS budget.

※The budget contains estimated funding for carrying out each program.

## Budget transition FY 2016-2022



## FY 2022 Budget by program

(Unit: billion yen)

Direct funding	
Government subsidies for JSPS as an Incorporated Administrative Agency	27.2
Research fellowships for young scientists	19.1
International scientific cooperation programs	5.9
Research application programs	0.7
Research Center for Science Systems	0.6
General administration	0.9
Grants-in-Aid for Scientific Research	139.7
Leading Initiative for Excellent Young Researchers	0.7
From Commissioned Program etc.	1.0
Multi-year Fund for Grants-in-Aid	97.5
<b>Total</b>	<b>266.1</b>

The “Multi-year Fund for Grants-in-Aid” was established in FY 2011.  
(FY 2022 budget is ¥97.5 billion)

## Transition in number of JSPS executives and employees

	2018	2019	2020	2021	2022
Executive	5	5	5	5	5
Full-time employee	163	175	161	167	170

Numbers on 1 April of each fiscal year.

## 1 Incorporating the Views of Researchers in JSPS Operations and Programs

JSPS takes measures to incorporate the views of researchers in its operations and programs including an advisory council with members who have a high level of diverse expertise and researchers who are

engaged at the forefront of scientific research. Used also are academic advisors who possess advanced levels of scientific knowledge.

## 2 Strengthening Screening and Evaluation Functions through the Mobilization of Frontline Researchers

### Research Center for Science Systems

#### Purpose

Situated within JSPS, the Research Center for Science Systems serves as a think tank for advancing science by frontline researchers. Established in July 2003, the Center provides recommendations and advice for enhancing JSPS's various programs, while participating in the administration and operation of the selection processes and evaluation procedures of the Grants-in-Aid for Scientific Research, Research Fellowships for Young Scientists, and other JSPS programs.

Based on a recommendation, titled "System Reform in Competitive Research Funding," issued by the Council for Science and Technology Policy, Cabinet Office in April 2003, the Center is staffed by program directors, with eminent research experience, and program officers, laboring on the frontiers of scientific advancement, who take responsibility for implementing a range of competitive research funding systems.

#### Features

##### (1) Frontline researcher appointments

Frontline researchers in cutting-edge fields at Japanese universities and research institutions participate in the Center's administrative and operational activities. Conveyed through them,

updated research trends and requests from the research community are utilized in the Center's operation.

##### (2) Specialized perspectives of researchers reflected in JSPS programs

Nine program groups are established within the Center so as to address the unique characteristics of each research field. Each group comprises two to five senior program officers and from eight to 21 program officers.

##### (3) Fair and impartial selection

Program officer appointments are for as a rule three years. So as to preclude imbalances in the program officer makeup, effort is made to choose their replacements from different disciplines and research institutions, while improving the ratio of female researchers.

Program Groups	
Humanities	Social Sciences
Mathematical and Physical Sciences	Chemistry
Engineering Sciences	Informatics
Biological Sciences	Agricultural and Environmental Sciences
Medical, Dental and Pharmaceutical Science	

#### Functions

##### (1) Provide recommendations and advice on JSPS's overall program

① The Center holds senior program officer meetings attended by the Center's director, deputy directors, and the senior program officers of each

research group, who exchange and compile information and formulate proposals and advice from scientific perspectives on JSPS's overall program (held twice a month).

- ② Program officer meetings are held to exchange updated information and news on research in their respective fields and to consider ways of applying them to JSPS's operations (held once a month).
- ③ The Center's senior program officers lead a working group held to consider ways to enhance JSPS's Grants-in-Aid for Scientific Research program (held once a month).
- ④ A working group is held to consider ways to enhance JSPS Research Fellowships for Young Scientists. Led by the Center's senior program officers, discussions are advanced on the fostering of young researchers through JSPS's postdoctoral fellowships, overseas research fellowships, and other programs. Proposals and advice are formulated on ways to improve the application procedures and selection systems of

these programs (held once a month).

## (2) Oversee application screening and project assessment for JSPS programs

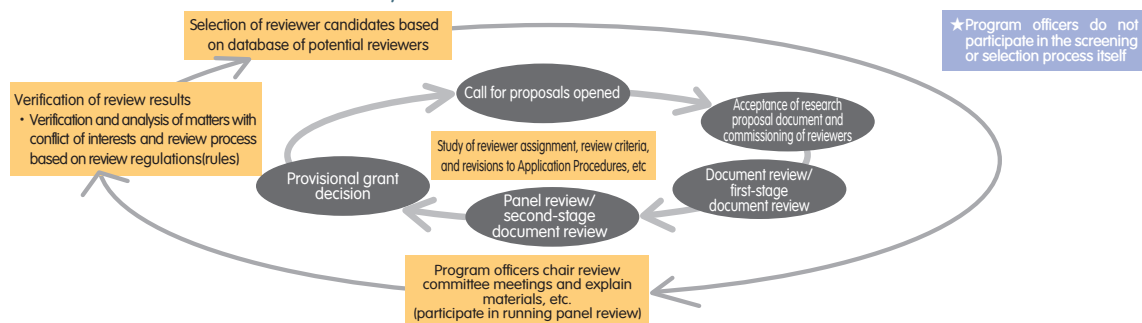
### ① Grants-in-Aid for Scientific Research

Program officers prepare lists of reviewer candidates and chair review meetings. They also examine ways to make improvements in the reviewer selection processes and selection policies of this program. To ensure fairness and transparency, they do not participate in the screening or selection processes.

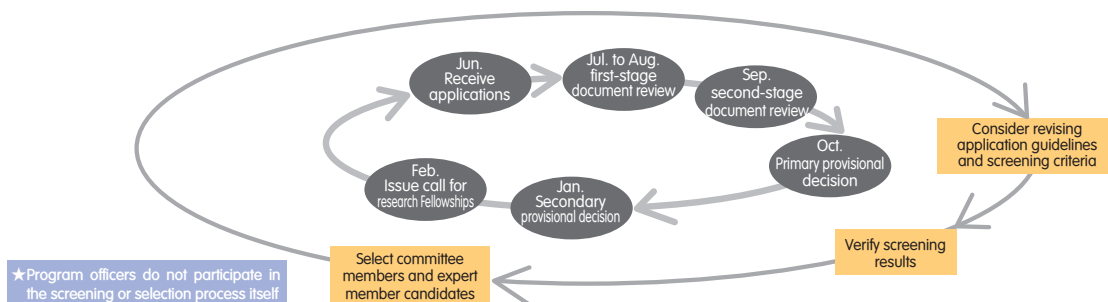
### ② Programs for fostering young researchers

Program officers prepare lists of reviewer candidates and examine ways to improve the reviewer selection process and screening procedures. In doing so, they consider ways to elevate the screening and evaluation quality of JSPS's fellowship programs. (To ensure fairness and transparency, they do not participate in the screening or selection process.) Program officers also conduct reviews and preliminary screenings of candidates for the JSPS Prize and *Ikushi* Prize.

### Roles of the Research Center for Science Systems in Grants-in-Aid for Scientific Research



### Role of the Research Center for Science Systems in Research Fellowships for Young Scientists program



### ③ JSPS's international exchange programs

Program officers prepare lists of reviewer candidates.

### ④ Carrying out verification and analysis of screening results

The Center program officers verify and analyze the application screening results of JSPS's various programs, and use the findings in selecting reviewers for subsequent application rounds.

### (3) Conduct surveys and studies of science policies and scientific research trends

The Center conducts surveys and studies on science-promotion policies and scientific research trends, and uses its findings to provide recommendations and advice on JSPS's various programs and its overall operation. The results of these surveys are posted on JSPS's webpage (in Japanese).

Website

[https://www.jsps.go.jp/j-center/chousa\\_houkoku.html](https://www.jsps.go.jp/j-center/chousa_houkoku.html)

### (4) Reporting activities

To deepen understanding of the Center's activities within the researcher community, its staff conducts briefings in response to requests from universities and academies throughout Japan.

Website

<https://www.jsps.go.jp/english/e-center/index.html>



## 3 Securing Diversity in Scientific Research

### (1) Securing diversity in scientific research

JSPS carries out its operations and programs in ways that secure diversity in scientific research as called for in its mid-term objectives and from the contemporary perspective that scientific research should be challenging, comprehensive, interdisciplinary and international in nature. Reports are compiled on the state of JSPS's operations and programs from this perspective and submitted to the Advisory Council to gain their input.

### (2) Promoting gender equality

Propelled by its "Basic Guidelines for Promoting Gender Equality in JSPS Programs," JSPS strives to advance gender equality in a full spectrum of science. JSPS has a page on its website, called "CHEERS!," through which it widely disseminates information on balancing research careers with life events, while providing information including statistical data, overseas examples, and good practices on gender equality in various research fields. CHEERS! <https://cheers.jsps.go.jp/>



Basic Guidelines for Promoting Gender Equality in JSPS Programs

[https://www.jsps.go.jp/english/e-gender\\_equality/index.html](https://www.jsps.go.jp/english/e-gender_equality/index.html)



## 1 Grants-in-Aid for Scientific Research (KAKENHI)

### Purpose

The Grants-in-Aid for Scientific Research (KAKENHI) are competitive research funds aimed at spawning marked advancement of research carried out based on the free ideas of researchers themselves -research across all fields of the humanities, social sciences and natural sciences that will contribute to the advancement of science in Japan.



KAKENHI Logo

### Features

#### (1) Japan's core competitive research funds

The budget for KAKENHI for fiscal 2022 is

approximately ¥237.7 billion (including the following year of grant categories that come under the Multi-year Fund). KAKENHI is the largest competitive research funds program in Japan.

#### (2) Applies to a wide spectrum of fields

KAKENHI funds research in various fields of the humanities, social sciences and natural sciences.

#### (3) Places importance on the free ideas of researchers

KAKENHI supports creative and pioneering research carried out based on the researcher's free ideas.

#### (4) Fair and equitable application review

More than 8,000 researchers carry out fair and equitable peer review.

#### (5) Meets researcher's needs

Flexible use of the grant possible, such as carrying over funds into the next fiscal year.

The placement of "KAKENHI" in the policy on the promotion of science, technology and scientific research in Japan

		Research Type	
		Scientific research based on researcher's creative ideas 【curiosity-driven research】	R&D on policy imperatives 【mission-oriented research】
Funding Type	Competitive research funds (Selected through open calls and review)	Research supported by Grants-in-Aid for Scientific Research	Research funded by open call and selection in line with the missions set by individual Ministries
	Basic funds (Provision of management and operation funds, etc.)	Research conducted at universities and inter-university research institutes	National projects led by the initiative of Government, strategically promoted R&D projects conducted by National Research and Development Agencies

### Contents

Various research categories are provided based on the objective and nature of the research. Under these

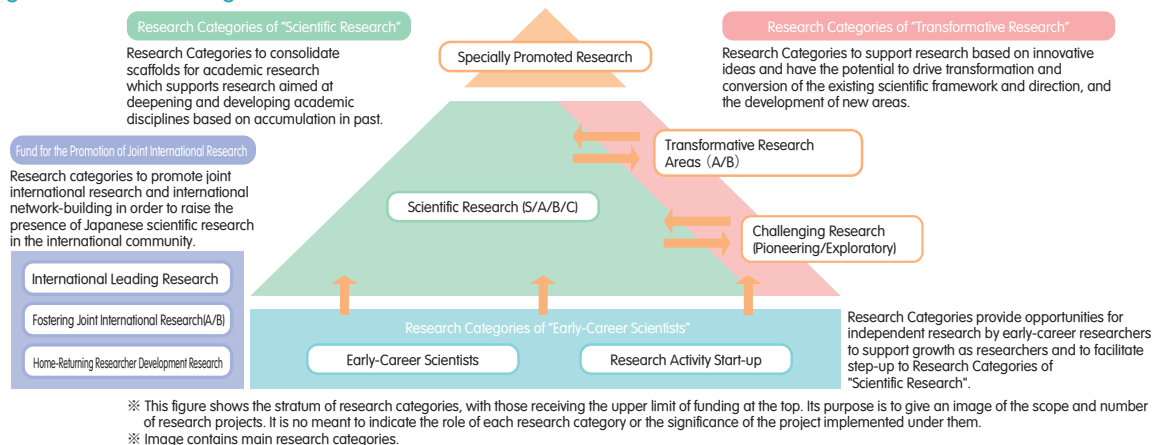
categories, grant administration, including call for proposals, review and grant delivery, is currently divided between MEXT and JSPS.

(As of March 2022)

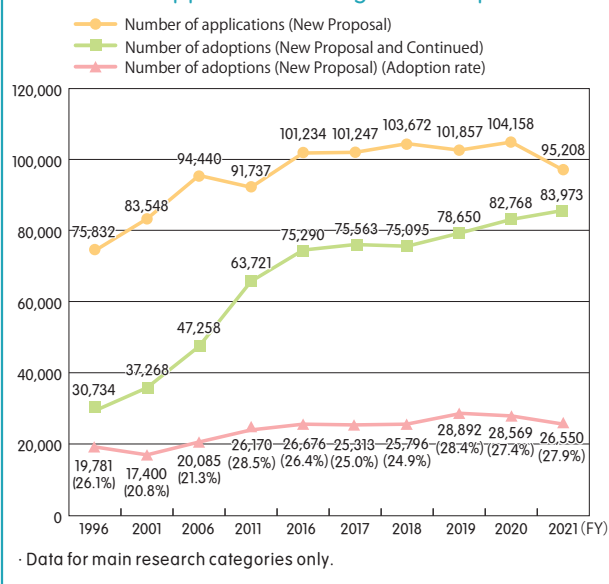
Research Categories	Purposes and description of each research category	Type of fund <sup>1</sup>	
<b>Grants-in-Aid for Scientific Research</b>			
Grant-in-Aid for Specially Promoted Research	Outstanding and distinctive research conducted by one or a relatively small number of researchers expected to achieve remarkably excellent research results that opens up a new scientific field. The research period is 3 to 5 years. (In a truly necessary case, period up to 7 years is acceptable.) The budget ranges from 200 million to 500 million yen per project (Only in a truly necessary case, budget exceeding 500 million yen is asked for.)	SG	
Grant-in-Aid for Scientific Research on Innovative Areas <sup>2</sup>	(Research in a Proposed Research Area) This category is intended to foster novel research areas proposed by diverse groups of researchers that are expected to lead to development and heightening of Japan's research level in the respective fields, to be conducted by collective research efforts through collaboration, scholarly training, shared use of equipment, etc. The period is 5 years. The budget range is generally set between 10 million to 300 million yen per fiscal year per proposed area. [A call for proposals for budget for collecting research results of Finished Research Area only is put out in FY2023 and beyond.]	SG	
Grant-in-Aid for Transformative Research Areas <sup>2</sup>	(A) Research areas proposed through co-creative and interdisciplinary efforts of diverse researchers, which aim to create research areas that will lead the way to radical transformation of and change in the existing framework and/or direction of research as well as upgrade and level-up of scientific research in Japan and nurturing young researchers, and will contribute to the development of the proposed research areas through efforts for joint research and shared use of equipment, etc. (5 years; more than 50 million yen and up to 300 million yen per fiscal year per research area (In a truly necessary case, a budget exceeding 300 million yen may be requested.))	SG	
	(B) Research areas proposed by compact groups of researchers who will be bearers of the next generation of research with a smaller budget scale (about 3 or 4 groups), which aim to create research areas that will lead the way to radical transformation of and change in the existing framework and/or direction of research as well as upgrade and level-up of scientific research in Japan through more challenging and exploratory research, and expected to lead to the Transformative Research Areas (A) in the future. (3 years; 50 million yen or less per fiscal year per research area)		
Grant-in-Aid for Scientific Research	(S) Creative/pioneering research conducted by one or a relatively small number of researchers. 5 years (in principle) 50 million to 200 million yen	(s)	SG
	(A), (B), (C): Creative/pioneering research conducted by one researcher or jointly by multiple researchers. (A) 3 to 5 years; 20 million to 50 million yen (B) 3 to 5 years; 5 million to 20 million yen (C) 3 to 5 years; 5 million yen or less	(A)	
		(B)	
		(C)	
Grant-in-Aid for Challenging Research	(Pioneering) (Exploratory) Research conducted by a single or multiple researchers that aims at radically transforming the existing research framework and/or changing the research direction and has a potential of rapid development. The scope of the (Exploratory) category encompasses research proposals that are highly exploratory and/or are in their budding stages. (Pioneering) 3 to 6 years; 5 million to 20 million yen (Exploratory) 2 to 3 years; 5 million yen or less	MF	
Grant-in-Aid for Early-Career Scientists	Research conducted by an individual researcher (*) who is less than 8 years after Ph.D. acquisition. (*) Individuals who are in the prospect of acquiring Ph.D. are also eligible. When counting the years after Ph.D. acquisition, the period of maternity leave and childcare leave can be excluded. 2 to 5 years; 5 million yen or less.	MF	
Grant-in-Aid for Research Activity Start-up	Research conducted by a single researcher who has been freshly appointed to a research position, or who has returned from his/her maternity, childcare or other kinds of leave. Up to 2 years; Up to 1.5 million per fiscal year	MF	
Grant-in-Aid for Encouragement of Scientists	Research conducted by an individual who is ineligible for application for other KAKENHI categories (e.g., individuals who belong to educational or research institutions, private companies, etc. and engage in the researches to contribute to the promotion of the science). 1 year; 100 thousand to 1 million yen.	SG	
Grant-in-Aid for Special Purposes <sup>2</sup>	Research projects of pressing urgency and importance.	MF	
<b>Grant-in-Aid for Publication of Scientific Research Results</b>			
Publication of Research Results	Subsidy for publication and/or international dissemination of research achievements of high academic values executed by academic associations and other organizations.	SG	
Enhancement of International Dissemination of Information	Subsidy for efforts by academic societies and other scholarly organizations to strengthen international dissemination of academic information for the purpose of international academic exchange.		
Scientific Literature	Subsidy for academic publication of research results (books) authored by an individual or a group of researchers.		
Databases	Subsidy for creation and operation of a database open to public use by an individual or a group of researchers.		
Grant-in-Aid for JSPS Fellows	Funding period is up to 3 years for research conducted by JSPS Fellows (including Foreign JSPS Fellows). As for Cross-border Postdoctoral Fellowship (CPD) the period is up to 5 years	SG	
<b>Fund for the Promotion of Joint International Research</b>			
International Leading Research	This grant aims to enable research groups led by top-level researchers in our country to play a central role in the international network, thereby achieving research results of high scientific value internationally. With the participation of postdoctoral fellows and graduate students, the grant seeks to foster researchers who can play leading roles in the international research community in the future. (7 years (extendable up to 10 years); up to 500 million yen)	MF	
Fostering Joint International Research	(A) Support of joint international research project conducted by a KAKENHI grantee in collaboration with researcher(s) at a foreign university or a research institution over a period of 6 to 12 months. The grant seeks to markedly advance research plans for the root research project and to foster independent researchers who can be internationally competitive. (The budget is up to 12 million yen.)		
	(B) Support of joint international research project conducted by multiple domestic researchers and a researcher who belongs to overseas research institution. In addition to the development of scientific research, the grant seeks to build out infrastructure of joint international research or further strengthen joint international research and to foster researchers who can be internationally competitive. (The period is 3 to 6 years. The budget is up to 20 million yen.)		
Home-Returning Researcher Development Research	Support of research to be conducted by a Japanese researcher with current affiliation abroad who is to be newly appointed at university or research institution in Japan. (The period is up to 3 years. The budget is up to 50 million yen.)		

<sup>1</sup> SG: Series of Single-year Grants, MF: Multi-year Fund<sup>2</sup> Under the categories "Scientific Research on Innovative Areas" "Grant-in-Aid for Transformative Research Areas" and "Grant-in-Aid for Special Purposes" MEXT issues call for proposals and adoption, and JSPS delivers grants.<sup>3</sup> After the review process is completed, the reviewers' names are posted on JSPS's website. The adopted projects are entered in the KAKEN database of the National Institute of Informatics for public access. KAKEN URL: <https://kaken.nii.ac.jp/en/>

## Image of research categories in FY 2022



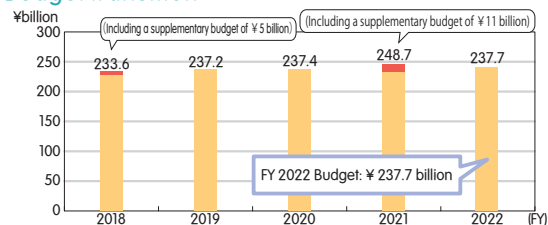
## Number of applications and grants adoption



## Radical Reform of KAKENHI System

It is questioned whether Japan can continue producing the kind of excellent scientific results that will allow it to maintain its international presence in future years. Given this situation, the Council for Science and Technology, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has issued a recommendation for radically reforming the Grants-in-Aid for Scientific Research (KAKENHI), positioning academic research as the source of national strength. ("Promotion of Academic Research in Japan and Reform of KAKENHI (Interim

## Budget transition



\*In 2011, a Multi-year Fund was established within the Grants-in-Aid program. Therefore, the FY 2011 and subsequent budgets include funds that will be disbursed in out years. FY 2022 budget is ¥237.7 billion

Report)" in August 27, 2014, Subdivision on Science Council for Science and Technology)

The Fifth Science and Technology policy (FY 2016-2020) and the sixth Science, Technology, and Innovation Basic Plan ((FY 2021-2025) embody content including from the quantitative perspective of setting a goal to increase the adoption rate to 30%.

### (1) KAKENHI Reform

Against this backdrop, reform of the KAKENHI program is being carried forward according to Implementation Policy of KAKENHI Reform. This initiative has three pillars: 1) Revision of the review system; 2) Revision of research categories and frameworks; and 3) Implementation of flexible and effective grant-usage system. As a vanguard reform, a new review system has been introduced since the 2018 funding year (call for proposals: September 2017).

## KAKENHI System Reform Process Schedule —Reform Application Review System and Research Categories—

Funding year	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Research category								
Specially Promoted Research	Revision of research categories (Emphasize challenging research, restriction on repeated grant acquisition)		Transition to new system <sup>*1</sup>					
Scientific Research on Innovative Areas	Revision of research categories (setting of application sections in line with size, involvement of researchers who will be bearers of the next generation of research, etc.)			Transition to "Transformative Research Areas" <sup>*1</sup>				
Scientific Research (S)		FY 2018 Reform of the KAKENHI Review System	Broad Section + Comprehensive Review					Revision to the Review Section Table <sup>*1</sup>
Scientific Research (A)			Medium-sized Section + Comprehensive Review <sup>*2</sup>					
Challenging Exploratory Research	Enhancement revisions	Transform to "Challenging Research" (Precedent implementation of Medium-sized Section and Comprehensive Review)						
Scientific Research (B)	Design new review system							Joint reviews will be conducted for several Basic Sections under Grant-in-Aid for Scientific Research B <sup>*4</sup>
Scientific Research (C)			Basic Section + Two-Stage Document Review					
Young Scientists (A)	Revision of research categories (Appropriate way of support based on carrier build-up, etc.)			Integrate to "Scientific Research"		Promotion of "KAKENHI Young Support Plan" (Improve the recruiting ratio for key items)		
Young Scientists (B)		Trial of support for independence			"Early-Career Scientists" (*change name) (Quantity control, Implementation of independence, etc.)			

<sup>\*1</sup> Applications for "Specially Promoted Research" will be reviewed as they have been to date, in "category units" of Humanities and Social Sciences, Science and Engineering, and Biological Sciences. For "Transformative Research Areas", which has been created from a progressive revision of the "Scientific Research on Innovative Areas" category, reviews will be conducted using Review Sections "I" through "IV".

<sup>\*2</sup> Reviews in the Challenging Research (Exploratory) category were conducted in a comprehensive review format up to the call for proposals for the 2021 funding year, but the two-stage document review format has been used from the 2022 funding year.

<sup>\*3</sup> While maintaining the current classification of Basic, Medium-sized, and Broad review sections, the examples of related research content offered for the Basic Sections have been revised.

<sup>\*4</sup> Starting from the FY2023 Call for Proposals, for Grant-in-Aid for Scientific Research (B), joint reviews will be conducted by consolidating several Basic Sections for which the number of applications is notably small.

## (2) Revision of the Review System (FY 2018 Reform of the KAKENHI Review System)

Under the Grants-in-Aid for Scientific Research (KAKENHI), the review system for Scientific Research and other categories received high marks from researchers for its ability to quickly and fairly review a huge volume of applications. Over recent years, however, there has been a steady increase in the number of grant applications coupled with a gradual shift in the trajectory of research proposals.

This changing environment spawned requests to improve both the application review system and its review section. Concomitantly, there was also a need to reform the review method so that it responds to changing scientific trends and in ways that better identify and fund highly viable research projects within a competitive environment.

Against this backdrop and toward the Grants-in-Aid for Scientific Research for fiscal 2018 (from the September 2017 call for proposals), we have revised KAKENHI Review Section and Review Method in the following ways:

- The "List of Categories, Areas, Disciplines and Research Fields" applied in and before fiscal 2017 was abolished and a new "Review Section Table" consisting of "Basic Section," "Medium-sized Section" and "Broad Section" has been adopted for the review.
- Since FY 2018 (Call for Proposals of September 2017),

the document and panel reviews which were conducted by different reviewers has been shifted to the new review methods. Under the new method, two systems are used depending on the research category: One is called Comprehensive Review, under which document and panel reviews are conducted by the same reviewers; under the other, called Two-Stage Document Review, document reviews are conducted in two stages by the same reviewers.

An interim examination was conducted in FY 2021, and the Review Section Table which will be applicable starting from the Call for Proposals for FY 2023 (the open call for which would be held in July and August 2022) has been revised.

### Key points of the revision

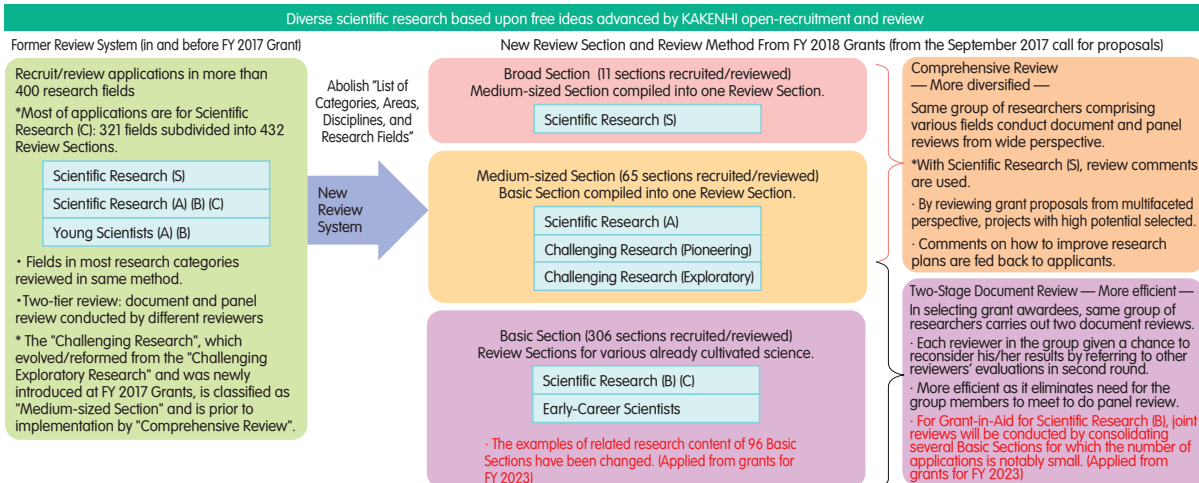
- The examples of related research content of the Basic Sections have been changed. (While maintaining the current classification of Basic, Medium-sized, and Broad review sections, the examples of related research content offered for the Basic Sections have been revised)
- Joint reviews will be conducted for several Basic

Sections under Grant-in-Aid for Scientific Research (B). (For Grant-in-Aid for Scientific Research (B), joint reviews will be conducted by consolidating several Basic Sections for which the number of applications is notably small)

As a connective to ongoing system reform, the KAKENHI program will be periodically re-evaluated and initiatives advanced in response to changes in scientific trends and research environments.

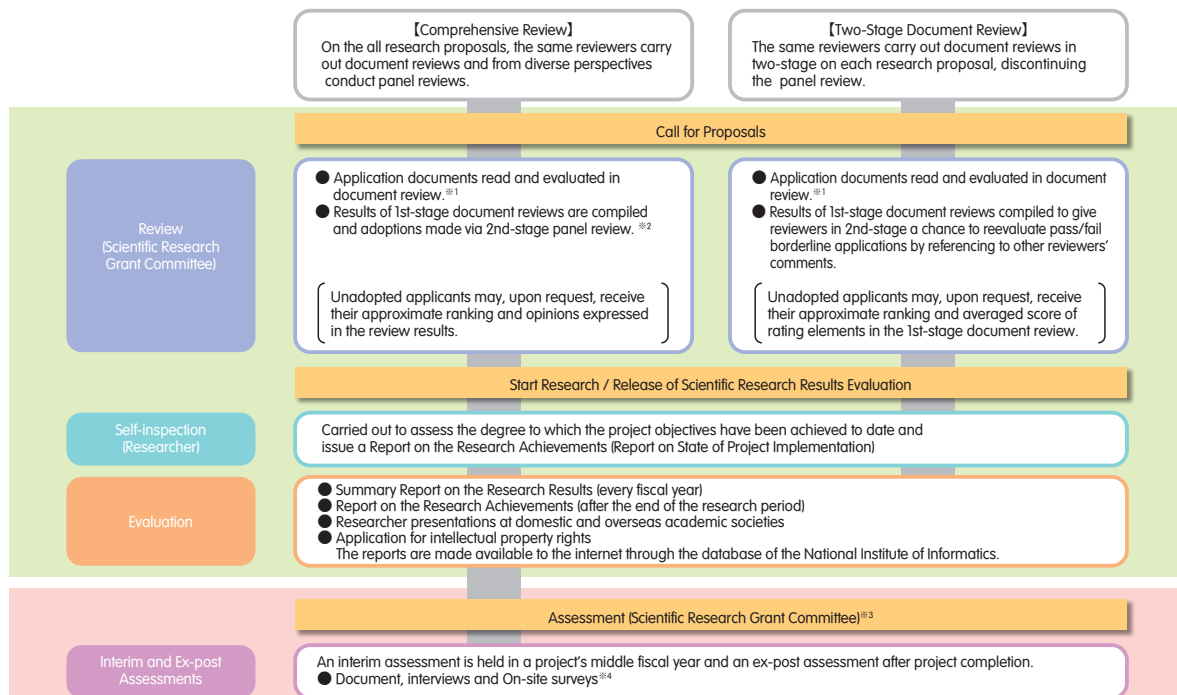
## Progress of Reform of the KAKENHI Review System

(As of March 2022)



- \* Applications for "Specially Promoted Research" will be reviewed as they have been to date, in "category units" of Humanities and Social Sciences, Science and Engineering, and Biological Sciences. For "Transformative Research Areas", which has been created from a progressive revision of the "Scientific Research on Innovative Areas" category, reviews will be conducted using Review Sections "I" through "IV".
- \* Reviews in the Challenging Research (Exploratory) category were conducted in a comprehensive review format up to the call for proposals for the 2021 funding year, but the two-stage document review format has been used from the 2022 funding year.

## Procedural flows review and evaluation from FY 2018



- ※1 In the categories Challenging Research and Generative Research Fields, preliminary screening will be carried out to reduce to applications to a suitable number for the document review. Reviews in the Challenging Research (Exploratory) category were conducted in a comprehensive review format up to the call for proposals for the 2021 funding year, but the two-stage document review format has been used from the 2022 funding year.
- ※2 Interviews will be carried out on Specially Promoted Research and Scientific Research (S).
- ※3 Assessments will be carried out on the project adopted after FY 2018 under Specially Promoted Research and Scientific Research (S).
- ※4 Interviews and On-site surveys may be held when judged necessary in the interim assessments.

## System Enhancements to Facilitate Grant-in-Aid Usage

## (1) Introduction of Multi-Year Fund (FY 2011)-

Before FY 2011, Grants-in-Aid were issued on a single fiscal year basis, requiring researchers to divide their research plans into one-year segments when applying for a grant. Now, this Multi-year Fund gives them the flexible use of their grants over the entire duration of multi-year projects.

\*Projects covered under the Multi-Year Fund in FY 2021.

- Research projects adopted under Scientific Research (C), Challenging Research (Pioneering/Exploratory), Young Scientists (B), Early-Career Scientists, Research Activity Start-up, Special Purposes, Scientific Research (B) (application section “Generative Research Fields”), Fund for the Promotion of Joint International Research (Fostering Joint International Research (A/B), Home-Returning Researcher Development Research, International Activities Supporting Group).

- By requesting funding scheduled for the next fiscal year(s) to be carried forward, researchers can make optimal use of their grants in pace with progress of their work.
- The use of grant funds may be carried over into the next fiscal year without having to do advanced processing. Researchers can advance their work by carrying unused funds over into the next fiscal year(s).
- Researchers can advance their work without having to do end-of-year accounting. As this system eliminates the fiscal-year framework, orders placed for goods or services in one year may be delivered in the next.

## (2) Establishment of Adjustment Fund (FY 2013)-

Within the Grants-in-Aid program, an Adjustment Fund was established in FY 2013. Its purpose is to make the funding of projects that do not fall under the program’s multi-year fund more flexible.

\* Projects covered under the Adjustment Fund in FY 2021.

- Research projects adopted under Specially Promoted Research, Scientific Research on Innovative Areas, Grant-in-Aid for Transformative Research Areas (A/B), Scientific Research (S/A), Scientific Research (B) (excluding the application section “Generative Research Fields”), Young Scientists (A), JSPS Fellows.

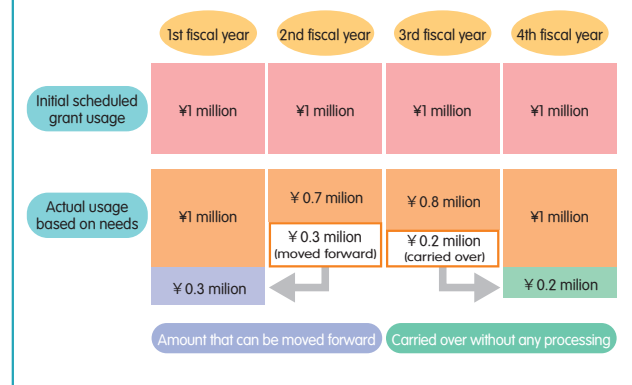
- When researchers with projects under the above-listed categories wish to use grant funds allocated for out years, they may use this Adjustment Fund to move forward funds for use in the current fiscal year.

- The Adjustment Fund may also be used to carry over grant funds into the next fiscal year. With this system, unused funds in one fiscal year are returned temporarily to the Treasury and then redeemed from the next year’s Adjustment Fund in an amount of up to 100%.

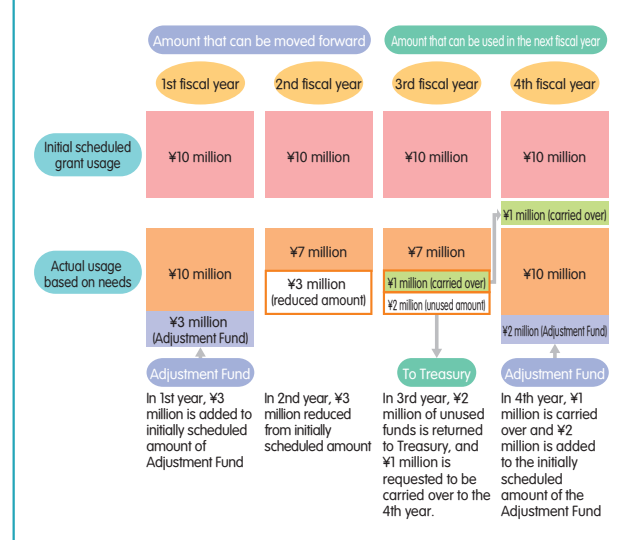
## (3) Smooth start of research from the beginning of the research period (provisional grant decision is issued) (Starting from grants for FY 2022)

Beginning from the grants FY 2022, many of the applicants —PIs and affiliated research institutions— of new research projects will be noticed the review results before the issuing of their provisional grant decision at the beginning of the fiscal year. As this will facilitate the advance processing of staff employment, purchasing, and trip planning, it

## Image of Multi-year Fund grant usage



## Image of Adjustment Fund grant usage



enables researchers to embark smoothly on their research activities from the first day of their research period (provisional grant decision is issued).

#### **(4) Securing research periods from the beginning to the end of the fiscal year**

In the case of new research projects, funds can be used once the notice of provisional grant decision has been made (except in certain categories; funds can be used from April 1 in around 90% of newly-adopted projects). In the case of continued projects, funds in single-year grant projects can be used from April 1, and in multi-year fund projects already underway funds can be used without interruption during the full research period as described in paragraph(1) above. The deadline for Report on the Results submission is set at the end of May in the next fiscal year, enabling research to be carried out to the end of the fiscal year.

### **Other System Enhancements**

#### **(1) Purchasing Joint-Use Equipment with a Mixture of Grant-in-Aid Funds**

From FY 2012, the program has greatly relaxed its restriction on Grants-in-Aid disbursed to different projects to be used in purchasing joint-use equipment. This was done to increase the efficiency of research grant utilization and to promote the joint usage of equipment and facilities.

The ability given researchers by the system to pool their funds in purchasing highly specific, expensive equipment that would be difficult for one of them to afford gives researchers a greater degree of freedom in the use of their research funds. Allowing research this option increases their prospects of making greater research advances.

In addition, the joint purchase of commonly used equipment with mixed funds from Grants-in-Aid and other competitive research funds is permitted as long as such joint usage does not impede the implementations of the Grant-in-Aid funded research. For details, please refer to MEXT's webpage.

[https://www.mext.go.jp/content/20200910-mxt\\_sinkou02-100001873.pdf](https://www.mext.go.jp/content/20200910-mxt_sinkou02-100001873.pdf)

#### **(2) Extension of research periods in line with interruptions such as maternity/childcare leave and long-term overseas stay**

Research can be suspended temporarily when taking leave for maternity, childcare and the like and research periods extended in accordance with their request. Moreover, in fiscal 2019 a system was introduced to enable research to be suspended temporarily during periods of residence outside Japan for research purposes and research periods extended accordingly, in order to encourage young researchers to gain experience abroad.

#### **(3) Alleviation of administrative burden through digitization of procedures (From FY 2020)**

In fiscal 2020 we eliminated the use of personal seal stamps and transitioned to an electronic application system for paperless preparation and submission of applications to apply for and use KAKENHI funds in order to alleviate the administrative burden on researchers and research institution.

#### **(4) Measures to Prevent the Misuse of Grants-in-Aid**

Under the KAKENHI, measures are taken to widely circulate rules for preventing the improper grant spending and research misconduct in the carrying out of research activities. For this purpose, a handbook is distributed and briefings are held. Requests are also made to research institutions to establish systems needed to prevent misconduct.

In FY 2014, an electronic application was installed that requires grant applicants to pledge that they will use their grants both properly and effectively. A function has been newly introduced into the electronic application system that requires the applicant to confirm a minimum number of items required to conduct KAKENHI-funded research before s/he makes a formal application for grant delivery. From FY 2015, research institutions have been required to hold research ethics education courses for researchers who conduct activities using KAKENHI funds, and rules promulgated that require researchers to take those courses.

In such ways, the KAKENHI Program is working to promote the proper and equitable use of Grant-in-Aid funds when conducting research activities.

## 2 Internationalizing Research and Advancing International Collaboration

### (1) Supporting Bilateral Collaboration with Partner Countries/Areas

#### Purpose

By supporting international joint research projects and seminars, researcher exchanges, and fostering young researchers, JSPS forms sustainable networks driven by bilateral research teams formed via exchanges among individual researchers.

#### Features

By supporting joint research projects and seminars for researchers of Japan and other countries in cooperation with counterpart funding agencies, JSPS builds research platforms that place all participants on an equal footing. Furthermore, JSPS provides support to Japanese researchers via programs that allow them to carry out joint research projects and seminars with countries/areas that do not have cooperative agreements with JSPS and to respond to changing global trends in scientific research collaboration. This support works to meet the needs that emerging countries in Asia and Africa have for stronger scientific exchange while advancing JSPS's cooperation with new science-promotion organizations.

#### Programs

##### ① Bilateral Collaborations

###### (Joint Research Projects and Seminars)

JSPS supports the implementation of joint research projects and seminars carried out via cooperation with researchers from other countries. Project proposals are solicited via the following two program formats.

- Joint Research Projects and Seminars in cooperation with countries where counterpart funding agencies have bilateral agreements with JSPS.
- Open Partnership Joint Research Projects and Seminars

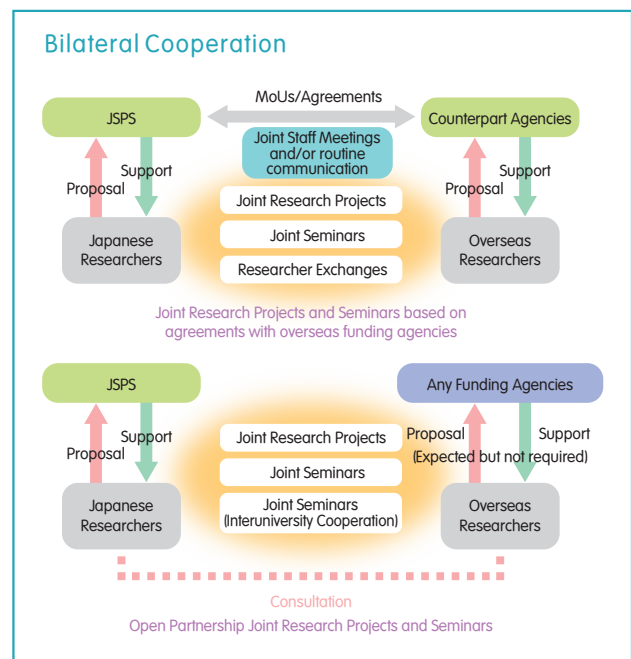
with all countries that have diplomatic relations with Japan including with Taiwan and Palestine. From the FY 2020 call, JSPS launched a new scheme for proposals named “Open Partnership Joint Seminars (Interuniversity Cooperation).”

Website:

<https://www.jsps.go.jp/english/e-bilat/index.html>

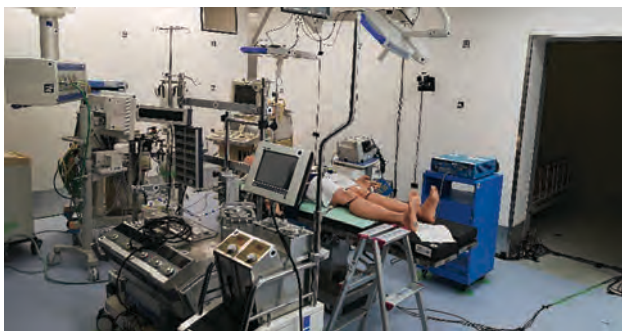
	Joint Research Projects	Joint Seminars	Joint Seminars (Interuniversity Cooperation)
Funding amount	¥1-2.5 million per year	¥1.2-2.5 million per seminar	up to ¥3million per seminar
Funding period	1-3 years	up to one week in duration	up to one week in duration

\*Funding amount and period may differ by countries or counterpart agencies.



Open Partnership Joint Seminar between Japan and Sweden (Associate Prof. INOKUMA Yasuhide, Hokkaido University)





JSPS-RSNZ (New Zealand) Joint Research Project  
(Associate Prof. KURATA Masahiro, Kyoto University)



JSPS-TUBITAK (Turkey) Joint Research Project  
(Associate Prof. ANDO Yoshito, Kyushu Institute of Technology)



JSPS-FWF (Austria) Joint Seminar  
(Associate Prof. MURAKAMI Yohei, Ritsumeikan University)

## ② Researcher Exchanges (Sending and Receiving)

Support is given for visits by researchers to each other's countries and attendant activities/exchanges with an eye to building an infrastructure for the sustainable development of networking and joint research among researchers from Japan and other countries.

Website:

<https://www.jps.go.jp/english/e-bilat/researcher.html>

Funding	International airfare and maintenance allowance
Period	3 months to 2 years

\*Support may differ by countries or counterpart agencies.

\*Japanese researchers wishing to go abroad apply to JSPS, while overseas researchers wishing to come to Japan apply to JSPS counterpart agencies in their countries.

## ③ Japanese-German Graduate Externship

Based on an agreement between JSPS and German Research Foundation (DFG), support is given for implementing mutual graduate curricula established between Japanese and German universities for the purpose of exchanging doctoral students, young researchers including postdocs, and teaching professionals. In both countries, the doctoral students receive joint guidance in conducting their research and preparing their dissertations.

Website:

[https://www.jps.go.jp/english/e-jg\\_externship/index.html](https://www.jps.go.jp/english/e-jg_externship/index.html)

## (2) Advancement of Globalized Joint Research

### ① International Joint Research Programs

#### Purpose

In responding to global developments in scientific research, JSPS works in cooperation with overseas science-promotion organizations to advance joint research carried out between excellent researchers in Japanese universities and research institutes and their colleagues in other countries. These programs also serve to enhance and expand training opportunities for young researchers.

#### Features

Supported fields vary depending on the counterpart agencies and application categories in each country. With some counterpart agencies, a new framework has been adopted based on a "Lead Agency Method," in which one agency takes the lead in doing the application screening.

#### Programs

Six programs (see the Table in P.16) are being carried out under International Joint Research Programs.

#### Website

<https://www.jps.go.jp/english/e-bottom/index.html>

## International Joint Research Programs

Program name	Country/ Corresponding Agency	Subject fields	Funding	Support	Project period
Partnerships for International Research and Education (PIRE Program)	US/NSF	Humanities, social science, natural sciences (fields mutually selected by JSPS and NSF)	Up to ¥10 million a year per project	Research grant Airfare Stipend Personnel cost	Up to 5 years
Open Research for Social Science (ORA Program)	France/ANR; Germany/DFG; UK/ESRC; Netherlands/NWO; Canada/SSHRC	Social sciences			2~3 years
Joint Research Program with SNSF (JRPs)	Switzerland/SNSF	FY 2019: Mathematics, Natural and Engineering Sciences FY 2022: Designing Future Societies (All disciplines)			3 years
Joint Research Program-LEAD with DFG (JRP-LEAD with DFG)	Germany/DFG	FY 2018: Geoscience FY 2022: Materials Science and Engineering for Energy Storage, Conversion, and Transport*			
Joint Research Program-LEAD with UKRI (JRP-LEAD with UKRI)	UK/UKRI	FY 2018: Life Sciences and Environmental Sciences FY 2021: Social sciences, Arts and Humanities*			
Joint Research Program with NSFC (JRP with NSFC)	China/NSFC	FY 2019: Sustainable Remediation*			5 years

※ Subject fields vary depending on each call

## ② KAKENHI (Fund for the Promotion of Joint International Research)

### Programs

We support academic research across countries through the “Fund for the Promotion of Joint International Research” in KAKENHI.

#### ● International Leading Research

This grant aims to enable research groups led by top-level researchers in our country to play a central role in the international network, thereby achieving research results of high scientific value internationally. With the participation of postdoctoral fellows and graduate students, the grant seeks to foster researchers who can play leading roles in the international research community in the future.

(7 years (extendable up to 10 years); up to 500 million yen)

#### ● Fostering Joint International Research (A)

Researchers selected for KAKENHI conduct joint international research at overseas university and research facilities for a period of 6 months to 1 year.

We aim to contribute to the cultivation of independent researchers who can be active internationally, and to significantly develop KAKENHI research programs (up to 12 million yen).

\*\*Fostering Joint International Research” was renamed “Fostering Joint International Research (A)” from call for proposals in FY 2018 following the establishment of “Fostering Joint International Research (B).”

#### ● Fostering Joint International Research (B)

This program is for Joint International Research between multiple Japanese researchers and researcher who belongs to overseas research institution. Along with the development of academic research, it aims to build and strengthen the foundation of international joint research and to cultivate researchers who can be active internationally. (3 to 6 years, up to 20 million yen)

#### ● Home-Returning Researcher Development Research

This program is for research that is expected to take place after Japanese researchers return from overseas. (up to 3 years, up to 50 million yen)

### Website

<https://www.jsps.go.jp/english/e-grants/index.html>

### (3) Building Hubs for Advancing International Research Collaboration

#### Purpose

Support is provided for the creation of high world-standard/medium-scale education and research hubs in Japan, used by Japanese scientific research institutions to carry out large-scale multinational research collaboration with similar hubs in other countries. One important function of these collaborations is to provide a matrix for promising young researchers to build their own networks, while giving them encouragement to participate fully in research activities.

#### Programs

##### ① Core-to-Core Program

Aimed at issues considered in Japan to be cutting-edge and internationally important and at regional issues to whose solution Japan can contribute, this program supports collaborative research between core research and education institutes in Japan and other countries around the world, carried out in such formats as joint research projects, seminars, and researcher exchanges.

The Core-to-Core Program is implemented in two components: “A. Advanced Research Networks” and “B. Asia-Africa Science Platforms.”

Website:

<https://www.jsps.go.jp/english/e-c2c/index.html>

##### A. Advanced Research Networks

Collaborative ties are established between top world-class research centers in Japan that partner over the long term with core research institutions around the world in advancing research that is considered leading-edge in Japan, while fostering the next generations of trailblazing young researchers.

Projects under this program must be carried out with at least two other countries and require counterpart research organizations to secure matching

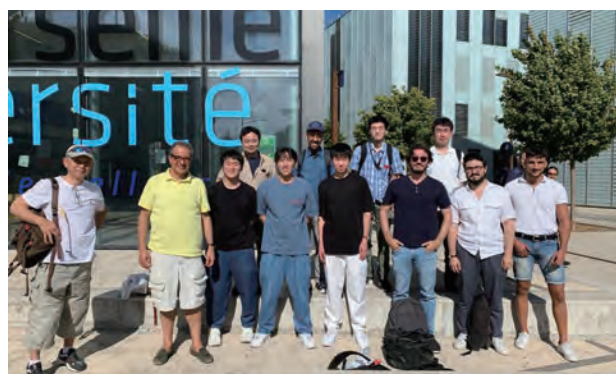
funds at a level needed to reciprocally conduct joint research, joint seminar, and the researcher exchange.

Target research	Research topics considered to be cutting-edge and internationally important in Japan
Target countries	Two or more countries having diplomatic relations with Japan
Project funding	Up to ¥18 million/year
Project period	Up to 5 years

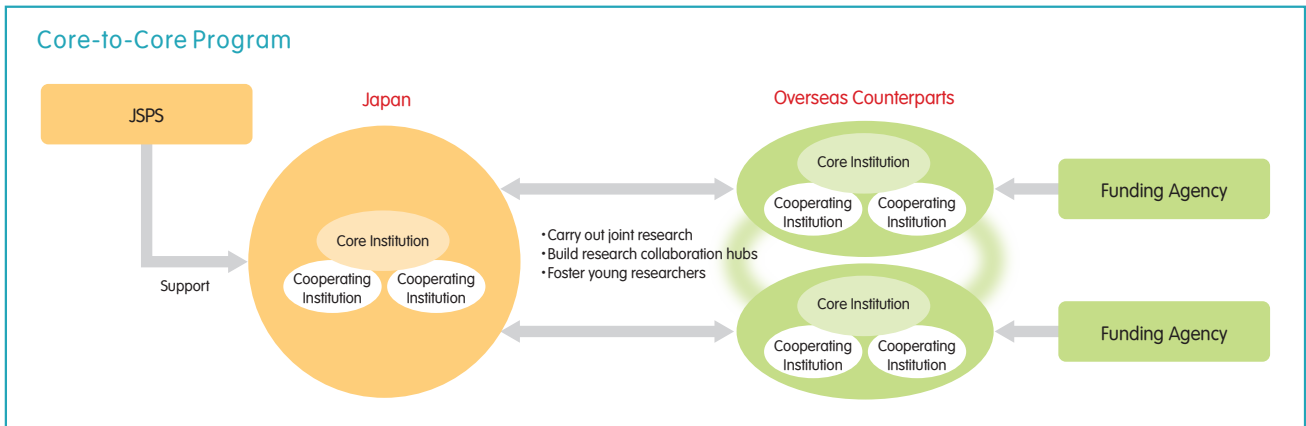
##### B. Asia-Africa Science Platforms

With an aim of contributing to the solution of problems prevailing in the Asia and African regions, Japanese universities and research institutes take the lead in carrying out research collaborations with research and education institutions in counterpart countries. By establishing sustainable collaborative relationships with the counterpart institutions, research-collaboration hubs are created in various targeted fields within Asia and Africa, which also foster the young researchers who will drive the next generation of research advances in their regions. In building scientific infrastructures in Asia and Africa, counterpart institutions in the regions are not necessarily required to secure matching funds when carrying out collaborative research with Japanese universities except in the cases of China, Korea, Singapore and Taiwan, which need to secure matching funds.

Target research	Research topics of special importance or significance to Asia and/or Africa and considered to be of high priority within Japan
Target countries	Two or more Asian and/or African countries having diplomatic relations with Japan
Project funding	Up to ¥8 million/year
Project period	Up to 3 years



WAIPS-2 workshop at Université d'Aix-Marseille  
(Photo provided by Université d'Aix-Marseille)



Field work for eDNA sampling in Selangor, Malaysia (Photo provided by Tropical Biosphere Research Center, University of the Ryukyus)

② A3 Foresight Program

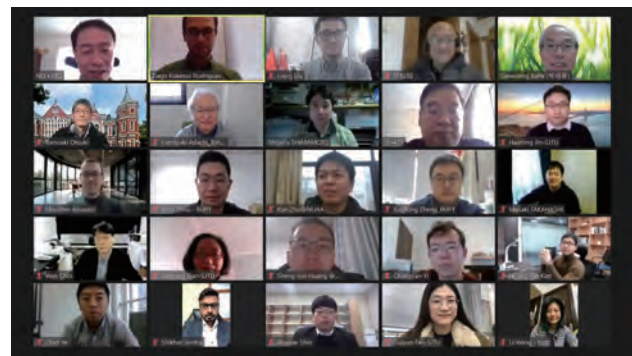
Under this program, Japan, China and Korea work as a consortium in supporting trilateral research projects that advance world-class research in tackling issues of common regional importance while partnering to foster talented young researchers. Ultimately, the program works to build world-standard research and education hubs in Asia with the three countries at their core. The research theme for each fiscal year is decided via consultation among the three country’s agencies in the previous year’s A-HORCs meeting. (P. 52)

In the following year, a Northeastern Asian Symposium is held on the same theme. Assembling researchers from the three countries, it provides a platform for them to share information on the latest advances in the subject field, while building networks over which to carry out new international research initiatives.

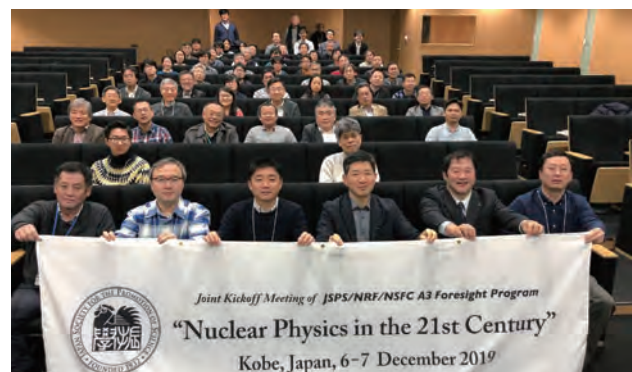
Website:  
<https://www.jsps.go.jp/english/e-foresight/index.html>

JSPS A3 Foresight Program

Themes	FY 2022: Approaches for Future Earth in Northeast Asia - Climate Change and Its Effects	
	FY 2020: IoT with Intelligence	
Project funding	FY 2019: Nuclear Physics in the 21st Century	
	FY 2018: Emerging Materials Innovation	
	FY 2017: Molecular Imaging-based Precision Medicine	
	FY 2016: Chemical Biology	
	FY 2015: Autophagy: from Basic to Medicine	
	FY 2014: Method and Modeling for High Performance Scientific Computing	
	FY 2013: Biomaterial and Nano-Bio Technology	
	FY 2012: Plasma Physics	
	Project period	Up to ¥50 million/5 years
		5 years



"Japan Society for the Promotion of Science (JSPS) China, Japan and Korea Foresight Project Joint Seminar 2021 Workshop" Online workshop held at Tohoku University. (Photo provided by the Graduate School of Information Sciences, Tohoku University)



Kickoff meeting @RIKEN : Group shot (Photo provided by RIKEN Nishina Center for Accelerator-Based Science)

### 3 Advancing Research in the Humanities and Social Sciences

#### Topic-Setting Program to Advance Cutting-Edge Humanities and Social Sciences Research

##### Purpose

Based on a report by the Subdivision on Science Committee within Council for Science and Technology, titled “Promotion of the Humanities and Social Sciences Addressing Risk Society and Matured Intellectual Society,” issued in July 2012, this program works to contribute to advancing the humanities and social sciences in three areas: (1) Joint research that will yield breakthroughs through close linkages with other fields of science; (2) joint research aimed at making societal contributions; and (3) international joint research that contributes to advancing the humanities and social sciences. The latter accompanied by (4) joint research that merges sciences and social sciences in pursuit of questions germane to the intrinsic nature and roots of the humanities and social sciences, advance based on concepts contained in the report “Project to Co-create Academic Knowledge upon an Axis of the Humanities and Social Sciences,” issued as the compilation of discussions held by the members of the aforementioned Committee.

##### Contents

This program is carried out in four subsets: (1) Area cultivation, (2) Responding to real society, (3) Global initiatives, and (4) Co-creation of academic knowledge, with the Program Committee selecting the research themes. The research itself is recruited in two categories: Topic-setting research on themes selected by the Program Committee and openly recruited research on themes proposed by researchers themselves. This dual structure works to advance joint research in the most cutting-edge and cross-cutting fields of the humanities and social sciences.

※Open calls for new proposals under the following categories are closed: Area Cultivation, Responding to Real Society, and Global Initiatives.

※※Research themes for Co-creation of academic knowledge are recruited only through call for proposals.

#### (1) Area Cultivation

Sought are research topics devised by researchers from different scientific fields that can spur unexpected jumps to new research domains and more innovative yet durable methodologies.

- Allocation
  - Topic-setting research: ¥10 million/year
  - Openly recruited research: ¥5 million/year

#### (2) Responding to Real Society

Sought is close collaboration between researchers and working level specialists from the planning and implementation of the research to the dissemination of its results. This linkage with the working level specialists who bridge the research and its application to society is essential in advancing research that makes real societal contributions.

- Allocation
  - Topic-setting research: ¥10 million/year
  - Openly recruited research: ¥5 million/year

#### (3) Global Initiatives

Sought are dialogue and interaction between Japanese and overseas researchers and the generation of globally significant results through the advancement of international joint research across diverse fields of the humanities and social sciences and the building of robust international networks.

- Allocation
  - Topic-setting research: ¥20 million/year
  - Openly recruited research: ¥10 million/year

#### (4) Co-creation of academic knowledge

Research is advanced in pursuit of questions germane to the intrinsic nature and roots of the humanities and social sciences, the results of which will contribute to answering these questions.

- Allocation: ¥15 million/year

##### Budget

FY 2022: ¥0.18 billion

##### Website

<https://www.jsps.go.jp/english/e-kadai/>

## Selected Projects under "Area Cultivation" in FY2020

Openly recruited research (New:11projects, Extension:1project)			
Research Areas	Research Themes	Core-Researcher	Affiliation
Exploring new methodologies for research in the humanities and social sciences	Reexamination of qualitative approach through interdisciplinary comparison	IGASHIRA Masahiko	Professor, Graduate School of Social Sciences, Hitotsubashi University
	Regional Science for Small Islands based on Creation of New 'Island Wisdom' by means of Communicative Archives	HATANO So	Professor, Research Institute for Islands and Sustainability, University of the Ryukyus
Issues of rules and publicness in AI-enhanced IT society	Rules and regulations of using AI as an alternative to the administration of long-term care insurance –from the viewpoint of community management and social capital	KAWASHIMA Noriko	Professor, School of community management, department of health & welfare, The University of Fukuchiyama
Cross-disciplinary investigation of disparity and equal opportunity in globalizing society	An empirical study on the origin of the literacy gap, the impact of the gap on decision-making, and how to narrow it	OGAWA Kazuhito	Professor, Research Institute for Socionetwork Strategies (RISS)/ Faculty of Sociology, Kansai University
Research on the relationship between science & technology and "humans"	Theory and Practice of Creating "Myself" as Natural Born Intelligence	GUNJI Yukio	Professor, School of Fundamental Science and Engineering, Waseda University
Society's responses and challenges with regard to global disasters such as pandemics	Designing Legal Institutions to Deal with the Coronavirus Pandemic	YOSHIDA Kunihiko	Professor, Graduate School of Law, Hokkaido University
	Phenomenological analysis of corpus of subjective reports about COVID-19 pandemic based on natural language processing	FROESE Tom	Assistant Professor, Okinawa Institute of Science and Technology Graduate University
	New Socio-Environmental Theories for the Post-Pandemic World: Learning from the History of Pandemics	FUJIWARA Tatsushi	Associate Professor, Institute for Research in Humanities, Kyoto University
	Examinations of counter-disaster policies based on large scale simulations on exhaustive trade network data	INOUE Hiroyasu	Associate Professor, Graduate School of Simulation Studies, University of Hyogo
	Comprehensive research on communication after a nuclear disaster from a global perspective	SEKIYA Naoya	Associate Professor, The Center for Integrated Disaster Information Research, the Interfaculty Initiative in Information Studies, the University of Tokyo
	Evidence-based Economic and epidemiological analysis of the spread of infectious diseases and its policy applications	NISHIYAMA Yoshihiko	Professor, Institute of Economic Research, Kyoto University
"Cognitive turn" and the transformation of identities	Emergence and sharing of mentality based on principle of predictive coding: An integrated study of cognitive science, humanities, and informatics	OHIRA Hideki	Professor, Graduate School of Informatics, Nagoya University

(As of April 2022)

## (For reference) Selected projects in FY2017

Topic-setting research: 0 projects
Openly recruited research: 12 projects

New  Extended

## Selected Projects under "Co-creation of academic knowledge" in FY 2021

Openly recruited research (New:2 projects)			
Research Areas	Research Themes	Core-Researcher	Affiliation
Overcoming Divided Society	Establishment of a sustainable multicultural society based on the normalization of international migration	SAKAI Kazunari	Professor, Graduate School of Intercultural Studies, Kobe University
Creation of values that will shape a new human society	Creating Shared Value through the Clarification of Plastic Pollution: Networking for a Circular Economy	HARADA Sadao	Associate Professor, Department of Public Affairs, Osaka University of Commerce

(As of April 2022)

## Program for Constructing Data Infrastructure for the Humanities and Social Sciences

### Purpose

To expand the using and sharing data in fields of the humanities and social sciences (HSS), work is being advanced through this program to build a HSS data infrastructure.

### Features

Data in the HSS include such as individual data from Japanese general social survey, statistical tables of official statistics, historical materials and image data. The Japan Data Catalog for the Humanities and Social Sciences (JDCat) allows the users to conduct cross-searches of multiple data archives and to access to the wide variety of metadata provided by research institutes participating in the program.

### Examples of Data Provided by Participating Research Institutes

Research Institutes Participating in this Program	Examples of Data
JGSS Research Center at Osaka University of Commerce	Japanese General Social Surveys: JGSS
Panel Data Research Center at Keio University	Japan Household Panel Survey and other panel surveys
Center for Social Research and Data Archives, Institute of Social Science, the University of Tokyo	Japanese Life Course Panel Survey of the Youth (JLPS-Y)
Institute of Economic Research, Hitotsubashi University	Statistical Yearbooks of Japan since the Early Meiji Era, and Questionnaire Forms and Survey Overviews of Official Statistics
Historiographical Institute of the University of Tokyo	Materials of the Bingo-Fukuyama Han Abe Family

### Contents

- Provision of JDCat, which allows cross-sectoral bulk searches of the HSS data in multiple data archives
- Provision of JDCat Analysis Tool, which allows online data analysis using R and Python without having to install that

- Enlightenment and publicity activities to cultivate a culture of using and sharing data among researchers in the HSS (including distribution of “A Guide to Data Sharing in the Humanities and Social Sciences” )
- Strengthening of archiving functions of the research institutes participating in this program



The brochure of Program for Constructing Data Infrastructure for the Humanities and Social Sciences



A Guide to Data Sharing in the Humanities and Social Sciences

### Budget

FY 2022: ¥0.18 billion

### Website

Program for Constructing Data Infrastructure for the Humanities and Social Sciences

<https://www.jsps.go.jp/english/e-di/index.html>

Japan Data Catalog for the Humanities and Social Sciences (JDCat)

<https://jdcatalog.jsps.go.jp>





# Fostering the Next Generations of Talented Researchers Who Will Challenge the Pioneering of New Knowledge

## 1 Providing Environments for Researchers to Work Independently

### 1) Research Fellowships for Young Scientists

#### Purpose

Awarded to excellent young researchers in Japan, these fellowships offer the fellows an opportunity to focus on a freely chosen research topic based on their own innovative ideas. Ultimately, the program works to foster and secure excellent researchers.

#### Features

#### (1) Core program for fostering young researchers

This fellowship program is Japan's core program for cultivating young researchers here in Japan, with more than 5,000 participating fellows every year.

#### (2) Values the independence of young researchers

Excellent young researchers are allowed to focus on a freely selected research topic and at an independently chosen research institution.

#### (3) Supplying monthly stipend and disbursing

##### Grants-in-Aid for Scientific Research

Funding is provided to encourage and support doctoral students and postdoctoral researchers under JSPS's Research Fellowships for Young Scientists. These researchers may also apply for a Grant-in-Aid for JSPS Fellows.

#### (4) Leave for child birth and infant nursing

Fellows who have to suspend their research for child birth and infant nursing are offered a path back into the laboratory. It is possible for them to work short hours while on such leave.

#### Framework

#### (1) Screening

A fair and transparent screening process is carried out by JSPS's Screening Committee for Young Researcher Fellowships, comprising frontline Japanese researchers.

#### (2) Target fields

Young researchers in all fields of the humanities, social sciences and natural sciences are eligible to apply. When recognized as necessary to advancing their research, they may spend part of their tenure at another research institution, including one overseas.

#### (3) Fellowship categories

- This program offers four categories of fellowships:
  - Doctoral Course Student (DC)
  - Postdoctoral Fellow (PD)
  - Restart Postdoctoral Fellow (RPD)
  - Superlative Postdoctoral Fellow (SPD)
- Outstanding young researchers may be given a Restart Postdoc (RPD) Fellowship after suspending

#### Fellowship categories

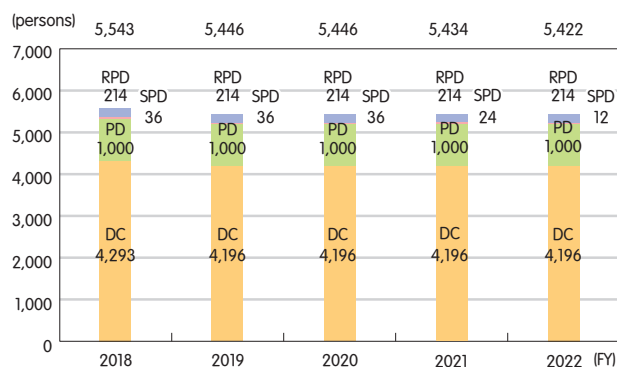
Categories	Eligibility	Tenure	Monthly stipend (FY 2022)	Research grant (Grant-in-Aid for JSPS Fellows)
DC	<ul style="list-style-type: none"> <li>Enrolled in doctoral course</li> <li>DC1: Enrolled in first year of doctoral course</li> <li>DC2: Enrolled in second year or higher of doctoral course</li> </ul>	DC1: 3 years DC2: 2 years	¥200,000	Up to ¥1.5 million a year
PD	<ul style="list-style-type: none"> <li>Hold a doctoral degree</li> <li>Within 5 years after receiving doctoral degree</li> <li>Transfer to another host institution that is different from the university where they were enrolled in a doctoral course</li> </ul>	3 years	¥362,000	
RPD	<ul style="list-style-type: none"> <li>Hold a doctoral degree</li> <li>May suspend research activities for three months or longer for childbirth and/or child raising</li> <li>(1) Researcher who is raising a pre-school child</li> <li>(2) Researcher who has given childbirth or cared for a child illness or disorder within past five years.</li> <li>No age or gender limitations</li> </ul>	3 years	¥362,000	
SPD	<ul style="list-style-type: none"> <li>Hold a doctoral degree</li> <li>Excellent researchers chosen from PD candidates</li> <li>* A call for applications was suspended in FY 2020.</li> </ul>	3 years	¥446,000	

their research activities for the purpose of childbirth and/or infant nursing.

### Budget

FY 2022: ¥15.80 billion

### Total Number of Fellowships



※ FY 2021-2022 DCs exclude fellows who extended their fellowships due to the COVID-19.

### Selection ratios(%)

	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
DC1	20.6	19.2	19.4	20.4	18.5
DC2	20.3	19.8	19.3	19.8	18.8
PD	15.7	17.3	19.6	19.8	21.0
RPD	26.1	24.1	24.0	29.3	35.8

※ FY 2018-2020 PDs include SPDs.

※ FY 2022 PDs and RPDs include persons scheduled to start the fellowship.

### Restart Postdoc (RPD) Fellowship

To support the raising of children and create an environment of equal gender participation within Japan's research community, the Restart Postdoc (RPD) Fellowship was established. It provides an avenue, including financial support, for excellent young researchers to transition smoothly back into the laboratory after suspending their research for childbearing and/or infant nursing.

Target fields: All fields of the humanities, social sciences and natural sciences

Number of new awardees per year: About 75

#### Eligibility

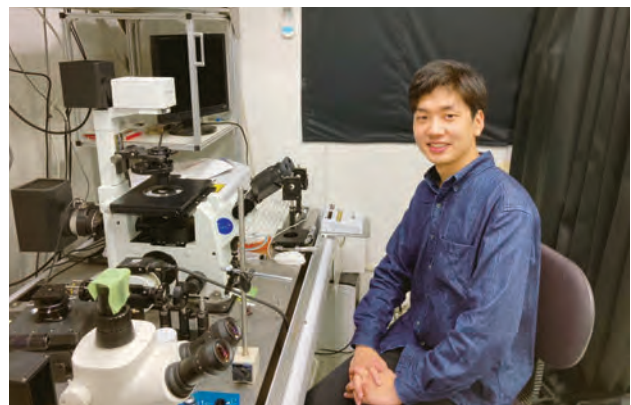
- Postdoctoral researchers who have within the past 5 years suspended their research for a

### Website

<https://www.jsps.go.jp/english/e-pd/index.html>



FURUKAWA Yui [DC, The University of Tokyo]



SAITO Takumi [PD, Tohoku University]

period of 3 months or longer for the purpose of child birth and infant nursing.

- No restriction on age or gender.

Tenure: 3 years

Monthly stipend (FY 2022): ¥362,000



SASAKI Tamaki [RPD, Tokyo Medical and Dental University]

## 2 Fostering Researchers Who Will Play Vibrant International Roles

### (1) Dispatching Young Researchers Abroad

#### ① Overseas Research Fellowships

##### Purpose

To foster highly capable researchers with wide international perspectives, this fellowship gives excellent young Japanese researchers an opportunity to carry out long-term research at an overseas university or research institution.

Overseas Research Fellowships – Restart Research Abroad (RRA) program gives young Japanese researchers who have suspended their research activities due to a life event (e. g. marriage, childbirth, child raising, nursing, caregiving) eligibility to apply for an RRA fellowship.

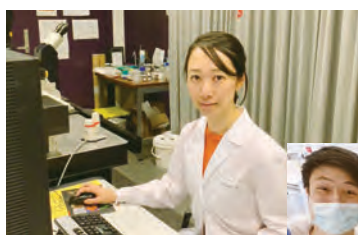
##### Features

#### (1) Long-term overseas research by young researchers

Opportunities are provided for excellent young Japanese researchers to collaborate with colleagues at top level overseas research institutions.

#### (2) Leave for Childbirth and infant nursing

Fellows are allowed to take leave for childbirth and infant nursing and then return to their fellowships.



Dr. WATANABE Kanako,  
Overseas Research Fellow  
(Utrecht University, Netherlands)



Dr. SHIBUYA Soichi,  
Overseas Research Fellow  
(University College London, U.K.)  
(Left end)

##### Framework

#### (1) Stipend, research grant and airfare:

Fellows are provided roundtrip international airfare to/from their destination, a stipend and research

grant. (Approximately: ¥4.5 million - ¥6.2 million/year, varying by destination.) Under the RRA program, roundtrip airfare is also provided for accompanying children together with a child allowance. (10% of stipend/grant for each child)

#### (2) Tenure: 2 years

#### (3) Screening:

A fair and transparent screening process is carried out by JSPS's Screening Committee for Young Researcher Fellowships, comprising frontline Japanese researchers.

#### (4) Target fields:

All fields of the humanities, social sciences and natural sciences

#### (5) Eligibility:

- Postdoctoral researchers employed as a researcher in Japanese universities, research institutions, or national laboratories
- Postdoctoral researchers who aspire to the above research positions

##### Budget

FY 2022: ¥2.42 billion

##### Website

<https://www.jsps.go.jp/english/e-ab/index.html>

#### Number of Researchers Dispatched to Each Destination (FY 2021)

USA	233	Austria	7	Cambodia	1
U.K.	39	Netherlands	6	Ireland	1
Germany	29	Italy	6	Kenya	1
France	21	Spain	5	Taiwan	1
Canada	15	Singapore	5	Belgium	1
Switzerland	11	Australia	3	total	396
Sweden	8	Denmark	3		

#### Selection ratios (%) for Overseas Research Fellowships

FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
22.3	23.3	20.5	19.4	27.5

Selected RRA fellows are included. Including selections scheduled for FY 2021-2022.

## ② Cross-border Postdoctoral Fellowship

### Purpose

In FY 2019, a new “Cross-border Postdoctoral Fellowship (CPD)” was established for the purpose of providing excellent young researchers with an opportunity to concentrate on their research for a long period at an overseas university or research institution.

\* The abbreviation CPD stands for the cross-border research activities advanced by postdoctoral researchers.

### Features

- An overseas research stay of 3 years or longer during the fellowship period.
- Fellows feedback the content of their overseas experience to their research institutions in Japan.

### Contents

#### (1) Target fields

All fields of the humanities, social sciences and natural sciences

#### (2) Eligibility

Researchers who are in the first year of a Postdoctoral Fellowship (PD) .

#### (3) Number of new awardees per year

About 10

#### (4) Tenure

Five years (Relocate during the fellowship’s first year to another country for a research stay of 3 years or longer)

#### (5) Financial Support

Monthly allowance of ¥446,000 (FY 2022)

Roundtrip airfare

Grant-in-Aid for Scientific Research (Grant-in-Aid for JSPS Fellows)

### Budget

FY 2022: ¥0.34 billion

### Website

[https://www.jsps.go.jp/j-pd/cpd\\_gaiyo.html](https://www.jsps.go.jp/j-pd/cpd_gaiyo.html)

## ③ Overseas Challenge Program for Young Researchers

### Purpose

This program gives doctoral students an opportunity to go overseas to challenge a new research environment, one in which they engage in joint research with researchers in the host country. Hence, the program contributes to the fostering of young researchers who possess abundant international experience and who can be expected to play leading roles in the wider scientific arena.

### Features

Targeted are doctoral students who have not experienced overseas stays for the purpose of doing research. They are free to choose the period of their overseas stays within a framework of three months to one year.

### Contents

#### (1) Financial support:

- Round-trip international airfare
- Maintenance allowance of from ¥1 to ¥1.4 million per dispatch irrespective of length of overseas stay (amount differs by destination)
- Research funding (bench fees of up to ¥200 thousand)

#### (2) Period of overseas stay:

Three months to one year from the date of dispatch

#### (3) Target fields:

All fields of the humanities, social sciences and natural sciences

#### (4) Eligibility:

Doctoral student at a Japanese university who has not experienced an overseas stay of 90 consecutive days or longer

## Budget

FY 2022: ¥0.26 billion

## Website

<https://www.jsps.go.jp/english/e-abc/index.html>

## Number of Researchers Dispatched to Each Destination (FY 2021)

USA	40	Singapore	3	Denmark	1
Germany	21	Sweden	3	Hungary	1
France	19	Korea, Rep	3	Finland	1
U.K.	10	Thailand	2	Russia	1
Canada	6	Austria	2	Czech	1
Switzerland	6	Turkey	2	Norway	1
Netherlands	6	Australia	1	Belgium	1
Italy	4	Ireland	1	Portugal	1
Spain	3	Senegal	1		
				total	141

## Selection ratios (%) for Overseas Research Fellowships

FY		Selection Ratios
2018		51.4
2019	1st	41.2
	2nd	17.2
2020	1st	17.3
	2nd	17.3
2021	1st	45.0
	2nd	46.8
2022	1st	49.6

※ Including selections scheduled for FY 2021-2022.

2023 Overseas Challenge Program for Young Researchers Flyer

## (2) Inviting Excellent Researchers from Other Countries to Japan

## Career stages of researchers

Pre- and postdoctoral researchers

6 years after Ph. D.

JSPS Postdoctoral Fellowships for Research in Japan	
Summer Program 2 months in summer approx. 100 fellows (By recommendation)	Standard 12 to 24 months approx. 340 fellows
Strategic Program 3 to 6 months approx. 10 fellows (By recommendation)	
Short Term 1 to 12 months approx. 140 fellows	

## ① JSPS International Fellowships for Research in Japan

## Purpose

JSPS carries out programs that provide excellent researchers from other countries an opportunity to conduct collaborative research, discussions, and opinion exchanges with researchers in Japan.

## Features

- Importance is placed on the scientific value of the research plan irrespective of the applicant's research field or nationality
- Various programs tailored to the visitors' career stage and the purpose of their visit
- Multiple application opportunities provided during the year

## Contents

## A. JSPS Postdoctoral Fellowship for Research in Japan (Summer Program)

Young pre- and postdoctoral researchers from the US, the UK, France, Germany, Canada and Sweden are invited to Japan for two months during the summer to participate in joint research at Japanese host institutions. The program begins with a one-week orientation conducted by SOKENDAI (the Graduate University for Advanced Studies), in which the participants study practical Japanese and experience Japanese culture before moving on to their respective host institutions. Prior to returning home, they reassemble to report on the results of their summer research activities.

- Eligible countries: US, UK, France, Germany, Canada, Sweden
- Number of the fellows who visited Japan in FY 2021: 10 (US/2, UK/1, France/5, Germany/1, Canada/1)

Mid-career~Professor

### JSPS Invitational Fellowships for Research in Japan

Long Term  
2 to 10 months  
approx. 60 fellows

Short Term  
14 to 60 days  
approx. 160 fellows

#### B. JSPS Postdoctoral Fellowship for Research in Japan (Strategic Program)

This program focuses upon the major advanced nations and other selected countries, from which it strategically invites outstanding young researchers to Japan to create collaborative research relationships with Japanese colleagues.

- Eligible countries: Switzerland
- Accepted in FY 2021: 3

#### C. JSPS Postdoctoral Fellowship for Research in Japan (Short-term)

Young pre- and postdoctoral researchers come to Japan from Western countries for relatively short tenures to conduct joint research at a Japanese institution under the guidance of a Japanese host researcher.

- Eligible countries: EU, UK, Norway, Russia, Switzerland, Canada, US.
- Accepted in FY 2021: 62 from 21 countries

#### D. JSPS Postdoctoral Fellowship for Research in Japan (Standard)

This program allows researchers affiliated with Japanese universities or research institutes to invite promising young researchers from overseas to Japan

to conduct joint research under their guidance.

- Accepted in FY 2021: 597 from 65 countries

#### E. JSPS Invitational Fellowship for Research in Japan (Long-term)

Overseas researchers with excellent records of research achievements are invited to Japan for relatively longer periods of time to collaborate with Japanese colleagues.

- Accepted in FY 2021: 38 from 21 countries

#### F. JSPS Invitational Fellowship for Research in Japan (Short-term)

Overseas researchers with excellent records of research achievements are invited to Japan for relatively short periods of time to hold discussions and engage in opinion exchanges with Japanese researchers and to deliver lectures.

- Accepted in FY 2021: 18 from 16 countries

#### Website

[https://www.jsps.go.jp/english/e-inv\\_researchers/index.html](https://www.jsps.go.jp/english/e-inv_researchers/index.html)

### ② RONPAKU (Dissertation PhD) Program (Targeted to Asian and African Researchers)

#### Purpose · Contents

This program supports excellent researchers in the countries of Asia and Africa or other specified countries among all those listed as Japanese ODA recipients who wish to receive a PhD from a Japanese university by submitting a dissertation without matriculating a doctoral course. The program is appraised for allowing the fellows to earn a doctoral degree without having to be absent for long periods of time from their home research institutions.

#### Website

<https://www.jsps.go.jp/english/e-ronpaku/index.html>

### ③ Support for Invited JSPS Fellows 1) Orientation

#### Purpose

This program is primarily for researchers who will for the first time be experiencing a long stay in Japan. Through participation in the program, they learn about important points relative to doing research and residing in Japan. Learning also about Japanese culture, they gain new perspectives with regard to the cultural values of others. Ultimately, the objective is to help the newly arriving researchers smoothly start and carry out their research activities during their tenure in Japan.

#### Contents

The program includes lectures on Japanese culture, history, and research environment, while providing participatory activities in Japanese language learning and disaster prevention, and also cultural experiences.

#### Website

[https://www.jsps.go.jp/english/e-plaza/02\\_e\\_orientation.html](https://www.jsps.go.jp/english/e-plaza/02_e_orientation.html)



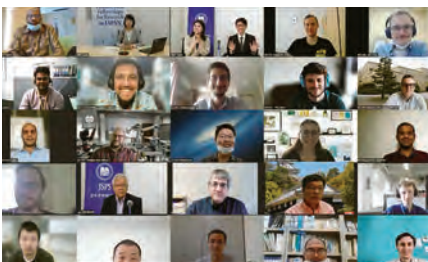
Lecture (FY 2019)



Experiencing the tea ceremony (FY 2019)



Japanese cultural experience (FY 2019)



Due to the spread of the COVID-19, this program was carried out online in June, 2022.



Online Japanese language lesson (FY2022)



Face-to-face Orientation for JSPS Postdoctoral Fellows was held for the first time in three years in Tokyo in September 2022.



## 2) Science Dialogue

### Purpose

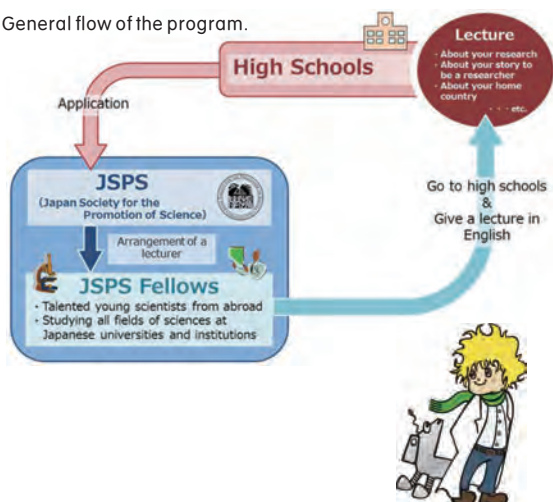
This program offers JSPS Overseas Fellows a unique opportunity to volunteer to give lectures in English on their research work and home countries at Japanese high schools in the vicinity of their host institutions. The aim of the lectures is to stimulate the young students' interest in research and deepen their understanding of science from a global point of view by interacting with the Fellows, hence fostering their potential to contribute to future scientific advancement. As for the Fellows, participation in the program offers them an enjoyable opportunity to interact with the local community and strengthen their ties with Japan.

### Contents

As to the procedure for carrying out the program, applications submitted for receiving lectures by high schools and for giving lectures by JSPS Overseas Fellows are matched by JSPS. Selected Fellows give their lectures in English, accompanied by a Japanese colleague who provides commentary on them. To heighten the student's interest, the lecturer may engage the students in experiments or fieldwork.

- Participants in FY 2021, 108 lectures, 66 high schools

General flow of the program.



Diallo (left), Jaspis-kun (right)  
(Science Dialogue Official Characters)

### Website

<https://www.jsp.go.jp/english/e-plaza/e-sdialogue/index.html>



Lecture by Dr. Sascha Georg KELLER, from The University of Tokyo (Germany) at Chiba Prefectural Sakura Senior High School, July 2021.



Lecture by Dr. Hamza UMER, from Hitotsubashi University (Pakistan) at Kosei Gakuen Girls' Senior High School, Tokyo, September 2021.



Lecture by Dr. Tanju YILDIRIM, from National Institute for Materials Science (Australia) at Tokyo Metropolitan Toyama High School, January 2022.



Lecture by Dr. Priyanka VERMA, from Osaka University (India) at Tezukayama Junior and Senior High School, Nara Prefecture, January 2022.

### 3 Awarding Achievements, Providing Training Opportunities for Researchers

#### ① Awards of Recognition

##### (1) JSPS Prize

###### Purpose

Established as a component of JSPS's program to foster excellent researchers, this Prize recognizes young researchers with rich creativity and superlative research ability. In doing so, it is meant to sustain the awardees' motivation while encouraging them in their research endeavors, thereby raising the level of scientific research in Japan to the world's highest standard.

###### Contents

##### (1) Selecting Recipients

Candidates are nominated to JSPS by the heads of Japanese universities and research institutes and by researchers in Japan with records of superlative

achievement. The Prize is awarded to outstanding young researchers under age 45 in principle, including foreign researchers who have conducted research in Japan, in all fields of the humanities, social sciences, and natural sciences. Recipients are chosen through a process of preliminary reviews conducted by JSPS's Research Center for Science Systems, with final selections made by the JSPS Prize Selection Committee comprising distinguished Japanese researchers including a Nobel Laureate. Around 25 researchers are awarded the JSPS Prize each year.

##### (2) The Prize

The Prize consists of a certificate of merit, a medal, and a purse of ¥1.1 million.

Some of the Prize recipients are also awarded the Japan Academy Medal.

###### Website

<https://www.jsps.go.jp/english/e-jsps-prize/index.html>



The 16th JSPS Prize Ceremony (18 February 2020, The Japan Academy)

## 18th (FY2021) JSPS Prize recipients

Name	Affiliation	Research Title
AMANO Tatsuya	Australian Research Council Future Fellow, School of Biological Sciences, The University of Queensland	Assessment of Global Biodiversity with Special Focuses on National Governance and Information Gaps in Language and Research
ISHIZAKA Kyoko	Professor, School of Engineering, The University of Tokyo	Study on Non-Equilibrium Condensed Matters by Utilizing Photoelectrons in Multiple Dimensions
ISHIDA Sachiko	Associate Professor, School of Science and Technology, Meiji University	Design and Mechanical Functions of Origami-Based Deployable Structures
WEI Fan Yan	Professor, Institute of Development, Aging and Cancer, Tohoku University	Exploring the Role of RNA Modifications in Health and Disease
OKA Takashi	Professor, The Institute for Solid State Physics, The University of Tokyo	Theory of Dynamical Control of Quantum Materials
KITAGAWA Daiju	Professor, Graduate School of Pharmaceutical Sciences, The University of Tokyo	Elucidation and Theorization of Basic Principles of Centriole Duplication
KUMAKURA Wakako	Assistant Professor, Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies	Nile Irrigation and Land System in the Transition Period from Medieval to Early Modern Egypt
KUWAMURA Yumiko	Professor, Graduate School of Law, Tohoku University	Comparative Study on a New Framework of Protection Law and Regulations for Diversified Workforce
SHIBATA Kazuhisa	Team leader, Center for Brain Science, RIKEN	Mechanisms of Perceptual and Cognitive Changes Induced by Real-Time Decoded Neurofeedback
SUGIURA Shinya	Associate Professor, Institute of Industrial Science, The University of Tokyo	Research on Wireless Communication System through Advanced Signal Processing
TADAKUMA Kenjiro	Associate Professor, Tough Cyberphysical AI Research Center, The Graduate School of Information Sciences, Tohoku University	Research and Development on Omnidirectional Driving Robotic Mechanisms Using Spherical Structure as Technological Core
TANIGUCHI Yuichi	Professor, Kyoto University Institute for Advanced Study; Team Leader, Center for Biosystems Dynamics Research, RIKEN	Developing Technologies for Molecular- and Systems-Level Elucidation of Gene Expressions
TSUKAZAKI Atsushi	Professor, Institute for Materials Research, Tohoku University	Exploration of Topological Phenomena in Thin Films and Interfaces
NAGANAWA Norihiro	Professor, Slavic-Eurasian Research Center, Hokkaido University; Professor, Institute for Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies	Explorations in Entanglements of Russia's Empire and the Muslim World
NANGO Eriko	Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University	Molecular Movie Analysis of Proteins Using X-Ray Free Electron Laser
NODA Koji	Associate Professor, Institute for Cosmic Ray Research, The University of Tokyo	Study of Very High Energy Gamma Ray Emission from Gamma Ray Bursts
HATAKEYAMA Takuji	Professor, Graduate School of Science and Technology, Kwansai Gakuin University	Development of Next-generation Organic Electroluminescence Materials
HOSHINO Ayuko	Associate Professor, Department of Life Science and Technology, Tokyo Institute of Technology	Elucidation of Mechanism of Exosome-Mediated Metastasis in Cancer
MUROOKA Takeshi	Associate Professor, Osaka School of International Public Policy, Osaka University	Behavioral Industrial Organization with Applications to Competition Policy and Consumer Protection Policy
MORI Akira	Professor, Faculty of Environment and Information Sciences, Yokohama National University	Studies on Ecosystem Functions and Services of Biodiversity in Plant Communities
YASUDA Takehiko	Professor, Graduate School of Science, Osaka University	Creation of The Wild McKay Correspondence Theory and Its Application to The Study of Singularities
YAMAZAKI Satoshi	Professor, Faculty of Medicine, University of Tsukuba; Project Associate Professor, The Institute of Medical Science, The University of Tokyo	Development of Hematopoietic Stem Cell Ex Vivo Expansion
YAMADA Teppei	Professor, Graduate School of Science, The University of Tokyo	Creation of Thermocell Using Thermo-Responsive Molecular Science
YAMANAKA Naoki	Associate Professor, Department of Entomology, University of California, Riverside	Elucidation of the Mode of Action of Steroid Hormones Controlling Insect Development
YUKAWA Masahiro	Associate Professor, Faculty of Science and Technology, Keio University	Development of Adaptive Signal Processing with Nonlinear Estimation Based on Model Selection

Titles and affiliations current as of 1 December 2021

**(2) JSPS *Ikushi* Prize****Purpose**

In 2009, JSPS received an endowment from His Majesty the Emperor Emeritus Akihito on the 20th year of his reign. Amidst a severe economic environment in Japanese society, His Majesty's desire was to encourage and support young scientists who are working diligently to advance their studies and research.

In deference to his wishes, JSPS established the JSPS *Ikushi* Prize program, which was placed into operation in FY 2010. It functions to officially recognize outstanding doctoral students who can be expected to contribute to Japan's future scientific advancement, while seeking to fan their enthusiasm for educational and research pursuits.

**Contents****(1) Selecting Recipients**

Candidates for the Prize are nominated to JSPS by the heads of Japanese universities and academic institutions, who choose outstanding students under 34 years of age enrolled in their doctoral programs. Doctoral students majoring in any field of the humanities, social sciences, or natural sciences are eligible. Awardees are chosen via a process of document reviews and interviews, followed by deliberation at a selection committee established within JSPS, which refers the vetted candidates to the JSPS president for final selection.

About sixteen awardees are selected each year.

**(2) The Prize**

Awardees receive a certificate, a medal and a scholarship grant of ¥1.1 million. They are also offered an optional JSPS Research Fellowship for Young Scientists, their tenures beginning in the following fiscal year.

**Website**

<https://www.jsps.go.jp/english/e-ikushi-prize/index.html>



The 9th JSPS *Ikushi* Prize Ceremony (8 March 2019, The Japan Academy)

12th (FY2021) JSPS *Ikushi* Prize recipients

Name	Affiliation	Research Title
OHKUBO Yuri	Graduate School of Science, Nagoya University	Signaling pathways regulating systemic nitrogen uptake in plants
KANAMORI Mariko	Graduate School of Medicine, The University of Tokyo	Identifying the social determinants of suicide in rural areas and developing a community empowerment model for suicide prevention
KANEKO Naotsugu	Graduate School of Arts and Sciences, The University of Tokyo	Elucidation of neural activity during action observation and motor imagery of walking for the development of new gait rehabilitation
KAWABATA Kohei	Graduate School of Science, The University of Tokyo	Symmetry and Topology of Open Systems
KOMATSU Mizuka	Graduate School of System Informatics, Kobe University	Parameter Variety: Differential Algebraic Approach to Unidentifiable Models and Its Applications
SATO Yoshiki	Graduate School of Engineering, Tohoku University	Single crystal growth and novel physical properties of intermetallic compounds with characteristic crystal structures
ZHANG Youyuan	Graduate School of Science, The University of Tokyo	Theoretical studies on photo-excitation processes of molecular ions generated in intense laser fields
SUGANUMA Kiichi	Graduate School of Music, Tokyo University of the Arts	A Study of Girolamo dalla Casa's Diminution Technique: Counterpoint, Notation, and its Performance
THAM Yukari Jessica	Graduate School of Humanities and Sociology at the University of Tokyo	Achieving fairness in the volunteer's dilemma
TATEUCHI Kai	Graduate School of Arts and Letters, Tohoku University	The Archaeological Study of Interregional Interaction and Cultural Changes in the Period of Transition from the Ancient Japan to the Medieval Japan
NAGAE Mayuko	Graduate School of Biagricultural Sciences, Nagoya University	Elucidation of brain mechanisms regulating follicular development in mammals
NAGAKAWA Haruki	Graduate School of Engineering, Tokyo University of Science	Efficient hydrogen production using anti photo-corrosive composite photocatalyst under sunlight
NAKANISHI Tomoko	Graduate School of Medicine, Kyoto University	Genetic determinants of respiratory diseases and their clinical implications
NOJIRI Taro	Graduate School of Agricultural and Life Sciences, The University of Tokyo	Uncovering evolutionary origins of echolocation in bats with special reference to organogenesis of ultrasound-related apparatus
FUJII Yasuyuki	Graduate School of Engineering and Science, Shibaura Institute of Technology	Relationship between food sensation and food function: elucidation of the cognitive improvement by astringent
FUJITA Kyohhei	Graduate School of Medicine, The University of Tokyo	Identification and utilization of $\alpha$ -mannosidase 2C1 as a biomarker enzyme for rapid and clinical fluorescence imaging of breast tumors
MORI Shunsuke	Graduate School of Engineering, Tohoku University	Polymorphic transformation in MnTe films and its application for non-volatile memory
YASUDA Masaru	Graduate School of Humanities and Human Sciences, Hokkaido University	Cicero's Political Philosophy and Its Epistemological Foundation

Affiliations current as of 1 May 2021

### (3) International Prize for Biology

#### Purpose

The International Prize for Biology was instituted in April of 1985. It commemorates the sixty-year reign of Emperor Showa and his longtime devotion to biological research and offers tribute to His Majesty the Emperor Emeritus, who has strived over many years to advance the taxonomical study of gobioid fishes while contributing continuously to the development of this Prize. The Prize is awarded to researchers who have attained records of world-class achievements in a selected field of biological research and have made landmark contributions to the advancement of science.

#### Contents

##### (1) Choosing the recipient

The Committee on the International Prize for Biology, comprising as its members leading Japanese scientists, representatives of economic organizations, and heads of academic institutions, carries out this award program. Toward selecting the recipient, a screening committee, comprising about 20 specialists including from overseas, is established under the Program Committee.

The field of Biology in which the Prize will be awarded is selected each year. To solicit candidates, a request for nominations is sent out to research organizations, academic institutions, and science-promotion agencies both in Japan and overseas. Then, the screening committee meets four times to

carefully vet the nominees and select one candidate, whom it recommends to the Program Committee. Around August of each year, the Program Committee meets to decide the Prize recipient.

### (2) Award Ceremony

The award ceremony is held at the Japan Academy in November or December of each year.

Awarded each year is one prize consisting of a certificate of merit, a medal, and a purse of ¥10 million.

### Website

<https://www.jsps.go.jp/english/e-biol/index.html>

### International Prize for Biology

28th	2012	Neurobiology	Joseph Altman (US)
29th	2013	Biology of Evolution	Joseph Felsenstein (US)
30th	2014	Systematic Biology and Taxonomy	Peter Crane (UK)
31st	2015	Cell Biology	OHSUMI Yoshinori (Japan)
32nd	2016	Biology of Biodiversity	Stephen Philip Hubbell (US)
33rd	2017	Marine Biology	Rita Rossi Colwell (US)
34th	2018	Paleontology	Andrew Herbert Knoll (US)
35th	2019	Biology of Insects	Naomi Ellen Pierce (US)
36th	2020	Biology of Environmental Responses	SHINOZAKI Kazuo (Japan)
37th	2021	Biology of Human Evolution	Timothy Douglas White (US)
38th	2022	Biology of Fishes	TSUKAMOTO Katsumi (Japan)

### (4) Hideyo Noguchi Africa Prize

#### Purpose

The spread of infectious diseases presents a common threat to all humanity. Mindful that Africa faces this scourge most acutely, the Government of Japan established the Hideyo Noguchi Africa Prize in July 2006 in memory of Dr. NOGUCHI Hideyo (1876-1928) whose belief in medical advancement and self-sacrificing activities in Africa remain a beacon of inspiration to all.

The Prize recognizes and honors individuals with outstanding achievements in the fields of medical research and medical services who have worked to combat infectious and other diseases in Africa, thus contributing to the health and welfare of the African people and, by extension, all humankind. The Prize is awarded every three years when the Tokyo International Conference on African Development (TICAD) is held, with the recipient receiving a citation, a medal, and a purse of 100 million yen.

### Contents

As to the selection process, a sub-Committee established under the auspices of JSPS selects candidates with achievements in “medical research” for the award and receives nominations from both in Japan and abroad, from among whom it recommends a maximum of three candidates to the Hideyo Noguchi Africa Prize Committee to select one candidate, who is referred to the Prime Minister for final selection.

### Website

<https://www.jsps.go.jp/english/e-noguchiafrica/index.html>

## ② Providing International Training Opportunities

### Purpose

Symposiums, seminars and other meetings are held for the purpose of fostering a wide spectrum of young researchers from across the world, including from Japan, other advanced nations, and countries of Asia and Africa. They give the participants opportunities to engage each other in intensive discussions, spurring network building among themselves.

### Features

Providing opportunities and platforms for young researchers to acquire new perspectives and participate in international research settings

- Give opportunities for promising young researchers to build networks with peers in international settings, while acquiring leadership skills through such experiences

### Programs

#### ① HOPE Meetings - Five Days with Nobel Laureates

HOPE Meetings are held to foster the next generation of researchers upon whose shoulders the future of S&T advances in the Asia-Pacific and Africa will rest, while working to build collegial networks among the young participants. They provide an opportunity for excellent graduate students and young researchers specially chosen from within the regions to interact directly with Nobel laureates and other of the world's most leading scientists.



Flyer for the 14th HOPE Meeting

The 13th HOPE Meeting was held in March 2022. Chaired by Dr. KAJITA Takaaki (2015 Nobel laureate in Physics), it brought more than 90 young researchers from 21 countries/regions together with nine Nobel laureates in fields of physics, chemistry, and physiology/medicine. It broke new ground in being the first HOPE Meeting to be held online.

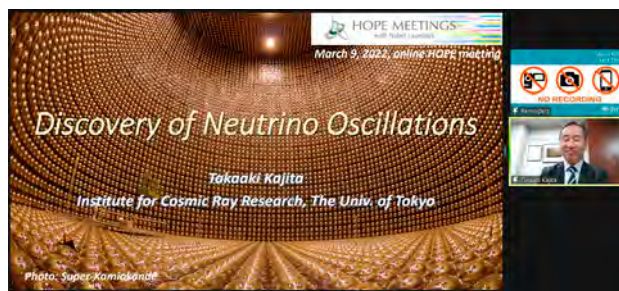
The 14th HOPE Meeting is scheduled for 27 February through 3 March, 2023. It is planned to have an in-person, face-to-face format.

Website

<https://www.jsps.go.jp/english/e-hope/index.html>



Group Discussion Session with Prof. William E. MOERNER (Center: Nobel laureate in Chemistry 2014), 13th HOPE Meeting



Lecture by Prof. KAJITA Takaaki (Nobel Laureate in Physics 2015), 13th HOPE Meeting



Group Discussion Session with Prof. Ada YONATH (Nobel laureate in Chemistry 2009), 11th HOPE Meeting



The 11th HOPE Meeting (Okinawa, 4-8 March 2019)

### ② Young Researcher Support for Attending Lindau Nobel Laureate Meetings

Every year, the Council for the Lindau Nobel Laureate Meetings invites about 30 Nobel laureates to Lindau in the south of Germany to give lectures to and hold discussions with young researchers assembled from

around the world. JSPS nominates candidates from Japan to the Council and covers their travel-related expenses to attend these Lindau Meetings.

Website

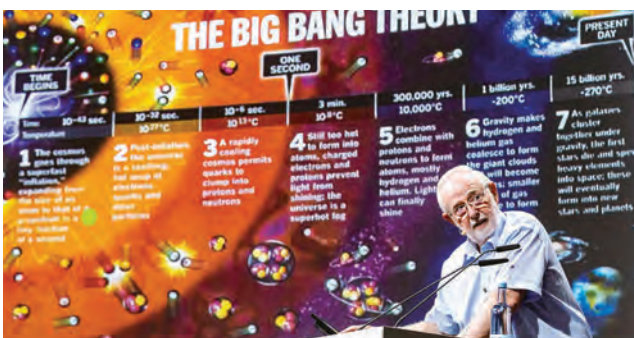
<https://www.jsps.go.jp/english/e-lindau/index.html>



The 69th Lindau Nobel Laureate Meeting (Christian Flemming/Lindau Nobel Laureate Meetings)



The 68th Lindau Nobel Laureate Meeting (Julia Nimke/Lindau Nobel Laureate Meetings)



The 69th Lindau Nobel Laureate Meeting (Christian Flemming/Lindau Nobel Laureate Meetings)



The 67th Lindau Nobel Laureate Meeting (Christian Flemming/Lindau Nobel Laureate Meetings)



### ③ Nobel Prize Dialogue

JSPS co-organizes Nobel Prize Dialogue Tokyo in cooperation with Nobel Prize Outreach AB, the public relations arm of the Nobel Foundation. Held as a free and open forum, the Dialogue engages a host of Nobel laureates and distinguished researchers and experts from Japan and abroad in spirited discussions with members of the public. Nobel Prize Dialogue Tokyo follows Nobel Week Dialogue held in Sweden each year the day before the Nobel Prize Award Ceremony. The Dialogue is held for the purpose of raising public interest in and deepening people's understanding of science while contributing to the advancement of science. The fifth Nobel Prize Dialogue Tokyo was held in October 2022. The first, held in March 2015, marked the first time for the Dialogue to be venues outside of Sweden.

#### Website

[https://www.jsps.go.jp/english/e-nobel\\_prize\\_dialogue/index.html](https://www.jsps.go.jp/english/e-nobel_prize_dialogue/index.html)

#### Videos from Nobel Prize Dialogue

<https://www.youtube.com/nobelprize>



Lecture by Prof. AMANO Hiroshi (2014 Nobel laureate in Physics) (Nobel Prize Dialogue Tokyo 2022)



Panel Discussion (Nobel Prize Dialogue Tokyo 2022)



Panel Discussion (Nobel Prize Dialogue Tokyo 2022)

Event	Date	Venue	Theme	The number of panelists
Nobel Prize Dialogue Tokyo 2015	1 March 2015	Tokyo International Forum	The Genetic Revolution and Its Future Impact	25 including 7 Nobel Laureates
Nobel Prize Dialogue Tokyo 2017	26 February 2017	Tokyo International Forum	The Future of Intelligence	36 including 5 Nobel Laureates
Nobel Prize Dialogue Tokyo 2018	11 March 2018	PACIFICO Yokohama Conference Center	The Future of Food	30 including 5 Nobel Laureates
Nobel Prize Dialogue Tokyo 2019	17 March 2019	PACIFICO Yokohama Conference Center	The Age to Come	19 including 5 Nobel Laureates
Nobel Prize Dialogue Tokyo 2022	23 October 2022	PACIFICO Yokohama Conference Center	Water Matters	23 including 7 Nobel Laureates

### ④Frontiers of Science (FoS) Symposia

In these symposia, talented young researchers from Japan and the counterpart country or countries lodge together so as to concentrate their time and effort on advancing cross-disciplinary discussions on leading-edge scientific topics across a spectrum of research domains. Cosponsored by partner organizations, these symposia are carried out via collaborative frameworks.

While working to broaden the scientific perspectives of the participating young researchers, FoS symposia also attempt to spur free thinking and new ideas unencumbered by precepts of existing academic disciplines, thus contributing to pioneering new interdisciplinary domains and building networks among future generations of leaders.



Website

<https://www.jsps.go.jp/english/e-fos/index.html>

### List of symposia and partner organizations (Up to FY 2022)

Symposium	Partner Organization
Japanese-American Frontiers of Science (JAFoS) Symposium	National Academy of Sciences (NAS)
Japanese-German Frontiers of Science (JGFoS) Symposium	Alexander von Humboldt Foundation (AvH)
Japanese-American-German Frontiers of Science (JAGFoS) Symposium	National Academy of Sciences (NAS) Alexander von Humboldt Foundation (AvH)
Japanese-French Frontiers of Science (JFFoS) Symposium *	French National Centre for Scientific Research (CNRS)
UK-Japan Frontiers of Science (UK-Japan FoS) Symposium	The Royal Society
Japanese-Canadian Frontiers of Science (JCFoS) Symposium	Royal Society of Canada (RSC) Canadian Institute For Advanced Research (CIFAR)

\* Up to 2015, Frontiers of Science (FoS) symposia had been carried out in partnership with the French National Centre for Scientific Research (CNRS) along with French Ministries of Foreign Affairs and International Development (MAEDI), and of National Education, Higher Education and Research (MENESR). (The organization names were current as of 2015.)



Speakers responding to questions from participants, Japanese-French Frontiers of Science (JFFoS) Symposium (June 2022, Kyoto)



Session coordination meeting between planning group members and speakers, Japanese-French Frontiers of Science (JFFoS) Symposium (June 2022, Kyoto)



Poster session, Japanese-French Frontiers of Science (JFFoS) Symposium (June 2022, Kyoto)



Cultural Tour, Japanese-French Frontiers of Science (JFFoS) Symposium (June 2022, Kyoto)

## 4 Building Researcher Career Paths

### Leading Initiative for Excellent Young Researchers (LEADER)

#### Purpose

The LEADER program, launched by MEXT in FY 2016, works to create stable environments in which excellent young researchers who challenge new scientific domains can advance their research independently. It opens new career paths up to young researchers who carry out their activities across a span of academic, industrial and governmental research institutions. JSPS carries out the program's application calls, screening functions and grant disbursement in accordance with MEXT guidelines.

#### Features

Under this program, research institutions offer posts to employ excellent young researchers, and young researchers apply for the program. Next, applicants (young researchers) negotiate the terms of their employment with the research institution. Furthermore, "excellent young researcher candidates" are selected from among the applicants. Upon obtaining a stable and independent research environment within the institution, they are designated as "excellent young researchers" and are

provided funding for a certain period. The posts given to these young researchers are either tenure track or non-time-limited appointments, administered through a fair and transparent personnel system, which must, in principle, include an annual salary system.

#### Framework

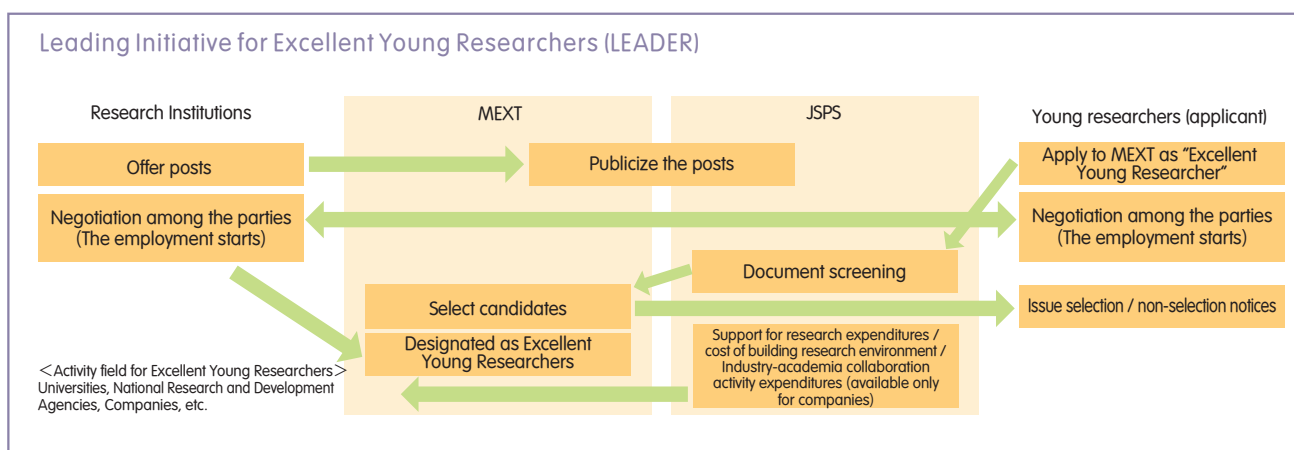
##### (1) Requirements for research institutions

Institutions that provide posts for excellent young researchers under this program must be either universities, colleges of technology, inter-university research institutes, national research and development agencies, public research and development institutes, or companies incorporated in Japan. The posts they provide can be in any field of the humanities, social sciences, or natural sciences.

##### (2) Requirements for applicants

① Have obtained a doctoral degree or completed a doctoral course, ② be age 39 or younger in the year following the application call (or be age 42 or younger for applicants in medical fields that include clinical training),\* ③ have accumulated a record of research achievements over the past five years, and ④ not have been selected as an excellent young researcher by MEXT in the past.

\* Adjustment of the age requirement may be considered in the case of researchers who have interrupted their research due to childbirth or childcare.



**(3) Research Expenditures and Costs of building****Research Environment**

## ① Research expenditures

Years 1 and 2 after selection: Up to ¥12 million for 2 years per researcher with an annual upper limit of ¥8 million. As for humanities and social sciences: Up to ¥8 million for 2 years per researcher with an annual upper limit of ¥5 million.

## ② Costs of building a research environment

Year 1 to 5 after selection: Up to ¥2 million/year per researcher

**(4) Industry-academia collaboration activity expenditures**

\* Available only in the case of companies. Either (3) or (4)

Year 1 to 5 after selection: An amount up to half the cost of the industry-academia collaboration activity shouldered by a company based on a contract (etc.) for the joint research, with an upper limit of ¥10 million/year per researcher.

**Budget**

FY 2022: ¥0.63 billion

**Website**

<https://www.jsps.go.jp/english/e-le/index.html>

# Enhancing the Education and Research Functions of Japan's Universities by Leveraging Their Diverse Strengths

## 1 World Premier International Research Center Initiative (WPI)

### Purpose

Based on provisions in the government's 3rd S&T Basic Plan, issued in March 2006, and the Comprehensive Strategy for Fostering Innovation issued by the Council for Science and Technology Policy in June of that year, MEXT inaugurated the WPI Program in the 2007 fiscal year. The program seeks to build top world-level research centers that have at their core a group of superb-caliber researchers. It provides concentrated funding to research institutes in Japan that work to achieve a globally high level of science while making system reforms in their operations. These centers should be highly visible within an orbit of international brain circulation and be able to boast an outstanding research environment and very high standard of research of a kind that prompts frontline researchers from around the world to want to advance their research at them.

In FY 2017, MEXT established a WPI Academy. The Academy is expected to enhance and amplify the brand of the overall WPI Program. By accelerating the dissemination and application of the program's achievements while networking the activities of the WPI centers, the Academy is expected to play a leading role in internationalizing and reforming Japan's research environment. The five WPI centers selected in FY 2007, the one WPI center selected in 2010 and the three WPI centers selected in 2012 have been certified as Academy members and commenced conducting Academy activities.

Subsidized by MEXT, JSPS carries out WPI grant selection, performs evaluations, and oversees project

progress using procedures prescribed by the Ministry. Concurrently, JSPS manages the operation of the WPI Academy and supports the activities of the WPI centers with an aim to optimizing the output of the WPI Program.

### Features

- (1) While working to further elevate the program's four existing missions, the new WPI missions add "Values for the Future" within an enhanced architecture for establishing world top-level research centers in Japanese universities and research institutions.

#### 【New WPI Missions】

- World-Leading Scientific Excellence and Recognition
  - The Highest Level of Research Impact
  - Expanding Knowledge Frontiers through Interdisciplinarity and Diversity
- Global Research Environment and System Reform
  - Harnessing Talent and Potential through Global Brain Circulation
  - Interdisciplinary and Inter-organizational Capacity Building
  - Effective, Proactive and Agile Management
- Values for the Future
  - Societal Value of Basic Research
  - Human Resource Building; Higher Education and Career Development
  - Self-sufficient and Sustainable Center Development



- (2) Disseminating the experiences and know-how accumulated at WPI centers



10th WPI Science Symposium (WPI-NanoLSI)



At WPI centers, diverse researchers work in a world-class research environment. (WPI-MANA)

## Contents

- Eligible institutions: Universities, inter-university research institutes, national research and development agencies, and public interest corporations
- Selection results: 14 institutions have to date been selected as WPI center: Five in FY 2007 (one was granted a 5-year extension), one in FY 2010, three in FY 2012, two in FY 2017, two in FY 2018, and one in FY 2021.
- Project duration: Ten years, with a possible 5-year extension for centers selected by FY 2012; Interim project evaluations are performed at the fifth year.
- Amount of grants  
Up to about ¥1.4 billion per year for each project selected in FY 2007 and 2010

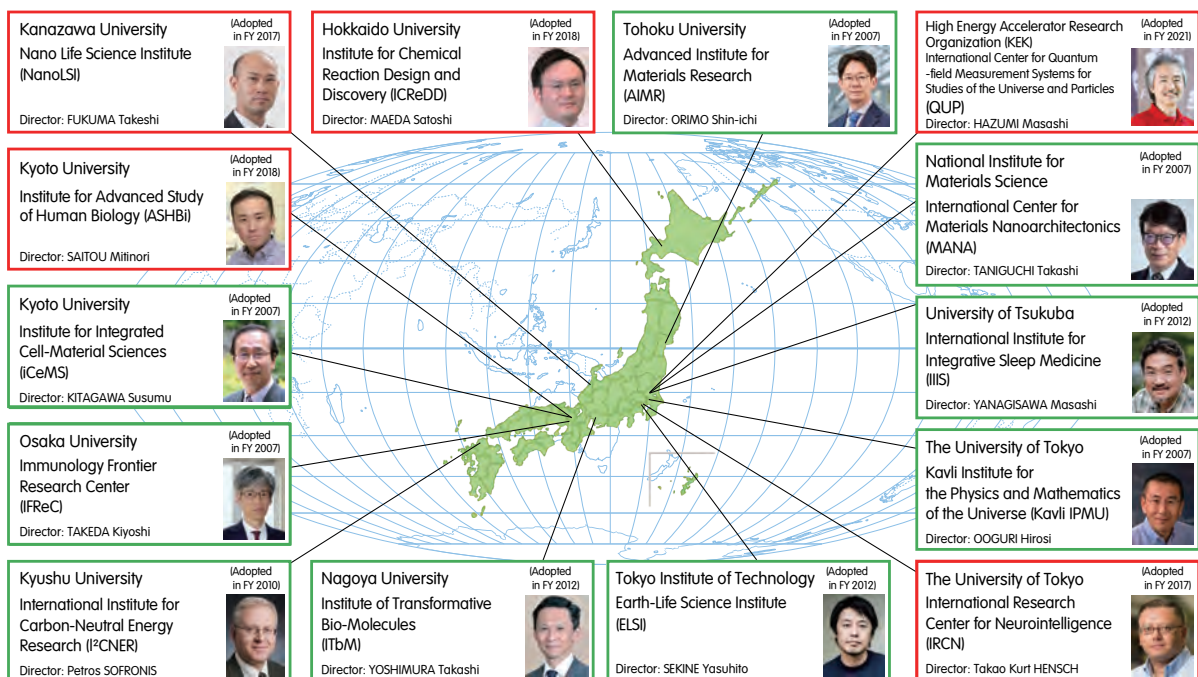
Up to ¥700 million per year for each project selected in FY 2012, 2017 and 2018

- Projects selected in FY 2021 receive an initial grant of ¥350 million and total funding of up to ¥7 billion over 10 years.
- Follow-up  
Each year, the WPI centers receive a site visit and a hearing to determine the state of progress being made in their projects. When deemed needed, improvements in their operations are requested.

## Budget

FY 2022: ¥6.10 billion

## WPI centers



## Website

- JSPS WPI Website  
<https://www.jps.go.jp/english/e-toplevel/index.html>
- WPI Forum (The website shares experiences and know-how accumulated at WPI centers and provides information for WPI related events)  
<https://wpi-forum.jps.go.jp/en/>



Website "WPI Forum"

## 2 Supporting University Education Reform

### 1) WISE Program (Doctoral Program for World-leading Innovative & Smart Education)

#### Purpose

This program works to advance the building of excellent education/research hubs that have at their core the strengths of the participating university—each being capable of fostering outstanding researchers and promoting exchange among them while continuously generating new joint research initiatives. It leverages the results of graduate school reforms already achieved by the universities and creates linkages among them and with other universities in and outside Japan, research organizations, and private companies. Upon this foundation, the universities establish 5-year, integrated master’s/doctoral programs that merge the highest global level of education and research prowess in fostering tiptop professionals capable of propelling progress in society’s various sectors.

The WISE Program Committee, established within JSPS, conducts application screening and project evaluations.

#### Features

Degree programs are created and developed in national, public and private universities with established graduate courses. They assure high quality throughout their integrated master’s/doctoral programs that foster high-level “knowledge professionals,” who will take a lead in forging and applying new knowledge, creating values that drive the next generation, and imbuing society with innovative tools needed to tackle and solve critical issues.

A 4-year system is provided for integrated master’s/doctoral programs and for doctoral programs in medicine, dentistry and pharmacology

(6-year system for basic research departments), and veterinary science.

#### Programs

- Areas/domains targeted for open recruitment  
As venues for fostering high-level knowledge professionals, the following four areas/domains have been established.

- ① Research fields in which Japan excels internationally
- ② Integrated science-humanities domains, interdisciplinary domains and new domains that can create diverse values and systems within society
- ③ Domains that contribute to the creation of new industries that spur economic development and form the core of future industrial structures
- ④ Domains expected to contribute to Japan from the perspective of its role in maintaining scientific diversity within the world

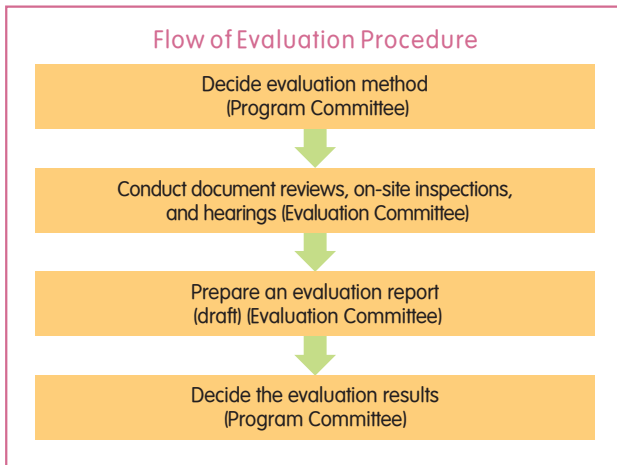
- Number of Selections

FY	Applications		Selections	
	University	Number	University	Number
2018	38	54	13	15
2019	29	44	9	11
2020	27	42	4	4

※ Joint application is counted as one university

- Period of support: 7 years
- Follow-up: In addition to follow-up by the WISE Program Committee, program officers visit the participating universities to ascertain the state of their progress, hold consultations, and offer advice.
- Evaluations  
Evaluations are conducted by the WISE Program Committee at the 4th and 7th-year junctures of each university’s program.

### Flow of Evaluation Procedure



### Budget

FY 2022: ¥5.02 billion

### Website

<https://www.jsps.go.jp/j-takuetsu-pro/index.html>

## 2) Human Resource Development Project for Supporting Knowledge-Based Society

### Purpose

This program is aimed at fostering talented people who possess both a high level of specialization and the kind of broad education that will enable them to respond flexibly to changes and new developments in future society and science. In the run-up to Society 5.0 in Japan, the program establishes within universities a system that spawns an enhanced academic environment, one that permeates and crosscuts the entire institution. This includes the establishment of institution-wide Management of Teaching and Learning, strengthening of universities' operational management systems, and bolstering of their interaction with society. JSPS has established a committee within this program to carry out its screening and evaluation functions.

### Features

To carry out the program's mission, three program menus have been established.

**(Menu recruited in FY 2020)**

#### Menu One

*Educational program that crosscuts the humanities and social sciences*

The scope of learning in Japan's national, public and private universities will need to be broadened so as to foster talent people who possess the ability to grasp the holistic picture of events from a universal perspective when dealing with complex, highly sophisticated societal issues and be able to approach such issues from multiple sets of specialized knowledge that transcend fields and disciplines of the humanities and sciences. Towards that end, this program seeks to establish a universal model for creating undergraduate curricula effective in giving students a working knowledge of multiple disciplines (systems of academic knowledge) and an in-depth understanding of their undergirding principles and conceptual frameworks. Armed with these acquired knowledge assets and skills, the students will go on to tackle real and challenging societal issues.

#### Menu Two

*Education program that pulls up, not hammers down, nails (gifted students)*

This program seeks to establish curricula that provide exceptionally talented students in certain fields an opportunity to receive a higher level of education so as to accelerate the development of their abilities in ways that will allow them to be a force for driving ahead Japan within a worldwide knowledge-intensive society.

**(Menu recruited in FY 2021)**

#### Menu Three

*Intensive education program*

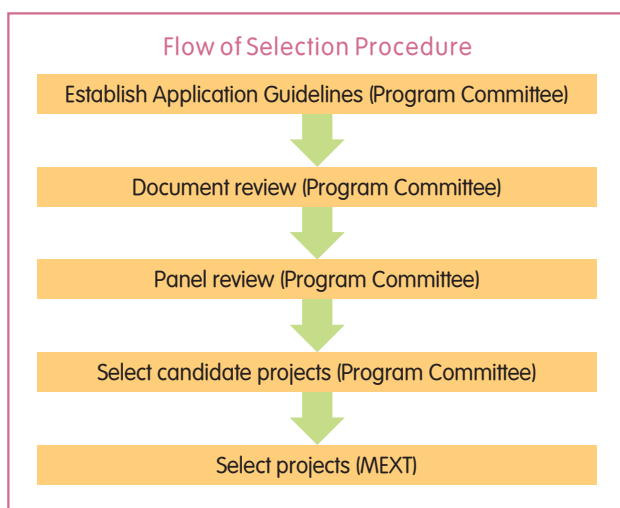
With an aim to realizing the kind of education in which students learn proactively, this program enhances the ability of undergraduates to selectively



choose and fuse the courses they take while also allowing them to more narrowly focus their curriculum. Introducing a quarterly system and holding classes on multiple days of the week, the program seeks to implement educational system reforms that will advance high quality and intensity learning.

## Contents

- Selection procedure



- Number of Selections

Menu One: 5

Menu Two: 1

Menu Three: 3

- Funding period

Menus One and Two: Up to 5 years

Menu Three: Up to 4 years

- Follow-up

(Menus One and Two)

In addition to follow-up by the Program Committee, program officers will via cooperation with the Committee regularly monitor the progress of each selected project and provide consultation and advice to their operators.

(Menu Three)

Follow-up activities are conducted by the Program Committee.

- Evaluation

(Menus One and Two)

A mid-term evaluation is carried out at the project's 3-year mark and a post-project evaluation is conducted after the funding period ends.

(Menu Three)

A post-project evaluation is conducted after the funding period ends.

## Budget

FY 2022: ¥0.42 billion

## Website

<https://www.jsps.go.jp/j-chishiki/index.html>

Human Resource Development Project for Supporting Knowledge-Based Society Site listing selected universities (operated by Kanazawa University)



<https://chishiki-syuyaku.jp/>

### 3) Superminent Program for Activating Regional Collaboration~SPARC~

#### Purpose

The Superminent Program for Activating Regional Collaboration (SPARC) works to place the roles of universities and colleges at the core of Japan's regional communities. Through collaboration between regional society and the universities, existing educational programs are revamped in ways that convert them into instruments for nurturing the kind of talented people actually demanded by the local communities. The trailblazing models created via this program will be propagated throughout Japan, spawning far-reaching innovations in university education. A SPARC Program Committee is established within JSPS which conducts application screening and project evaluations.

#### Features

In pursuit of the above Purpose, two types of programs are carried out.

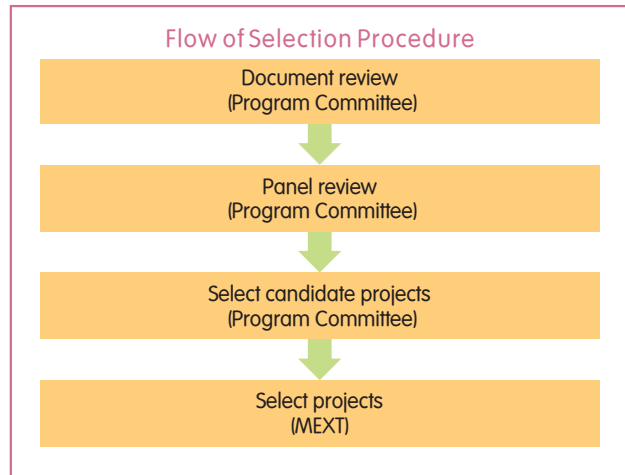
Type (1): Aimed at reorganizing university departments

Type (2): Aimed at developing dynamic collaborations

As a program for propelling educational innovation in Japanese universities, SPARC provides a platform for each region to implement, based on their own unique concepts, projects for activating regional collaborations and creating inter-university linkages. Accordingly, proposals are sought that leverage the free ideas of regional communities while reflecting the program's guidelines and objectives.

#### Contents

- Selection procedure



- Number of projects selected  
Type (1): About 5  
Type (2): About 4
- Funding period  
Maximum of 6 years for both Types (1) and (2)
- Evaluations  
Interim evaluation conducted in projects' fourth year (FY 2025) and post-project evaluation in FY 2028

#### Budget

FY 2022: ¥1.45 billion

#### Website

<https://www.jsps.go.jp/j-sparc/index.html>

### 3 Supporting the Globalization of Japanese Universities

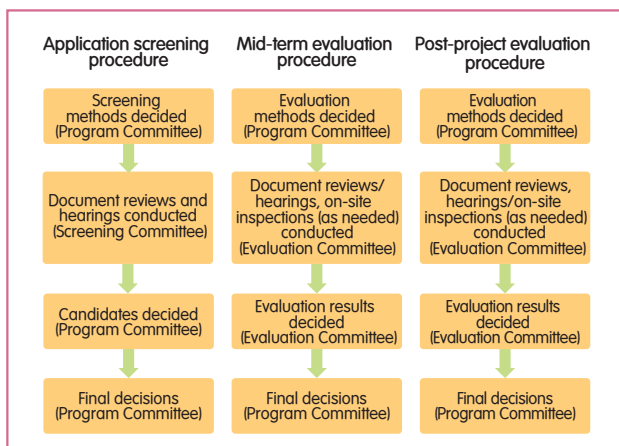
#### 1) Inter-University Exchange Project

##### Purpose

While working to build higher-education networks with countries and regions of importance to Japan, this program gives focused funding to creating internationally recognized university education systems, fostering excellent students who will go on to play active roles in the global arena, and implementing systems that advance quality-assured collaborations and student exchanges all with the objective of strengthening the global development capacity of Japanese universities. A program committee established within JSPS screens applications and evaluates projects.

##### Contents

- Funding period: Up to 5 years
- Screening: Application screening is carried out every fiscal year.
- Evaluation  
Follow-up reviews of projects are carried out every fiscal year, except for the third year in which a mid-term evaluation is conducted. A post-project evaluation is performed after the funding period ends.



##### ● Number of Selections

Fiscal Year	Type	Selections <Number of applications>	
2011 (Support ended)	Type A: CAMPUS Asia	13 <103>	
	I: Projects with universities in China and Korea	10 <51>	
	II: Projects with other universities in China, Korea, and universities in ASEAN member countries	3 <52>	
	Type B:	12 <80>	
	I: Projects with universities in the U.S. II: Projects with universities in Europe, Australia, and other countries	7 <49> 5 <31>	
2012 (Support ended)	Category I: Projects with universities in ASEAN member countries	9 <54>	
	Category II: SEND (Student Exchange-Nippon Discovery) program	5 <17>	
2013 (Support ended)	AIMS (ASEAN International Mobility for Students) program	7 <25>	
2014 (Support ended)	Projects with universities in Russia	5 <17>	
	Projects with universities in India	4 <14>	
2015 (Support ended)	Projects with universities in Central and South America	8 <25>	
	Projects with universities in Turkey	3 <9>	
2016 (Support ended)	Type A-(1): Advanced projects based on the results from CAMPUS Asia pilot program	8 <8>	
	Type A-(2): New CAMPUS Asia projects	9 <22>	
	Type B: Projects with universities in ASEAN member countries	8 <52>	
2017 (Support ended)	Projects with universities in Russia and India	Type A: Projects that promote international exchange With Russia	7 <20>
		With India	2 <14>
		Type B: Projects that establish an information platform for Japanese universities With Russia	1 <2>
		With India	1 <2>
2018	Projects with universities in the U.S.	Type A: Projects that promote international exchange	9 <20>
		Type B: Project that promotes international exchange and that establish an information platform for Japanese universities	1 <1>
2019	Projects with the EU	3 <10>	
2020	Projects with the African countries	Type A: Projects that promote international exchange Start-up type	2 <18>
		Acceleration / Progress type	5 <13>
		Type B: Projects that establish an information platform for Japanese universities	1 <1>
2021	Support for promoting the establishment of Asian Higher Education Community	Continuing consortia from Mode 2 (1)-A CAMPUS Asia Plus	12
		New consortia (1)-B CAMPUS Asia (2)-A CAMPUS Asia Plus (2)-B CAMPUS Asia	8
2022	Support for Creation of Inter-University Exchanges in the Indo-Pacific Region	14 <30>	

##### Budget

FY 2022: ¥1.05 billion

##### Website

<https://www.jsp.go.jp/english/e-tenkairyoku/index.html>

### 2) Top Global University Project

#### Purpose

This program provides focused support to universities that rigorously work to internationalize their organizations by advancing system reforms and establishing collaborations with top-flight overseas universities. In doing so, they strengthen the international compatibility and competitiveness of higher education in Japan, while creating environments and platforms upon which students with excellent abilities and skills are fostered. A program committee established within JSPS screens applications and evaluates projects.

#### Features and Content

- Number of Selections in FY 2014

<> Number of applications

Category	Number	Total
Type A: Top Type -For world-class universities with potential to rank in the top 100 list	13 <16>	37 <109>
Type B: Global Traction Type -For universities leading Japanese society toward globalization	24 <93>	

- Funding period: Up to 10 years
- Evaluation

Follow-up reviews of projects are carried out every fiscal year, except for their fourth and seventh years when mid-term evaluations are conducted. A post-project evaluation is performed after the funding period ends.

#### Budget

FY 2022: ¥2.99 billion

#### Website

<https://www.jsps.go.jp/english/e-tgu/index.html>

## Purpose

Form various networks to support international research and cultivate an expansive environment in which Japanese researchers and research institutions can effectively carry out international research activities.

## Features

### (1) Collaboration with counterpart science promotion organizations

- Engage in discussions on solutions to global issues and on issues of common interest to science-promotion agencies in many countries. Work to create a global environment for advancing diverse genres of research, while forming agreement-based partnerships between science-promotion agencies in various countries.

### (2) Support the building diverse networks among researchers in and outside Japan

- Advance the establishment of a researcher network through various means including support for activities carried out by researchers in JSPS alumni communities and creating a database of researchers in and outside Japan.
- Provide an Internet-accessed database to facilitate cooperation among researchers in and outside Japan.

### (3) Support international scientific exchange through JSPS's overseas offices

- JSPS's ten overseas offices in nine countries support efforts by Japanese researchers and universities to form international networks, while collecting and disseminating information on scientific trends.

## 1) Globalizing and Strategically Developing Research Programs

The Headquarters for International Affairs works proactively to advance and strengthen the internationalization of JSPS programs while gathering and disseminating information via these programs on international research trends and on the activities of overseas research organizations. It disseminates information on JSPS's programs and initiatives in a manner that is not only easy for researchers but also for the public to understand.

## 2) Partnering with Science-Promotion Organizations of Other Countries

### ① Global Research Council (GRC)

The Global Research Council (GRC) was established by National Science Foundation (NSF) in May 2012 as a forum that brings together the heads of research-funding agencies from around the world. It works to strengthen linkage among the agencies and to elevate the quality of science, while as a consortium taking on issues that cannot be solved by any one country. Each year, the GRC holds an annual meeting and five preparatory meetings in designated regions of the world. From the time of the GRC's establishment, JSPS has been a member of its Governing Board. The 11th GRC annual meeting is scheduled to be held in The Hague, Netherlands in May 2023, cohosted by Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) and The São Paulo Research Foundation (FAPESP).

Website

<https://www.jsps.go.jp/english/e-grc/index.html>

<https://www.globalresearchcouncil.org/>

#### List of past GRC annual meetings

Times held	Schedule	Achievements
1st	13-15 May 2012 Washington, D.C., USA	· Statement of Principles for Scientific Merit Review
2nd	27-29 May 2013 Berlin, Germany	· Statement of Principles for Research Integrity · Action Plan towards Open Access to Publications
3rd	26-28 May 2014 Beijing, China	· Statement of Principles and Actions for Shaping the Future
4th	26-28 May 2015 Tokyo, Japan	· Statement of Principles for Funding Scientific Breakthroughs · Statement of Approaches: Building Research and Education Capacity
5th	25-27 May 2016 New Delhi, India	· Statement of Principles on Interdisciplinarity · Statement of Principles and Actions Promoting the Equality and Status of Women in Research
6th	29-31 May 2017 Ottawa, Canada	· Statement of Principles: The Dynamic Interplay Between Fundamental Research and Innovation · Statement of Principles: Capacity Building and Connectivity Among Granting Agencies Worldwide
7th	14-16 May 2018 Moscow, Russia	· Peer/Merit Review/ Statement of Principles
8th	1-3 May 2019 São Paulo, Brazil	· Statement of Principles: Addressing Expectations of Societal and Economic Impact
9th	24-28 May 2021 Durban, South Africa (held online)	· Statement of principles on mission-oriented research · Statement of principles on public engagement
10th	30 May-3 June 2022 Panama City, Panama (held hybrid)	· Statement of Principles and Practices for Research Ethics, Integrity, and Culture in the Context of Rapid-Results Research · Statement of Principles on the Development of the Science and Technology Workforce Development

#### ② Asian Heads of Research Councils (ASIAHORCs)※

To advance science aimed at solving problems shared commonly among Asian countries while fostering the region's young researchers, this annual meeting is held by the heads of science-promotion agencies from ten Asian countries: Japan, China, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. They engage in a broad exchange of views and information including science policy, research funding and international collaboration in their respective countries.

Website

<https://www.jsps.go.jp/english/asiahorcs/index.html>

#### ③ Heads of Research Councils in Asia (A-HORCs)※

To promote high-level research activities in Asia with Japan, China and Korea at their core, the heads of leading science-promotion agencies in the three countries meet annually to discuss face-to-face S&T policy trends and the state of international collaboration in their respective countries. Initially proposed by JSPS, these meetings have been held each year from 2003. Discussions in them have yielded various tangible outcomes including the establishment of the "A3 Foresight Program" and "Northeastern Asian Symposiums," jointly implemented by JSPS and its partner agencies in China and Korea.

※HORCs: Heads of Research Council

### 3) Building International Communities for Researcher Collaboration

#### ① Forming a Researcher Community

To form and maintain a network between itself and former JSPS fellows and among the fellows themselves, an alumni community, supported by JSPS with follow-up activities, is established. At present, alumni associations of former JSPS fellows have been established in 20 countries. These associations hold seminars, symposiums and other events to promote exchange between their members and Japanese colleagues and to stimulate interest in young researchers for doing research in Japan through JSPS's fellowships and other programs.

Website

[https://www.jsps.go.jp/english/e-plaza/20\\_alumni.html](https://www.jsps.go.jp/english/e-plaza/20_alumni.html)



JSPS Alumni Association in Australia (JSPSAAA) Fourth annual symposium (29-30 March 2022, Sydney)

#### ② BRIDGE Fellowship Program

Directed to the members of JSPS alumni associations, this program provides opportunities for former JSPS fellows to revisit Japan for the purpose of creating, sustaining and/or strengthening collaborative relations with Japanese colleagues. While in Japan, the BRIDGE fellows conduct joint research and seminars, carry out training activities for young researchers, give lectures, and/or build networks with Japanese researchers by participating in conferences.

Website

<https://www.jsps.go.jp/english/e-plaza/bridge/index.html>

#### ③ JSPS Researchers Network (JSPS-Net)



To maintain networks cultivated over long years of research exchange between Japan and counterpart countries while working to strengthen and expand them, JSPS operates JSPS-Net which supports a network among Japanese and overseas researchers and uses social networking services to support the building of a wider researcher community.

Website

<https://www-jsps-net.jsps.go.jp>

**Alumni community**



 GERMANY *1 Established in 1995 	 FRANCE *2 Established in 2003 	 UK&IRELAND Established in 2004 	 US&CANADA Established in 2004 
 SWEDEN Established in 2005 	 INDIA Established in 2006 	 EGYPT Established in 2008 	 EASTERN AFRICA *3 Established in 2008 
 KOREA Established in 2008 	 BANGLADESH Established in 2009 	 FINLAND Established in 2009 	 THAILAND Established in 2010 
 CHINA Established in 2010 	 PHILIPPINES Established in 2013 	 NEPAL Established in 2015 	 DENMARK Established in 2015 
 INDONESIA Established in 2016 	 AUSTRALIA Established in 2017 	 NORWAY Established in 2019 	 MALAYSIA Established in 2019 

\*1 German speaking scientific community.  
\*2 French speaking scientific community.  
\*3 The Eastern African alumni community includes Burundi, Ethiopia, Kenya, Rwanda, Tanzania, Uganda and Zambia.

#### 4) Building a Vibrant Base for International Exchange — JSPS's Overseas Offices

JSPS operates eleven liaison offices in ten countries as follows:

- JSPS Washington Office
- JSPS San Francisco Office
- JSPS Bonn Office
- JSPS London Office
- JSPS Stockholm Office
- JSPS Strasbourg Office
- JSPS Bangkok Office
- JSPS Beijing Office
- JSPS Cairo Research Station
- JSPS Nairobi Research Station
- JSPS Science Advisor in São Paulo

#### ● Main functions

- (1) Collaborating with overseas academic promotion organizations
- (2) Holding symposia
- (3) Supporting the overseas activities of Japanese universities
- (4) Developing alumni networks among former JSPS program participants
- (5) Sharing academic information in Japan and gather information, such as scientific trends overseas
- (6) Supporting researchers conducting fieldwork

Website

[https://www.jsps.go.jp/english/about\\_us/overseas\\_office.html](https://www.jsps.go.jp/english/about_us/overseas_office.html)



### ● Joint Use of JSPS Overseas Offices

The offices provide an overseas foothold in support of efforts by Japanese universities to expand their international bases and activities by allowing their researchers and staffs to use the office facilities during their stays in the host countries.

Support offered to universities by these offices include the following activities: (1) Holding symposiums in the host country, (2) conducting international collaborations, such as joint research or researcher exchanges, with local universities, (3) doing follow-up activities to maintain or further develop relationships with local universities, and (4) carrying out PR or information-gathering activities.

### ● Overseas Internships for University Administrative Staff

Yet another function of JSPS's overseas offices is to train international exchange specialists among the staffs of Japanese universities by providing them with internships for acquiring experience in carrying out international programs. During their internships, they are required to make a study and compile a report on a selected theme regarding international academic exchange.



The Summer Festival for the 30th Anniversary of the JSPS Washington Office (3 September 2021)



20th anniversary of the Strasbourg Office and the Maison Universitaire France-Japon (14 December 2021)



JSPS Alumni Association of Indonesia (JAALI) Virtual kick-off seminar (27 July 2021, Bangkok Office)

# Creating an Overarching Platform for the Comprehensive Analysis of Science Information

## 1 Building a Centralized System for Information Collection and Management

JSPS carries out a diverse range of programs to advance science including programs to fund research, foster researchers, and promote international scientific exchange. To support the activities of researchers from a cross-sectional and comprehensive perspective that transcends the borders of JSPS's programs, a base is

established within JSPS for conducting integrated analysis and application of information related to them. JSPS is working on centralizing its management with an aim to consolidating and sharing program-related data while ensuring information security and protecting personal information.

## 2 Conducting Comprehensive Science-Information Analysis

### Center for Science Information Analysis

#### Purpose

The Center for Science Information Analysis (CSIA) was established in 2018 as an institutional research department within JSPS pursuant to a reshuffling of the Center for Global Science Information. Utilizing information on JSPS's various programs, the Center works to ascertain and analyze in a comprehensive manner and from a long-term perspective the trends and outcomes of these programs, while conducting surveys and research on ways to improve and elevate them.

#### Features

(1) Under the Center director, senior researchers (part time, among them one deputy director) summarize the studies and analyses conducted on their respective themes and provide advice to JSPS with regard to its various programs. Under the guidance of the senior researchers, the Center's researchers (full time) carry out the surveys and analyses and process their findings on such factors as program trends.

- (2) When appropriate, senior researchers attend meetings of the Research Center for Science Systems, and by holding liaison conferences with personnel from external organizations, they share information and strengthen cooperative ties.
- (3) Based on the results of its surveys and analyses, the Center makes proposals on ways to enhance JSPS programs, while working to widely disseminate information garnered through its surveys.

#### Functions

- (1) Conducting comprehensive and long-term assessment and analysis of JSPS's program trends and results
- (2) Collaboration and information sharing with external organizations through liaison conferences
- (3) Offering proposals for enhancing JSPS programs based on the results of surveys and analyses
- (4) Widely disseminating the results of surveys and analyses

#### Website

<https://www.jsps.go.jp/english/e-csia/index.html>

## 1 Implementing an Electronic Application System

JSPS uses an information system to lighten the burden on researchers, application reviewers, and universities/research institutions when submitting/processing applications for JSPS programs while, at the same time, improving the efficiency of its own processing work. It includes an information security system to protect the highly confidential information contained in JSPS's application and review

processes.

Toward computerizing the application procedure and screening work involved in JSPS's various openly recruited programs and out of consideration for cost performance, JSPS has introduced an electronic application system, which is linked to the Cross-Ministerial Research and Development Management System (e-Rad).

## 2 Boosting Information Dissemination

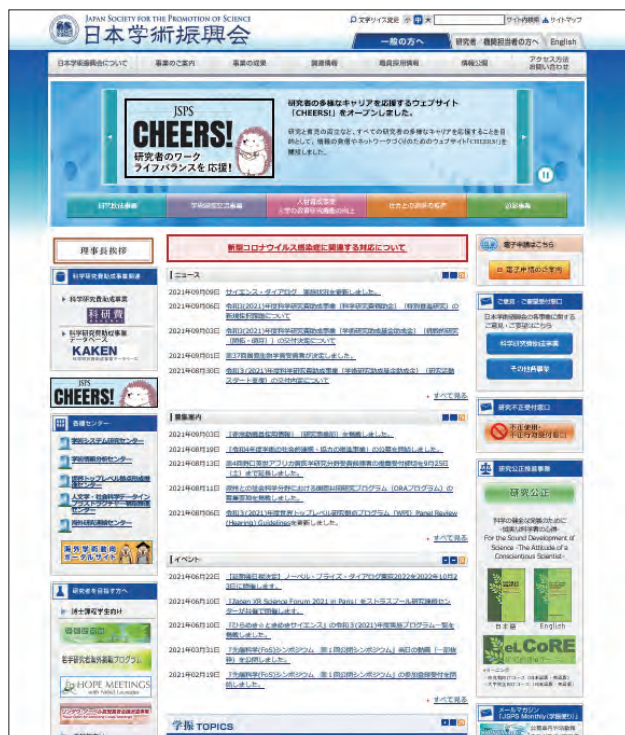
### (1) Enhancement of Information Dissemination

#### ① Website

Targeting a wide range of both Japanese and overseas researchers, the website posts timely notices and updates on JSPS's programs, including prospectuses and application calls. Worded for a general usership, the website also provides information on the results of project selections and reports on their implementations.

Website

<https://www.jsp.go.jp/english/index.html>



#### ② Publication of brochures and leaflets

JSPS publishes brochures to widely introduce its array of programs, about which information is disseminated via its website. Leaflets and posters of JSPS's major programs are also printed and distributed.



#### ③ Email Magazine

"JSPS Monthly" is one of the media used by JSPS to disseminate information over the Internet. Issued free of charge each month, this e-magazine provides an efficient way to check the latest information on JSPS programs including all of its open calls for applications. It can also be used to obtain the latest information posted on the JSPS website. The magazine's current readership is around 25,000 people.

To subscribe to "JSPS Monthly"

<https://www.jsp.go.jp/j-mailmagazine/index.html>

- Published: 1st Monday of each month
- Format: Text data
- Language: Japanese

## ④ Social Media

JSPS uses social network services such as via Facebook in carrying out its HOPE Meetings, Frontiers of Science Symposia and other programs and events so as to centralize and expedite the dissemination of information on them and their recruitments.

To attract wide interest in JSPS's overall program via audiovisual media, an animated video introduction is placed on YouTube under the title "JSPS Supports Science."



YouTube "JSPS Supports Science"  
<https://www.youtube.com/user/jpsvideos>



JSPS official Twitter

## (2) Outreach, promotion, and use of discoveries in society

## ① HIRAMEKI☆TOKIMEKI SCIENCE –Welcome to a University Research Lab– Science That Inspires and Inspirts

## Purpose

This program seeks to promote the study of science in Japan, ultimately advancing future research by instilling intellectual curiosity and a rich sense of creativity in the younger generation. Researchers talk with students in an easy-to-understand manner about their KAKENHI-funded research activities, communicating to them the fun and fascination of scientific pursuit. Through this process, they convey to society and the larger public the cultural value and societal importance of science. To date, sessions have been attended by about 78,000 students at 1,961 institutions over the course of the program.

## Project Description / Features

- Sharing the results of KAKENHI academic research  
 These sessions are held via the KAKENHI program at universities and research institutions throughout Japan. At them, researchers talk to elementary school pupils and middle and high school students in an easy-to-understand manner about their own creative and pioneering research, giving the students a deeper understanding of the meaning of science and its roles in their daily lives.

In FY 2021, 184 of these sessions were held at 101 institutions, with a total attendance of about 2,900 pupils and students who will go on to shoulder the future of Japan.

- Institution visits/experience-based program  
 The students visit labs at the hosting university or research institution, where they conduct experiments, do fieldwork, and participate in other hands-on activities. They are, thus, able to see, hear and touch research directly.

● Eligible participants

Fifth and sixth grade elementary school pupils and middle and high school students can participate in these visits. Teachers are encouraged to observe the sessions.



Let's build islands and waterfalls out of cardboard! - Understanding high-definition 3D data by touching - (Assoc. Prof. Yuichi S. HAYAKAWA, Faculty of Environmental Earth Science, Hokkaido University)

Website

<https://www.jsps.go.jp/hirameki/index.html>



From genes to medicine - let's learn how microorganisms make medicinal drugs! (Asst. Prof. Dana ULANOVA, Education and Research Department of Integrated Sciences, Kochi University)



The brochure of "HIRAMEKI☆TOKIMEKI SCIENCE -Welcome to a University Research Lab- Science That Inspires and Inspirits"

## ② Publishing Noteworthy Contributions to Science and Technology

### Purpose

This program supports the creation of tools for giving open access to outstanding results across the full spectrum of scientific research. The research results of academic societies are placed in a database and separated between those oriented to researchers and those oriented to the general public so as to make them easier to retrieve and understand.

The “Database on Noteworthy Contributions to Science and Technology” can be accessed on the National Institute of Informatics’ website.

### Features

The database is divided into major fields of research, with each research result conveyed in three categories: (1) A specialist-oriented category for researchers and corporate technicians, (2) an introductory category for students from the junior high level and the general public, and (3) an English language category. Included in the data are charts, diagrams, and photographs.

### Contents

An expert-comprised program committee established within JSPS sets program policy and oversees the state of program progress. Regarding the division of labor, academic societies compile the data to be posted, the National Institute of Informatics maintains and operates the database, and JSPS convenes the committee meetings, coordinates program activities, and performs public relations and administrative functions.

Fields	Participating Societies
Mathematics	The Mathematical Society of Japan
Physics	Nishina Memorial Foundation
	The Japan Society of Applied Physics
Chemistry	The Chemical Society of Japan
Mechanical Technologies	The Japan Society of Mechanical Engineers
Electrical Technologies	The Institute of Image Information and Television Engineers
	Information Processing Society of Japan
	The Illuminating Engineering Institute of Japan
	The Institute of Electrical Engineers of Japan
Materials Science	The Institute of Electronics, Information and Communication Engineers
	The Society of Polymer Science, Japan
	The Japan Institute of Metals and Materials
Civil Engineers	The Ceramic Society of Japan
Architecture	Japan Society of Civil Engineers
Life Science	Architectural Institute of Japan
	The Japanese Biochemical Society
Agriculture	Japan Bioindustry Association
Pharmaceutical Science	Association of Japanese Agricultural Scientific Societies
Medical Sciences	The Pharmaceutical Society of Japan
—	The Japanese Cancer Association
	Toray Science Foundation
	Inamori Foundation
	The Japan Prize Foundation

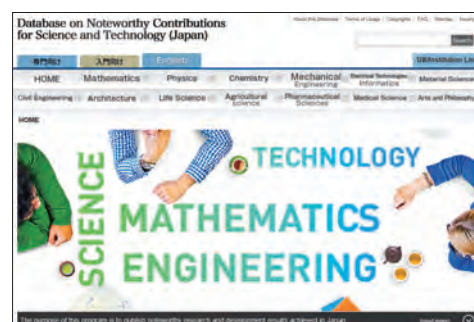
### Website

Publishing Noteworthy Contributions to Science and Technology

<https://www.jsps.go.jp/j-takuetsu/>  
(Available only in Japanese)

Database on Noteworthy Contributions for Science and Technology

<https://dbnst.nii.ac.jp/english>



## 3 Creating Cooperative Linkage between Science and Society

### (1) University-Industry Cooperative Research Collaboration Meeting

#### Purpose

JSPS's mission is the advancement of science. In the past, the academic community has been at the core of advancing scientific research, but is now increasingly more driven by multifarious expectations and demands from the industrial and other sectors as well as society. This has given rise to an urgent need to create a platform upon which frontline researchers from academia and industry can meet and take time to engage in exchanges of views and information and swap reports on their research activities, thereby stimulating each other as they take on future science and technology challenges.

Against this backdrop, JSPS launched the University-Industry Cooperative Research Program, which in 2020 operates in accordance with the following conceptual framework. "To contribute to the elevation of research in Japan, a new platform is created for frontline researchers in academia and industry who, on their own volition, collaborate in areas and ways that bridge the two sectors in pursuit of important but not sufficiently addressed research topics and societal issues. Upon this platform, researchers from the two sectors transcend barriers of organization and domain in fusing seeds germinated from scientific research with the needs of contemporary society. Such university-industry joint research is carried out upon verification of new research\* trajectories."

\* This includes basic, applied and developmental modes of research, pursued irrespective of direction or stage.

#### Contents

##### (1) University-Industry Cooperative Research Committees

JSPS supports bottom-up cooperative programs carried out based on the free ideas of frontline researchers from the academic and industrial sectors. By establishing University-Industry Cooperative Research Committees, a platform is created for them to engage each other in exchanges of views and information on basic, applied and developmental research in their respective areas of specialization, all within a free and informal atmosphere.

##### (2) University-Industry Cooperative Committees

JSPS has established these committees as forums carried out by members of University-Industry Cooperative Committees who agree with JSPS's operational principles and objectives.

Implemented in an autonomous, self-driven manner, these forums work to advance member-initiated bottom-up activities focused on societal issues. The fruits of these free and informal exchanges of ideas and information among forum members contribute widely to advancing scientific research. The members are not only responsible for the forum's activities but must also take responsibility for their results.

#### Website

<https://www.jsp.go.jp/english/e-soc/index.html>

## University-Industry Cooperative Research Committees

Committee Name
19th Committee on Steelmaking
24th Committee on Foundry Technology
36th Committee on Industrial Instrumentation
54th Committee on Ironmaking
69th Committee on Materials Processing and Applications
123rd Committee on Heat Resisting Materials and Alloys
124th Committee on Advanced Ceramics
125th Committee on Conversion between Light and Electricity
129th Committee on Strength and Fracture of Advanced Materials
145th Committee on Processing and Characterization of Crystals
146th Committee on Superconductive Electronics
147th Committee on Amorphous and Nano-Crystalline Materials
153rd Committee on Plasma Materials Science
157th Committee on Structural Response Control and Monitoring
167th Committee on Nano-Probe Technology
181st Committee on Multifunctional Molecular Electronics
182nd Committee on Terahertz Science, Technology and Industrial Development
187th Committee on Metamaterials
193rd Measurement and Characterization Platform
194th Advanced Molecular Transformations by Molecular Catalysts
195th Utilization and biological effects of radiation

## University-Industry Cooperative Committees

Committee Name
R021 Committee on Food and pre-illness marker
R022 Committee on Quantum Structural Biology
R023 Committee on Innovation of Construction Materials for Resilient Infrastructure in the Next-Generation
R024 Committee on Electromagnetic-Wave-Excited Reaction Field
R025 Committee on Development of Advanced Functional Thin Films and Interfaces
R026 Committee on Future Design Committee of Advanced Measurement and Analysis
R031 Committee on Hybrid Quantum Nanotechnologies
R032 Committee on Crystal Growth for Industrial Innovation
R041 Committee on Bio, Molecular, Nano Technologies

## (2) Donations

## Purpose

JSPS receives contributions for the purpose of supporting researchers and advancing scientific research.

## Features

Established within JSPS is a special trust for receiving donations and funding activities. Donations made to JSPS enjoy a tax-exempt status. Contributions are received from corporations, groups and individuals, and are used to carry out various endowed programs. These include the following:

## Contents

## (1) Special Science Promotion Fund

Donations are made by private companies, organizations and individuals in support of JSPS's research funding, researcher support, international scientific cooperation, and other science-promotion programs, especially those for which there is an urgent or special need for funding.

## (2) Fujita Memorial Fund for Medical Research

The family of the late Dr. FUJITA Noboru donated money to establish this Fund, which is used to award grants to young researchers in the field of surgical medicine.

## (3) Proxy Collection of Funds to Support Holding International Scientific Meetings

JSPS lends its tax-exempt status to organizations holding international academic conferences.

## Website

<https://www.jsps.go.jp/j-donation/index.html>



## 4 Promoting Research Integrity

### Purpose

Many research achievements are obtained using Grants-in-Aid and other competitive research funds. Measures, however, are sought to counter misconduct in the execution of such research activities.

Accordingly, MEXT issued “Guidelines for Responding to Misconduct in Research” in August 2014. They obligate all researchers participating in research activities supported by competitive research funds or other funding to take a course in research-ethics. For that purpose, a program is being carried out to enhance and promulgate research-ethics education in Japan. This effort includes developing and distributing standardized learning materials for researchers and holding training sessions to hone the knowledge and capability of persons in charge of conducting research-ethics education at universities and other institutions.



### Contents

#### (1) Developing and Distributing Research-Ethics Educational Materials

To promote the proper conducting of research activities while precluding research misconduct, research-ethics education materials are developed and promulgated. At present, they take two forms.

- ① The book *For the Sound Development of Science—The Attitude of a Conscientious Scientist (Green Book)* has been published by Maruzen in both English and Japanese versions.
- ② Based on the Green Book and learning materials derived from it, one e-Learning Course on Research Ethics (eL CoRE) for researchers and another for graduate students have been developed and are now provided over the Internet as a service to make research-ethics education available to anyone, anywhere, anytime.

#### (2) Enhancing Research-Ethics Education

Symposiums and other meetings are held to add vigor to research-ethics education, and support is provided to enhance the practicability of research-ethics education. For examples:

- ① As symposium was held via cooperation between the Japan Science and Technology Agency (JST) and Japan Agency for Medical Research and Development (AMED).
- ② To more effectively put “eL CoRE” training into practice, an online research-ethics seminar was held that included a simulated workgroup experience.

#### (3) Providing Consulting Services for Preventing Research Misconduct

Consultation is provided to research institutions on the establishment of systems for preventing research misconduct and advice is given them on how to investigate and process reported cases of specific misconduct.

### Budget

FY 2022: ¥0.04 billion

### Website

<https://www.jsps.go.jp/english/e-kousei/index.html>

## List of Programs

Program		Term	Support	Charge section	Page		
II Creating Diverse World-Level Knowledge	Grants-in-Aid for Scientific Research (KAKENHI)		1-7 years (differs by category)	Differs by category	University-Industry Cooperation and Research Program Division, Research Aid Planning Division, Research Aid Division I, II, III	7	
	Bilateral Collaborations (Joint Research Projects and Seminars)		Joint research: 1-3 years Seminars: within 1 week Interuniversity Cooperation): within 1 week (differs by country or agency)	Joint research: ¥1-2.5million a year per project Seminars: ¥1.2-2.5 million per project Interuniversity Cooperation): Up to ¥3 million per project (differs by countries or agencies)	International Research Cooperation Division II	14	
	Researcher Exchange Program (Dispatch)		3 months-2 years (differs by countries or agencies)	Roundtrip international airfare, maintenance allowance (differs by countries or agencies)	Overseas Fellowship Division	15	
	Japanese-German Graduate Externship		Up to 5 years	Up to ¥15 million a year per project	International Research Cooperation Division II	15	
	International Joint Research Programs		A maximum of 3 or 5 years (depending on the program)	Up to ¥10 million a year per project	International Research Cooperation Division II	15	
	Core-to-Core Program	A. Advanced Research Networks	Up to 5 years	Up to ¥18 million a year per project	International Research Cooperation Division I	17	
		B. Asia-Africa Science Platforms	Up to 3 years	Up to ¥8 million a year per project	International Research Cooperation Division I		
	A3 Foresight Program		5 years	Up to ¥50 million / 5 years per project	International Research Cooperation Division I	18	
	Topic-Setting Program to Advance Cutting-Edge Humanities and Social Sciences Research	Area Cultivation	3 years	¥5 or 10 million a year per theme	University-Industry Cooperation and Research Program Division	19	
		Responding to Real Society		¥5 or 10 million a year per theme			
Global Initiatives		¥10 or 20 million a year per theme					
Co-creation of academic knowledge		6 years	¥15 million a year per theme				
Program for Constructing Data Infrastructure for the Humanities and Social Sciences		Up to 5 years	¥30 million a year per hub	University-Industry Cooperation and Research Program Division	22		
III Fostering the Next Generations of Talented Researchers Who Will Challenge the Pioneering of New Knowledge	Research Fellowships for Young Scientists		2-5 years	Fellowship: ¥200,000-446,000 per month Research grant: ¥1.5 to 3 million per year CPD recipients also receive round-trip airfare	Research Fellowship Division	23 26	
	Overseas Research Fellowships		2 years	Fellows receive round-trip airfare, housing/research stipend (approximately ¥4.5 million-¥6.2 million/year depending on destination). RRA recipients also receive round-trip airfare and allowance for each accompanying child (approximately 10% of housing/research stipend).	Human Resource Development Program Division	25	
	Overseas Challenge Program for Young Researchers		3 months-1 year	Up to ¥1.4 million per year	Human Resource Development Program Division	26	
	JSPS International Fellowships for Research in Japan	JSPS Postdoctoral Fellowships for Research in Japan	A. Summer program B. Strategic program C. Short-term D. Standard	A. 2 months in summer B. 3-6 months C. 1-12 months D. 12-24 months	Roundtrip international airfare, maintenance allowance etc. (differs by category)	Overseas Fellowship Division	28
		JSPS Invitational Fellowships for Research in Japan	E. Long-term F. Short-term	E. 2-10 months F. 14-60 days			
	RONPAKU (Dissertation PhD) Program		3 years	Roundtrip international airfare, etc.	Overseas Fellowship Division	30	
	Science Dialogue		Ongoing	Cost of teaching materials, domestic travel	Overseas Fellowship Division	31	
	HOPE Meetings - Five days with Nobel Laureates		About 5 days	Domestic travel, food/ lodging, other participation costs	International Research Cooperation Division I	37	
	Young Researcher Support for Attending Lindau Nobel Laureate Meetings		About 1 week	Roundtrip international airfare, travel expenses, meeting participation costs including food/ lodging	International Research Cooperation Division I	38	
	Nobel Prize Dialogue		1 day	Admission free of charge	International Research Cooperation Division I	39	

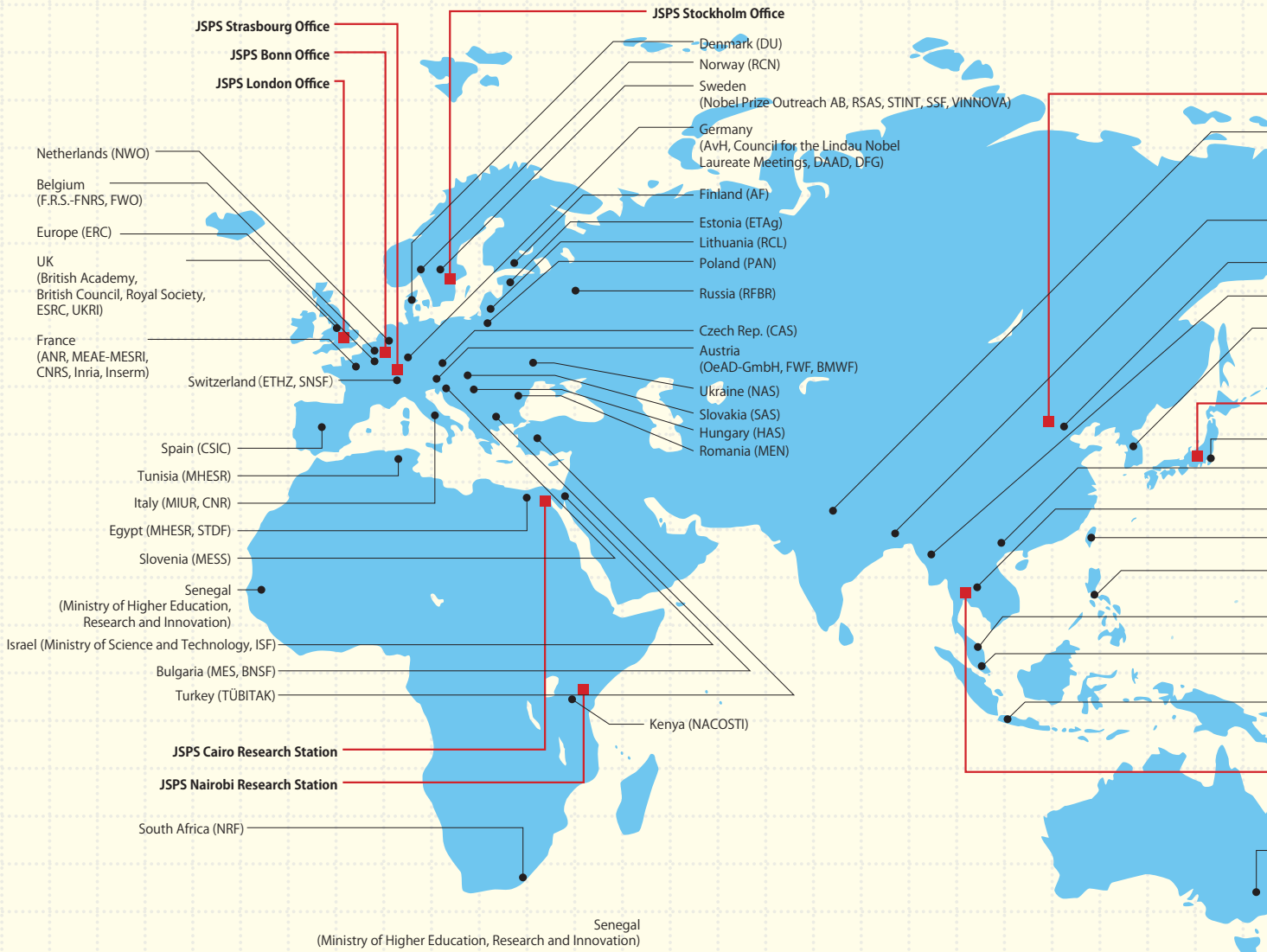
	Program	Term	Support	Charge section	Page
III Fostering the Next Generations of Talented Researchers Who Will Challenge the Pioneering of New Knowledge	Frontiers of Science (FoS) Symposia	4 days	Roundtrip international airfare, foreign/domestic travel, food/lodging	International Research Cooperation Division I	40
	Leading Initiative for Excellent Young Researchers (LEADER)	Up to 5 years	<b>[A]</b> ① Years 1 and 2 after selection: Up to ¥12 million for 2 years per researcher with an annual upper limit of ¥8 million. As for humanities and social sciences: Up to ¥8 million for 2 years per researcher with an annual upper limit of ¥5 million. ② Costs of building research environment: Year 1 to 5 after selection: Up to ¥2 million/year per researcher <b>[B]</b> Industry-academia collaboration activity expenditures: Year 1 to 5 after selection: An amount up to half the cost of the industry-academia collaboration activity shouldered by a company based on a contract (etc.) for the joint research, with an upper limit of ¥10 million/year per researcher. ※ Companies choose [A] or [B]	Human Resource Development Program Division	41
IV Enhancing the Education and Research Functions of Japan's Universities by Leveraging Their Diverse Strengths	World Premier International Research Center Initiative (WPI)	10 years	Up to ¥1.4 billion a year per project selected in FY 2007 and 2010 Up to ¥700 million a year per project selected in FY 2012, 2017, 2018, 2021 and 2022	WPI Program Center	43
	WISE Program	7 years	<b>[Programs selected in FY2018]</b> About ¥160 million per project <b>[Programs selected in FY2019]</b> About ¥160 million per project <b>[Programs selected in FY2020]</b> About ¥210 million per project	University Cooperation Program Division	45
	Human Resource Development Project for Supporting Knowledge-Based Society	<b>[Menu One, Two]</b> Up to 5 years <b>[Menu Three]</b> Up to 4 years	<b>[Menu One]</b> ¥44.45 million a year per project <b>[Menu Two]</b> ¥30.22 million a year per project <b>[Menu Three]</b> ¥50 million a year per project	University Cooperation Program Division	46
	Supereminent Program for Activating Regional Collaboration~SPARC~	<b>[Type One]</b> Up to 6 years <b>[Type Two]</b> Up to 6 years	<b>[Type One]</b> ¥200 million a year per project (in the first year) <b>[Type two]</b> ¥100 million a year per project (in the first year)	University Cooperation Program Division	48
	Inter-University Exchange Project	Up to 5 years	Up to ¥50 million a year per project (in the first year)	University Cooperation Program Division	49
	Top Global University Project	Up to 10 years	Up to ¥200-500 million a year per project	University Cooperation Program Division	50
V Building Robust International Research Networks and Infrastructures	BRIDGE Fellowship Program	14-30 days	A round-trip air ticket, daily maintenance allowance, research support allowance	International Policy Planning Division	53
VII Advancing Cross-Sectional Initiatives	HIRAMEKI ☆ TOKIMEKI SCIENCE –Welcome to a University Research Lab– Science That Inspires and Inspirits	During period from the date of provisional grant decision to March	Up to ¥500,000 per program	University- industry Cooperation and Research Program Division	58
	Publishing Noteworthy Contributions to Science and Technology			University- Industry Cooperation and Research Program Division	60
	Fujita Memorial Fund for Medical Research	9 months	¥1 million per project	University- Industry Cooperation and Research Program Division	62
	Proxy Collection of Funds to Support Holding International Scientific Meetings	Contributions collected under JSPS's status as "special public-interest promotion corporation" Within 2 years Contributions collected as specified tax-exempt donations Within 1 year		General Affairs Division	62
	Promoting Research Integrity			Research Integrity and Auditing Office	63

List of JSPS Overseas Counterpart Institutions (97 institutions)

Region / Country		Counterpart Institutions	Fellowships	Bilateral Programs		Multilateral and Other Program
			Postdoctoral Fellowship	Researcher Exchanges	Research Projects/Seminars	
Asia	Bangladesh	University Grants Commission of Bangladesh (UGC)			✓	
		Bangladesh Academy of Sciences (BAS)				✓
	China	Chinese Academy of Sciences (CAS)			✓	
		Chinese Academy of Social Sciences (CASS)			✓	
		Ministry of Education (MOE)		✓		✓
		Ministry of Science and Technology (MOST)	✓			
		National Natural Science Foundation of China (NSFC)			✓	✓
		China Scholarship Council (CSC)		✓		
	India	Department of Science and Technology (DST)			✓	✓
		Indian Council of Historical Research (ICHR)				✓
		Indian Council of Social Science Research (ICSSR)			✓	
	Indonesia	Directorate General of Higher Education, Research, and Technology, Ministry of Education Culture, Research, and Technology (DGHERT)			✓	
		Indonesian Institute of Sciences (LIPI)			✓	
		National Research and Innovation Agency (BRIN)				✓
	Korea, Rep.	National Research Foundation of Korea (NRF)			✓	✓
	Malaysia	Vice-Chancellors Council of National Universities in Malaysia (VCC)				✓
	Myanmar	Ministry of Education				✓
	Philippines	Department of Science and Technology (DOST)			✓	✓
	Singapore	National University of Singapore (NUS)			✓	✓
Thailand	National Research Council of Thailand (NRCT)			✓	✓	
Vietnam	Ministry of Science and Technology (MOST)			✓		
	Vietnam Academy of Science and Technology (VAST)			✓	✓	
Taiwan	Academia Sinica				✓	
Oceania	Australia	Australian Academy of Science (AAS)	✓			✓
		Australian Research Council (ARC)				✓
	New Zealand	Ministry of Business, Innovation and Employment (MBIE)				✓
		The Royal Society of New Zealand (RSNZ)	✓		✓	✓
Africa	Egypt	Ministry of Higher Education and Scientific Research (MHESR)				✓
		Science, Technology and Innovation Funding Authority (STDF)			✓	
	Kenya	National Commission for Science, Technology and Innovation (NACOSTI)			✓	✓
	Senegal	Ministry of Higher Education, Research and Innovation				✓
	South Africa	National Research Foundation (NRF)			✓	✓
Tunisia	Ministry of Higher Education and Scientific Research (MHESR)				✓	
Europe	Austria	Austrian Agency for International Cooperation in Education and Research (OeAD-GmbH)	✓			✓
		Austrian Science Fund (FWF)			✓	
		Federal Ministry of Science and Research (BWF)				✓
	Belgium	Fonds de la Recherche Scientifique-FNRS (F.R.S. -FNRS)	✓		✓	
		Research Foundation-Flanders (FWO)	✓		✓	
	Bulgaria	Ministry of Education and Science of Bulgaria (MES)	✓			✓
		The Bulgarian National Science Fund (BNSF)				✓
	Czech	Czech Academy of Sciences (CAS)	✓		✓	
	Denmark	Universities Denmark (DU)				✓
	Estonia	Estonian Research Council (ETAg)	✓			
	Finland	Academy of Finland (AF)	✓	✓	✓	
	France	French National Research Agency (ANR)				✓
		Ministry for Europe and Foreign Affairs - Ministry of Higher Education, Research and Innovation (MEAE-MESRI)			✓	
Centre National de la Recherche Scientifique (CNRS)		✓			✓	
National Institute for Research in Computer Science and Automation (Inria)				✓		
National Institute of Health and Medical Research (Inserm)				✓		

Region / Country		Counterpart Institutions	Fellowships	Bilateral Programs		Multilateral and Other Program
			Postdoctoral Fellowship	Researcher Exchanges	Research Projects/Seminars	
Europe	Germany	Alexander von Humboldt Foundation (AvH)	✓			✓
		Council for the Lindau Nobel Laureate Meetings				✓
		German Academic Exchange Service (DAAD)	✓		✓	
		German Research Foundation (DFG)			✓	✓
	Hungary	Hungarian Academy of Sciences (HAS)	✓		✓	
	Italy	Ministry of Education, University and Research (MIUR)	✓			
		The National Research Council (CNR)			✓	
	Lithuania	The Research Council of Lithuania (RCL)			✓	
	Netherlands	Netherlands Organisation for Scientific Research (NWO)			✓	✓
	Norway	The Research Council of Norway (RCN)	✓	✓		
	Poland	Polish Academy of Sciences (PAN)	✓		✓	
	Romania	Ministry of National Education (MEN)				✓
	Russia	Russian Foundation for Basic Research (RFBR)			✓	
	Slovakia	Slovak Academy of Sciences (SAS)	✓			✓
	Slovenia	Ministry of Education, Science and Sport (MESS)	✓		✓	
	Spain	Spanish National Research Council (CSIC)				✓
	Sweden	Nobel Prize Outreach AB				✓
		Royal Swedish Academy of Sciences (RSAS)	✓			✓
		The Swedish Foundation for International Cooperation in Research and Higher Education (STINT)	✓		✓	
		Swedish Foundation for Strategic Research (SSF)	✓			
		Swedish Governmental Agency for Innovation Systems (VINNOVA)	✓			
	Switzerland	ETH Zurich (ETHZ)	✓	✓		
		Swiss National Science Foundation (SNSF)	✓			✓
Ukraine	The National Academy of Sciences of Ukraine (NAS)	✓				
UK	The British Academy	✓				
	The British Council	✓				
	The Royal Society	✓		✓	✓	
	Economic and Social Research Council (ESRC)				✓	
	UK Research and Innovation (UKRI)				✓	
Europe	European Research Council (ERC)				✓	
North America	Canada	Canadian Embassy (CE)	✓			
		Natural Sciences and Engineering Research Council of Canada (NSERC)	✓			
		Mitacs	✓			
		Social Sciences and Humanities Research Council (SSHRC)				✓
		Royal Society of Canada (RSC)				✓
		Canadian Institute For Advanced Research (CIFAR)				✓
	USA	National Academy of Sciences (NAS)				✓
National Institutes of Health (NIH)		✓			✓	
National Science Foundation (NSF)					✓	
Social Science Research Council (SSRC)		✓				
Central/South America	Argentina	National Council of Scientific and Technological Research (CONICET)				✓
	Brazil	Brazilian Federal Agency for Support and Evaluation of Graduate Education (CAPES)			✓	
	Chile	Chilean National Commission for Scientific and Technological Research (CONICYT)				✓
	Mexico	National Council on Science and Technology (CONACYT)				✓
Middle East	Israel	Ministry of Science and Technology				✓
		Israel Science Foundation (ISF)			✓	
Turkey	The Scientific and Technological Research Council of Turkey (TÜBİTAK)			✓	✓	
International Organizations	United Nations University (UNU)	✓				

Map of JSPS Overseas Offices and Counterpart Institutions





## Number of Researchers Exchanged

Program Region / Country	FY	Foreign Researchers Invited to Japan											Total	Japanese Researchers Sent Abroad									Total					
		Invitational Fellowships						Postdoctoral Fellowships			Bilateral/ Multilateral and Other Programs			Overseas Research Fellowships			Research Fellowships for Young Scientists CPD			Bilateral/ Multilateral and Other Programs								
		Short-term			Long-term			2019	2020	2021	2019	2020		2021	2019	2020	2021	2019	2020	2021	2019	2020		2021	2019	2020	2021	
		2019	2020	2021	2019	2020	2021																					2019
<b>Total</b>		161	12	18	75	32	38	1,083	757	672	1,721	23	85	3,040	824	813	416	367	396	7	14	27	4,255	96	256	4,678	477	679
<b>Asia</b>																												
India		7			4	1	3	100	81	45	99	1	9	210	83	57	1	1					141			142	1	
Indonesia		1			1	1	2	11	10	11	54	1	4	67	12	17							67		1	67		1
Republic of Korea		4	1	1	3	2		34	25	21	157	3		198	31	22							335	1	4	335	1	4
Cambodia								1	1	1	16			17	1	1							29			29		1
Singapore								3	4	2	45	1	22	48	5	24	8	4	5				49		31	57	4	36
Sri Lanka								1	1		8			9	1								6			6		
Thailand				1				4	5	5	56	1	2	60	6	8							93		5	93		5
China		16		1	4	1	3	209	188	171	218	5		447	194	175						1	410		4	410		5
Nepal								3	3	2	3			6	3	2							6			6		
Pakistan								4	4	6	6			10	4	6							1	1		1	1	
Bangladesh		2			4			33	26	24	13		1	52	26	25							18			18		
Philippines					1			6	7	5	36			43	7	5							69		4	69		4
Bhutan											2			2									6			6		
Viet Nam							1	10	10	8	36		1	46	10	10							97		2	97		2
Malaysia								9	7	6	18			27	7	33							45		16	45		16
Myanmar				1	1		1	1			10			12		2							56			56		
Mongolia		1						4	2	2	15			20	2	2							36			36		
Lao											3		3	3		3							4		3	4		3
Taiwan		1	1		1			22	13	17	35	3		59	17	17	1	1	1				82			83	1	1
Australia		8			6	1	1	28	23	21	8			50	24	22	6	5	3				99	4	1	105	9	4
New Zealand			1	1				2	3	5	8			10	4	6	2						24		1	26		1
Papua New Guinea								1	1					1	1													
<b>Oceania</b>																												
Iceland																							3			3		
Ireland		2			1	1		4	4	6				7	5	6			1	1					1		2	
Italy		11		1	1	1	1	52	35	33	10			74	36	35	7	4	6				88	3	5	95	7	11
Ukraine		2			1	1	1	5	3	2				7	4	3							10			10		
Uzbekistan					1	1		1			8			10	1								5			5		
United Kingdom		19		1	5	1	1	51	18	19	94	1		169	20	21	40	32	39			1	274	10	13	314	42	53
Estonia								4	1	1				4	1	1							8			8		
Austria		1			2	1	1	4	3	3	12			19	4	4	3	3	7		1	1	26	1	2	29	5	10
Netherlands		5			1			3	3	2	15			24	3	2	5	6	6		2	4	67	2	6	72	10	16
Kazakhstan								1			1		1	2	1	1	1						4			5		
Cyprus								1						1									2			2		
Greece		1		1	1			2	1					4	1	2												
Croatia					1			3	1					4	1								6			6		
Georgia		1												1														
Switzerland		1						7	3	3	27		1	35	3	4	8	8	11			1	76	19	12	84	27	24
Sweden								14	8	5	32	1		46	9	5	9	9	8				57	1	3	66	10	11
Spain		1		1	1	1	1	22	16	20	5			29	17	22	2	4	5			1	37		3	39	4	9
Slovakia								2	1	1				2	1	1												
Slovenia								5	3	2	14			19	3	2							34			34		
Serbia		2						1						3									2			2		
Czech Republic								8	4	5	17		2	25	4	7							39	1	6	39	1	6
Denmark		1						1			1		2	3		2	4	3	3			1	4		1	8	3	5
Germany		14	2	1	2	1	2	81	34	38	181			278	37	41	41	30	29	2	2	5	355	8	26	398	40	60
Norway								2	2		2			4	2		1	1					27	1	2	28	2	2
Hungary					2			7	5	5	17			26	5	5							30		1	30		1
Finland		2						6	5	3	11			19	5	3							15	1	4	15	1	4
France		10	2		8	6	3	85	53	48	137	1	3	240	62	54	22	17	21			2	267	13	31	289	30	54
Bulgaria		1						7	3	3				8	3	3							1			1		
Belarus								2			2			4									2			2		
Belgium		2	1	1				7	5	2	24			33	6	3	1	1	1				51	3	1	52	4	2
Bosnia and Herzegovina								1		2				1		2												
Poland		2	1		2	1		16	11	7	10			30	13	7	1	1					33			34	1	
Portugal								3	2	3	1			4	2	3	1						9		1	10		1
Latvia								1	1	1				1	1	1												
Lithuania					1			2	2	1	20			23	2	1							16			16		
Romania		2			1			3	2	1				6	2	1							1			1		
Luxembourg								2	1	1				2	1	1												
Russia		3				2	2	3	3	7	37			43	5	9							131					





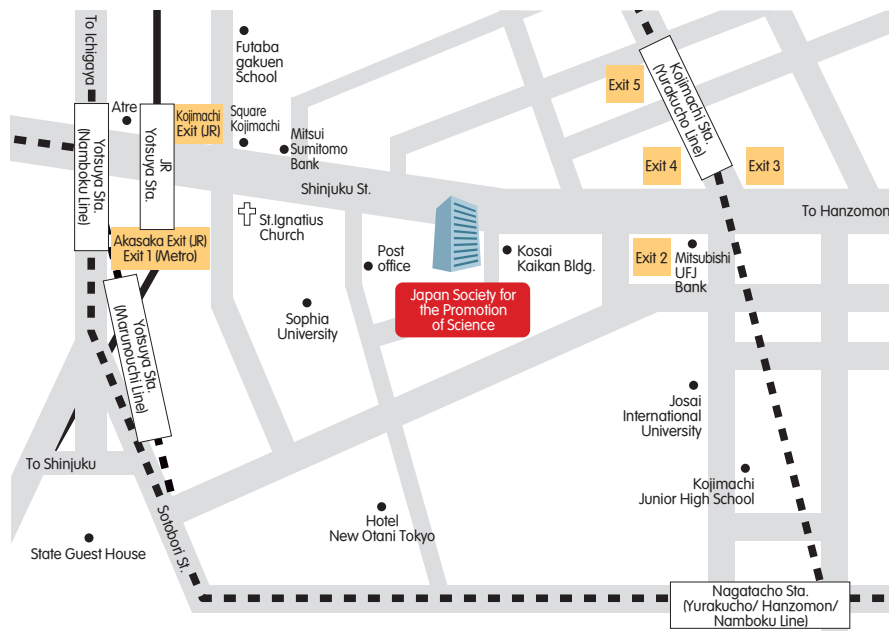
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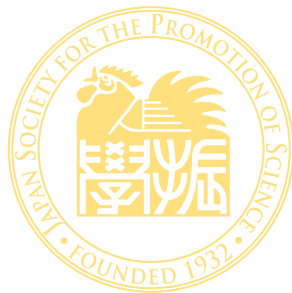


- 6 minutes walk from Tokyo Metro Yurakucho Line Kojimachi Station (Exit 2)
- 8 minutes walk from JR Sobu Line/ Chuo Line Yotsuya Station (Kojimachi Exit)
- 10 minutes walk from Tokyo Metro Marunouchi Line/ Namboku Line Yotsuya Station (Exit 1)

**Crowing Rooster, Emblem of the Japan Society for the Promotion of Science**



From days of old in Japan, it has been the belief that the vigorous cry of the rooster in the gray of the morning augurs the coming of a new and bright day. As the crowing rooster can therefore be thought of as a harbinger of the kind of new knowledge that promises a brilliant future for humankind, it was chosen as the emblem of the Japan Society for the Promotion of Science. This emblem was designed in 1938 by Professor WADA Sanzo of Tokyo Fine Arts School to depict the rooster that symbolizes the breaking dawn in a verse composed by Emperor Showa.



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