

Operation and Management of IROAST

1. IROAST Steering Committee Activities

We held our IROAST Steering Committee meetings 11 times in the academic year of 2021 to discuss and determine various regulations and agenda items required for operating and managing IROAST successfully. In particular, the committee has discussed and approved implementation of the following research support programs and provided support to many researchers.

2. IROAST Research Support Programs

We have several research support programs running in parallel to promote research programs under international collaboration, aiming to build international joint research networks and offer/gain benefit from circulating knowledge through minds around the world.

IROAST Young Faculty Members for International Joint Research

We select outstanding young faculty members from the Faculty of Advanced Science and Technology, the Institute of Industrial Nanomaterials, the Magnesium Research Center, and the Center for Water Cycle, Marine Environment and Disaster Management and invite them to IROAST for three or four years, and give them opportunities to conduct international joint research at overseas universities and institutions for at least one year in total. The COVID-19 pandemic has prevented them from traveling overseas since 2020, but we are promoting international joint research online, and each has achieved satisfactory results through that avenue.

IROAST International Joint Research Travel Support

We select distinguished faculty members from the Faculty of Advanced Science and Technology, the Institute of Industrial Nanomaterials, the Magnesium Research Center, and the Center for Water Cycle, Marine Environment and Disaster Management and send them to universities and institutions overseas to conclude MOUs for promoting their international joint research and/or to perform their joint research there. Unfortunately, the COVID-19 pandemic has interrupted this support project since 2020.

IROAST Visiting Professor and Visiting Professor Candidate Invitations

We invite Visiting Professors and Visiting Professor candidates to IROAST to promote joint research with their host researchers. The purpose is to build international joint research networks and to open international seminars that attract young researchers, including graduate students, to cutting-edge research activities. This program has also been suspended since 2020.

IROAST Research Awards (for IROAST faculty members only)

To encourage and reward innovative research activities, we select and award outstanding and promising IROAST faculty members by evaluating their research activities from the previous academic year.

IROAST Proofreading/Publication Support

We offer financial support for proofreading/publication to IROAST-affiliated researchers to increase the number of papers emanating from the fields of science and technology at Kumamoto University.

IROAST Research Internship Program

We provide hands-on research opportunities for highly motivated undergraduate and graduate students and young postdoctoral researchers keen to pursue advanced scientific research. In 2021, we offered online internships.

Young Faculty Member Support Program for New IROAST Major Research Areas

We have launched a new support program for young researchers who are taking on pioneering and high-potential research toward new major research areas at IROAST. The focus will be on young researchers in the fields of science and technology who are the potential to make great strides on the international stage.

IROAST Start-up Program to Create an Inter-Departmental Joint Research Hub

We have embarked on a new program aiming to support bold and sustainable research that targets new areas through creating research networks by linking departments in different fields. The program promotes cross-disciplinary and interdisciplinary fusion research to harness the University's strengths in science and technology. Five faculty members were selected to launch and coordinate joint research groups.

IROAST Symposia

We invite keynote speakers from overseas and domestic universities to hold international symposiums two to three times a year. In 2021, three symposia took place either online or in a hybrid of online and in-person events.

IROAST Seminars

International researchers invited through the IROAST Visiting Professor and Visiting Professor Candidate Invitation program mentioned above give talks at IROAST Seminars organized by their host professors. In 2021, we had a visiting professor come to Japan and hold a seminar at the University, and also hosted online joint seminars with visiting professors' laboratories. In addition, as a multidisciplinary international joint research support program with the International Research Center for Medical Sciences (IRCMS), we held a seminar at which presentations were made by joint research groups supported by the program.

IROAST Workshop for Research Capability Building

Aiming to improve the research skills of the University's researchers and students, we organized a three-session workshop with a cumulative total of more than 100 participants. Each session covered three topics: how to write an effective abstract, which is essential for writing

papers; how to send out information via social media and e-mail; and how to use appropriate English expressions that are often used incorrectly by Japanese.

3. Enhancing IROAST's public relations activities

To promote IROAST's activities widely, we renewed our website, introduced social media (Twitter, Instagram, Facebook, YouTube), and published pamphlets both in Japanese and English to provide information about what we do.

A symposium, organized by IROAST and held in Japanese, was announced to government offices, companies, universities, and high schools in Kumamoto Prefecture, attracting participants not only from within the University but outside it as well.

4. Preparing for the second phase (AY2022 to AY2027)

IROAST, which will enter its second phase in AY2022, has the following two goals: 1) to establish a research hub through which we can circulate knowledge through great minds in science and technology that will lead the post-COVID-19, post-SDG world and generate new innovations; and 2) to develop an environment that serves as a hub for great minds that attracts outstanding researchers from Japan and abroad.

We will engage in international research activities that focus on the science and technology needed to build a society that provides safety, security, and well-being. The goal is to realize Society 5.0, which will support the next generation of natural sciences.

5. Statistics for IROAST Research Activities

The following tables indicate several indices to evaluate our research activities.

◆ Indices for Self-evaluation of IROAST Research Activities

Indices for Self-Evaluation (Numerical Target)	2017	2018	2019	2020	2021
Number of Papers (30 papers per year)	26	43	72	112	102
Rate of Internationally Collaborated Papers (~80%~)	88.5	79.1	81.9	83.0	77.5
Rate of Top 10% Papers (~20%~)	15.4	16.3	20.8	23.2	7.8
Field Weighted Citation Index (>1.1)	1.33	1.31	1.59	2.41	0.90
Number of Concluded MOU (>20 for the first term)	8	13	16	16	21
Number of Visiting Professors (~40~)	26	37	41	44	49
Number of Distinguished Professors (4)	2	3	4	3	5
Number of International Symposia including KU-KAIST Joint Symposium (>1)	1	5	3	1	3
Number of International Seminars including IROAST&IRCMS Joint Seminars (~20~)	20	23	20	2	7

Indices for Self-Evaluation (Numerical Target)	2017	2018	2019	2020	2021
Number of Invited Researchers (~25~)	25	28	22	–	–
Number of Researchers Visiting Overseas Universities and Institutions (~20~)	21	18	15	–	–
Number of Internship Students	–	3	13	–	8

Note) The number of papers and other paper-related data for 2018-2021 were obtained from the Web of Science by requesting the IR office in April 2022.

◆ Summary of Research Fund

FY2021

Categories	Number of Grants	Amount (x 1000 Yen)
JSPS Grant-in-Aid	9	37,037
Commissioned Research	1	3,210
Contract Research	1	1,674
Donated Grant	1	900
Total	12	42,821

FY2020

Categories	Number of Grants	Amount (x 1000 Yen)
JSPS Grant-in-Aid	8	32,560
Commissioned Research	1	1,300
Private Research Grant	2	1,000
Total	11	34,860

FY2019

Categories	Number of Grants	Amount (x 1000 Yen)
JSPS Grant-in-Aid	4	23,400
Commissioned Research	1	2,200
Private Research Grant	2	950
Donated Grant	1	1,000
Total	8	27,550

*Amended some numbers for the last three years based on a revised criterion.