The ROIS publishes an online magazine, Science Report, to inform the audience overseas about Japan’s latest academic research activities and achievements. Science Report focuses on a specific research topic for six months at a time with monthly feature articles introducing different aspects of the field. The magazine is intended to provide insights into some of the major ongoing research projects and how the country uses the Team Japan approach to bring together all the expertise and resources it has to offer to advance studies in certain areas. The site offers links to the news releases and publications of various universities and other academic institutions from across Japan. https://sr.rois.ac.jp/en/

Activities for Gender Equality

The ROIS has the Office for Gender Equality set up at each of its research centers to promote a fair and equal work environment where both men and women researchers can thrive and access the support they need. As part of the initiative, the ROIS also publishes on its website a directory of female researchers who can be found through the ROIS researchmap search engine.

Inter-University Research Institute Corporation
Research Organization of Information and Systems

2019 / 2020

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The Institute of Statistical Mathematics

National Institute of Genetics

Joint Support-Center for Data Science Research (DS)

https://www.rois.ac.jp/en/
Contact Phone: +81-3-6402-6200

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President’s Message

Today, big data and creative use of it hold the key to innovations as it provides new lenses through which to look at our society. The ROIS has worked to build a strong foundation for data and analytics by promoting collaborations among Japanese universities. As an organization that has been on the forefront of “data science” from day one, I believe the Research Organization of Information and Systems (ROIS) will play an increasingly important role within the research community in solving the world’s problems.

We intend to become a main resource for data science for universities through our efforts in the following areas:

- Consolidating and sorting data that are useful to society as well as research universities
- Revolutionizing methodologies for gaining meaningful knowledge from big data
- Developing real-time technologies for aggregating and processing a large volume of scattered data
- Developing visualization technologies to help people grasp astronomical amounts of high-dimensional data

The ROIS opened in 2004 as an inter-university research institute, which is a system unique to Japan. Serving as the umbrella institution for four other inter-university organizations that came together to form the ROIS, we are well-positioned to leverage the expansive network of expertise across Japan and overseas.

In 2016, the ROIS created the Office of Strategic Planning to strengthen alliances between the ROIS and the research organizations to which it oversees. The Center works to promote the use and application of data and analytics by promoting collaborations among research organizations.

Today, big data and creative use of it hold the key to innovations as it provides new lenses through which to look at our society. The ROIS has worked to build a strong foundation for data and analytics by promoting collaborations among Japanese universities. As an organization that has been on the forefront of “data science” from day one, I believe the Research Organization of Information and Systems (ROIS) will play an increasingly important role within the research community in solving the world’s problems.

In these productive research environments, the ROIS and the four research institutes strive to foster the next generations of data scientists at Sokendai, for which they serve as some of the core operating organizations.

At the ROIS, we are determined to do our best to advance data science that can be applied to tackle issues facing modern society. As we take on the 21st Century challenge, it is critical for us to ensure a free flow of ideas and knowledge. For this reason, we intend to encourage Japanese universities and research institutions to pursue collaborative relationships with their counterparts from around the world, as well.

At the ROIS, we are committed to serving as the hub of research related to information and systems in Japan. We hope you will join us in our effort to advance data science through the power of academic partnerships.

Sincerely,

Ryoichi Fujii
President of Research Organization of Information and Systems

Pioneering Research Frontiers in the Data Age to Solve Modern Society Problems

Research Hub for Academic Institutions

The four research institutes that comprise the Research Organization of Information and Systems have researchers in residence from various national and private universities in Japan. A total of 4,883 researchers from 370 institutions participated in the residency programs during 2018.

Joint Support-Center for Data Science Research (ROIS-DS)

--- Better Future through Academic Partnerships and Collaborations ---

The Joint Support-Center for Data Science Research (DS-Center) is an institution that was founded in April 2016 to promote activities of “data science (or Data-drive type research)”, those currently being conducted at academics as well as industries. The center contributes to the research and development of growth of those activities through maximizing the abilities and the activities of data science in the Research Organization of Information and Systems. Our “data sharing initiative” focuses on a variety of research fields, including life science, polar environments, social science, and humanities. Our “data analysis support movement” provides cutting-edge support for data analysis or data mining that focuses on specialized field such as numerical, and develops and supports cross-disciplinary high-level mathematical methods. DS facility invites publicly-offered joint research every year.

About Inter-University Research Institute

An inter-university research institute helps promote research collaborations and resource sharing among universities across Japan. It provides universities with access to cutting-edge equipment, voluminous academic data, and research materials that would be difficult for them to obtain and maintain individually. It also offers them support for analysis of such data.

Research Organizations

- President’s Office
- Strategic Planning Office
- Promotion Office of Research Organizations
- Office of Policy Coordination
- Science and Technology Office
- Administration Office
- Human Resources Office
- Gender Equality Management Office
- Finance Management Office
- Audit Office
- Conference of Directors-General
- Management Council
- Board of Directors

Research Organization of Information and Systems

- President: Yohei Dokuma
- Director: Hisaya Hirasawa

Sokendai, The Graduate University for Advanced Studies

- President: Yohei Dokuma
- Director: Hisaya Hirasawa

Center for Data Science and Innovation

- Director: Naoki Iwashita

National Institute of Informatics

- Director: Shuichi Ueno

The Institute of Statistical Mathematics

- Director: Hidetoshi Murakami

National Institute of Polar Research

- Director: Kiyoshi Murakami

Joint Inter-University Research Institute for Social Systems Analysis

- Director: Tetsuo Aoyama

Organizational Chart

- The number of students is as of May 1, 2018.
- The number of the bracket is the number of foreigner
Four Research Institutes in Pursuit of Scientific Principles and Cutting-edge Research

National Institute of Polar Research

Polar regions around the South and North Poles are sensitive to global environmental changes, including global warming, with results that will affect the future of human beings. Focusing on how the global environment forms and how it will change in the future, based on field observations, analysis of materials and samples, parsing of data, and modeling, the institute promotes advanced, integrated, and multi-discipline earth systems science, including geoscience and the environmental, biological, space, and planetary sciences. Furthermore, the institute, having observation bases in the Arctic and Antarctic, plays a core role in the Japanese Antarctic Research Expedition (JARE) and Arctic Challenge for Sustainability (4CS).

National Institute of Informatics

NII promotes research in all areas of informatics—from theoretical computer science to such cutting edge topics as artificial intelligence, big data, IoT (Internet of Things) and cybersecurity—to build the way for future value creation in this new study field as Japan's only academic informatics research center. In addition to building and operating networks, such as the Science Information NETwork 5 (SNET5), and offering academic online content and services, NII develops research data infrastructures for open science and information security platforms based on inter-institutional cooperation. NII also focuses on collaboration with universities, research institutions and corporations both inside Japan and overseas.

National Institute of Genetics

The activity of biological organisms is based on the genetic information. Genetics is a science that reveals the mystery of life from the viewpoint of genetic information. NIG conducts state-of-the-art research on cell function, generation/differentiation, evolution/biodiversity, and genomics/physiological information; simultaneously, it pioneers new research in the life sciences. Furthermore, NIG, as an international hub for life science research, operates three research infrastructure projects: BioResource Project, Advanced Genomics Project, and Bioinfomation and DNA Data Bank of Japan (DDBJ) Project.

The Institute of Statistical Mathematics

“Statistical mathematics” refers to a science aimed at extracting meaningful information from data in order to gain and develop knowledge that is useful for decision-making. As the only research institute for “statistical mathematics” in Japan, ISM works on both cutting-edge and basic researches and accelerates solutions to academic, societal and industrial problems through the “NEDGE (Network Of Excellence) Project” in collaboration with other organizations in different sectors. At the same time, ISM conducts the “Project for Fostering and Promoting Statistical Thinking” to develop professional data scientists who lead various research activities.

Overviews of the four institutes that are on the cutting-edge of polar science, informatics, statistical mathematics and genetics with some highlights of their recent research work.
Resource Sharing and Joint Research to Meet the Needs of Universities

We take advantage of the academic research bases as well as global partnerships to make a wide range of research and educational support programs available to universities.