At NII, Global Liaison Office (GLO) was established to systematically promote international research exchange activities with foreign universities and research institutions. Its main roles are such as conclusion of international Memoranda of Understanding (MoU), implementation of MOU Grant (Research Exchange Grant Program), and NII International Internship Program. NII also holds "Shinhan Meetings", where the world’s top-class researchers get together to have intensive discussions on the field of informatics by staying in a training-camp-style. NII is actively accepting researchers through German Academic Exchange Service (DAAD) and Japanese-French Laboratory for Informatics (JFLI) as well.
Informatics to Create Future Value on the Wheels of Research and Service

Integrated Research from Basic Methodology to State-of-the-Art

“Informatics” combines not only technologies like computer science and information communications engineering but also the humanities, social studies, and the life sciences. This new academic domain involves every aspect of society. NIL has established four basic Research Divisions—namely, Principles of Informatics, Information Systems, Architecture Science, Digital Content and Media Sciences, and Information and Society—plus 16 Research Centers charged with systematically accomplishing specific tasks. From the basic methodology of informatics to state-of-the-art informatics, Big Data, the Internet of Things (IoT), and information security, NIL advances the integration of research. We are also using our strengths even in graduate education to foster new leaders of an advanced information society.

Research Divisions

**Principles of Informatics Research Division**
- Pursues new theories and principles pertaining to algorithms and computational complexity as well as studies of artificial intelligence, robotics, and quantum computing.
- Promotes critical thinking and technical ability.

**Information Systems Architecture Science Research Division**
- Strengthens the performance, quality, and functionality of computers and networks to maintain the technical infrastructure.
- Develops technical solutions to software and hardware architecture.

**Digital Content and Media Sciences Research Division**
- Studies generation of media content including sign and patterned media plus the basic technologies to store, retrieve, and present it.
- Enhances exchange and interaction to understand people and knowledge.

**Information and Society Research Division**
- Positively develops the information society.
- Strengthens the performance, quality, and functionality of the digital content by conducting research on realizing national decisions using social and cognitive computing.

Research Centers

Center for Robust Intelligence and Social Technology (Established April 2016)
Center for Cognitive Innovation
Center for Global Research in Advanced Software Science and Engineering
Center for Collaborative Research
Center for Global Research Center for Big Data Mathematics

Graduate Program

Fostering New Leaders of an Advanced Information Society

Graduate education at the National Institute of Informatics involves (1) participation in courses at SOKENDAI (The Graduate University for Advanced Studies), (2) cooperation with other graduate schools, and (3) access to special joint research fellows. SOKENDAI is the first graduate university in Japan established to push forward world-class scholarly research beyond the borders of conventional disciplines and to open up new paths of scientific inquiry. The National Institute of Informatics (NIL) offers 3-year and 5-year PhD courses within SOKENDAI, in which it constitutes the Department of Informatics. Six areas of study include fundamental information science, information infrastructure science, software science, information media science, intelligent systems science, and information environment science. These areas break out into more than 70 classes.


Services to Support Research Infrastructure and Education

NIL coordinates with academic institutions and the research community. For starters, it built and now operates the Science Information NETwork (SINET), the world’s most advanced, high-speed network linking domestic and international sites. NIL also helps to establish and provide academic authentication infrastructure, Education and Support for Use of Cloud Systems, development of Research Data management platforms, development of research data sets for use in the adoption and advancement of other world platforms. Security Systems Grounded on Inter-University Collaboration. We also contribute to the building of systems to enable national universities and other academic institutes to respond rapidly to security incidents. In addition, NIL strives to contribute to improving the international competitiveness of educational research, accelerating studies on leading-edge topics, developing interdisciplinary programs, promoting more efficient research, and enhancing the functions of universities.

Science Information NETwork (SINET)

**Innovative Connectivity**
- SINET introduces a state-of-the-art, optical data network with the latest technology that achieves 100 Gbps connectivity, thus minimizing transfer delays between the nodes of all areas of Europe, America, and Asia.

**Ultra High-Speed**
- With bandwidths of 100 Gbps for node connections, this ultra-high-speed network is prepped for further development.

**Robust and Reliable**
- Multileveled advanced network architecture has redundancy configured into each layer, introducing methods for avoiding and bypassing obstacles.

**Multifunctional Flexibility**
- Development and Provision of Certified Collaborative Platforms
- NB develops and provides the Academic Access Management Federation in Japan (Gakusen), PNP Digital Certificates Assurance Service, and external (workloads oriented) LAN-LAN technology platforms for universities and research institutions to realize not only easy but also safe and secure access for online services, computing, and materials for educational/research.

**Security Systems Grounded on Inter-University Collaboration**
- NIL collaborates with national universities to construct systems that observe, detect, and analyze cyber attacks waged against SINET. Based on data sharing with national universities and other international organizations, NIL also provides helpful information to national universities depending on the urgency level and risk of attacks. Beyond that, NIL helps people in charge of cybersecurity to work as a team to cope with cyber attacks. In this way, we contribute to the construction of systems that enable our national universities to respond promptly to security incidents and accidents.

Scholarly Contents Infrastructure

CINI (NIL Academic Information Navigator)
- This discovery service allows users to search information on academic publications and series. CINI also features users search ability and access for information. CINI Service is supported by the Japan Institute of Informatization, and CINI Distributions allows users to download theses for doctoral degrees in fields confirmed by Japanese universities.

**JARO Cloud (Shared Research Repository Service)**
- This is a cloud-based service that provides institutional repositories for universities, research institutions, and other academic institutions. The service uses NIL-developed repository software WIKO to facilitate the development and operation of institutional repositories. More than 100 academic institutions in Japan use the service.

GakuNin RDM (Research Data Management Service)
- This service allows researchers to manage research data and related files in their daily research activities. In addition to the basic management functionality, very external research tools and storage can be connected and utilized from this single platform. Managed files in GakuNin can be deposited to the JARO Cloud by means of simple and easy operation, so as to facilitate researchers’ Open Science activity in Japan.