大学共同利用機関法人 情報・システム研究機構

国立情報学研究所

大学共同利用机关法人 信息系统研究机构

国立信息学研究所

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

National Institute of Informatics

2006-2007

国立信息学研究所作为日本在信息学这一崭新的学术领域中唯一的一所学术综合研究所，以"创造未来价值"为目标，在网络、软件、内容等信息相关领域中，综合性地开展从新的理论和方法论到如何进行运用方面的各种研究开发工作。同时，作为大学共同利用机关，不仅致力于构筑学术界整体的研究教育活动中必不可少的高端学术信息基础设施（Cyber Science Infrastructure：CSI），同时还注重与全国各地的大学、研究机构、民间企业及各种社会活动之间进行合作，携手共进。

As Japan's only general academic research institution seeking to create future value in the new discipline of informatics, the National Institute of Informatics (NII) seeks to advance integrated research and development activities in information-related fields, including networking, software, and content. These activities range from theoretical and methodological work to applications. As an inter-university research institute, NII promotes the creation of a state-of-the-art academic-information infrastructure (the Cyber Science Infrastructure, or CSI) that is essential to research and education within the broader academic community, with a focus on partnerships and other joint efforts with universities and research institutions throughout Japan, as well as industries and civilian organizations.

特色 Features of NII

开展信息学的综合性研究和教育
Advancing Integrated Research and Education in the Field of Informatics

推动高端学术信息基础设施的建设
Promoting the Cyber Science Infrastructure (CSI)

创造未来价值
Creating Future Value

为社会与公众事业做贡献
Social and Public Contribution

进行综合性信息处理
Interdisciplinary Approach to Information Processing

强化产业界、学术界和政府的三方合作
Partnership among Industry, Government and Academic Sectors

开展国际活动
International Research Activities

致力于研究生教育和人才培养工作
Graduate Education and Human Resource Development

"信息学"是一门不仅包括计算机科学和信息工程，而且包括人文社会科学及生命科学的领域在内的新的学术领域。国立信息学研究所拥有四大研究领域、五个研究设施（中心），并设有研究开发合作总部及合作研究部门。本研究所的目标是进行创造未来价值的信息学研究，为社会及公共事业做出贡献，开展综合性信息处理，推动产业界、学术界、政府和民间的合作，强化国际性研究及各项实业。

Informatics is a new academic discipline based not only on computer science and information technology, but on the human, social, and life sciences. The NII advances informatics research with the goals of creating future value; furthering social and public contributions; promoting interdisciplinary approaches to information processing; partnerships among industry, government, academic, and civilian organizations; and international research activities and operations. The NII has established four research divisions, five research centers, the Organization for Management and Outside Collaboration on R&D, and the Collaborative Research Unit.

研究领域　　Research Division

信息学理论领域　　　　　　　　　　　Principles of Informatics Research Division

在探求有关信息学的新原理和理论的同时，力争开拓新领域，展开各项研究活动。

In the Principles of Informatics Research Division we seek to discover new principles, theories and methods in Informatics, and extend our goal to pioneering the frontiers to try and achieve a paradigm shift in informatics.

体系结构科学领域　　　Information Systems Architecture Science Research Division

开展有关计算机、网络等的软件及硬件的体系结构及系统化方面的研究。

The Information Systems Architecture Science Research Division deals with the research issues in software/hardware architectures of computers and networks, and their system implementation.

内容科学领域　　　　　Digital Content and Media Sciences Research Division

研究范围包括文章、影像等各种内容及媒体的分析、制作、积累和活用，以及有关处理方法的理论及系统化研究。

The Division conducts research on various types of contents and media such as text and video in terms of analysis, creation, compilation and application, and their processing methods from the theories to the systems.

信息社会相关领域　　　　　　Information and Society Research Division

进行跨学科的研究，致力于探讨如何在信息技术社会中体现社会信息、学术信息、文化信息等各种信息与社会、团体的相关关系。

The Information and Society Research Division takes an interdisciplinary approach to relations between a variety of information and society or community and to implementing information systems in society. (This approach includes social informatics, scientific informatics, and cultural informatics.)

研究设施　　Research Center

网格研究开发中心　　　　　　　　　Center for Grid Research and Development

本研发中心致力于研究开发在高端学术信息基础设施的尖端研究开发中不可缺少的网格中间件，并努力普及成果，进行运用和管理。

The Center researches and develops grid middleware necessary to advanced research and development in the Cyber Science Infrastructure (CSI), and disseminates its results and conducts operations.

联想信息学研究开发中心　　　Research and Development Center for Informatics of Association

以大规模内容为对象进行联想计算系统的研究开发，构筑可帮助提高人的联想能力的实践性信息技术。

The Center researches and develops associative calculation mechanisms about large-scale content, and constructs practical information technology that supports raising humans' associative ability.

战略研究项目创造中心　　　Strategic Research Projects Incubation Center

针对信息学研究中需要组织性地对其开展进行支援的重要课题进行组织化及资源的提供。

The Center plays a role in developing potential projects and incubating them into strategic and organized projects by providing research support.

学术网络研究开发中心　　　Research and Development Center for Academic Networks

针对高端学术信息基础设施中的核心部分--学术网络和全国大学共同认证基础设施，与有关机构进行合作，策划尖端性研究开发项目，加强网络和系统的构筑。

The Research and Development Center for Academic Networks is responsible for conducting research and development as well as construction of the cutting-edge infrastructures of the academic network and the UPKI (InterUniversity Public Key Infrastructure) for Japanese universities, both forming the core of the Cyber Science Infrastructure (CSI) by cooperating with Japanese universities and relevant organizations.

学术内容服务研究开发中心　　　Research and Development Center for Scientific Information Resources

针对应用在高端学术信息基础设施上的学术性数字内容的制作及共有方法，与有关机构进行合作，开展尖端的研究开发活动，并在数字内容流通方面进行各项策划工作。

The Center coordinates and operates with the related organizations in conducting advanced research and development about their circulation and generation, common of the academic digital content on the Cyber Science Infrastructure (CSI).

研究合作开发总部　　Organization for Management and Outside Collaboration on R&D

学术信息网络运营合作总部　　　Organization for Science Network Operations and Coordination.

本部门围绕作为高端学术信息基础设施（CSI）核心部分的新一代网络及中间件等的构筑进行策划和运营。

The Organization coordinates and operates the construction of Next-Generation Network, middleware and others as part of the core of the Cyber Science Infrastructure (CSI).

学术内容运营合作总部　　　Organization for Scientific Resources Operations and Coordination

本部门围绕高端学术信息基础设施（CSI）核心部分的学术内容的形成及服务的提供进行策划和运营。

The Organization coordinates and operates the management of scientific resources and the provision of services as part of the core of the Cyber Science Infrastructure (CSI).

未来价值创造型信息学研究组织　　　Organization for Value Creation in Informatics

本组织以创造满足未来的社会性和技术性要求的未来价值为目标，制定长远的重要课题，通过与全国的各所大学和研究机构进行广泛合作，来解决信息学方面的难题。

Meeting future social and technological requirements through value creation in informatics, the organization is making continuous research efforts to overcome grand challenges by organizing all Japanese universities and research institutions in each research area.

社会产业界及学术界合作活动推进总部　　Organization for Promoting Cooperation with Society and Industry

本部门旨在强化信息学对社会及公共事业做出的贡献，加强产业界、学术界和政府之间的合作，将研究成果有效地还原给社会，创造新的价值，并建立合作活动的模式和框架。

Promoting research activities in informatics to contribute to society and the public and to reinforce government-industry-academia collaboration, and aiming at sharing reseach results and their values with society and industry, the organization is developing innovative model and frameworks for promoting cooperative activities.

## 学术信息网络(超级SINET / SINET)　Science Information Network (Super SINET/SINET)

学术信息网络是旨在促进日本全国的大学、研究机关等的教育、研究及学术信息流通而建立的信息网络，截止2006年3月，已与708家大学等研究机关连接。同时为了促进国际性研究信息的流通，加强与国外研究网络的合作，本信息网络实现了与欧美及亚洲各国研究网络之间的互联。

The Science Information Network (Super SINET / SINET) was established to promote the distribution of educational, research, and scholarly information among universities and research organizations throughout Japan. As of the end of March 2005, the SINET is connected with 708 universities and research organizations. SINET also is connected with research networks in Europe, the United States, and Asia to promote the international distribution of scholarly information and to collaborate with overseas research networks.
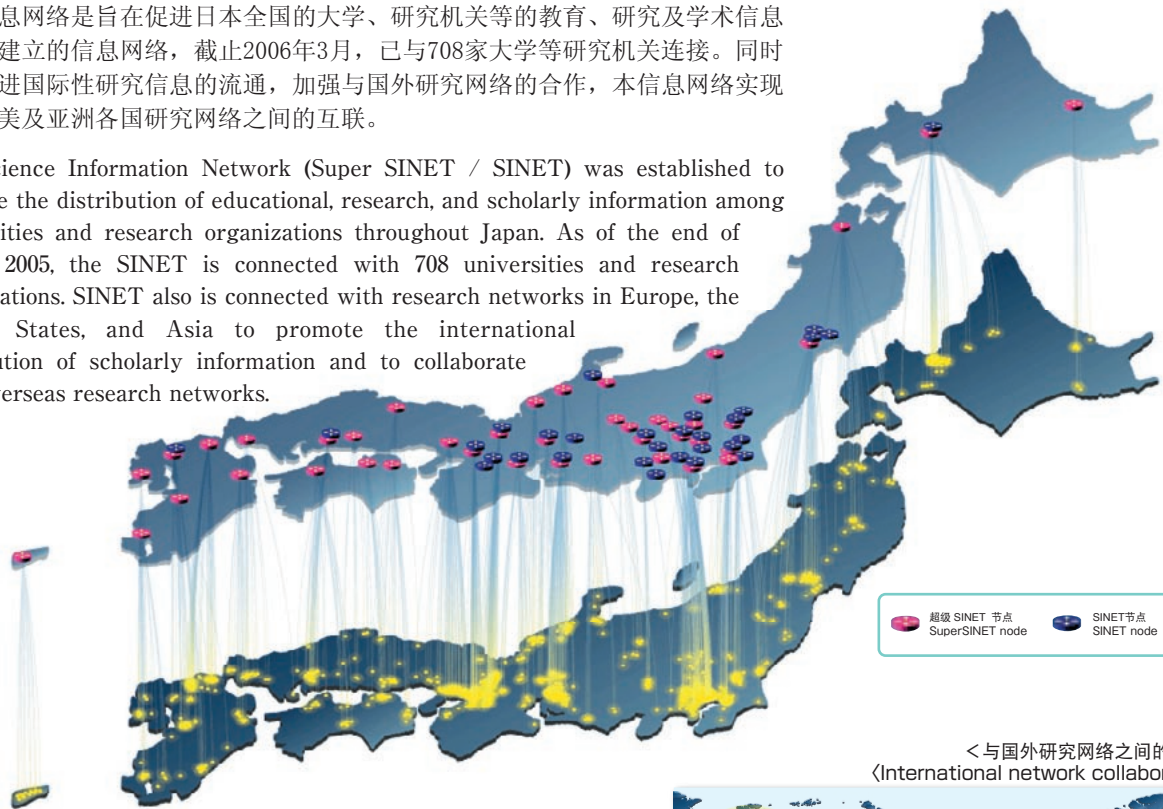
超级 SINET 节点　SuperSINET node
SINET节点　SINET node

〈与国外研究网络之间的互联〉
〈International network collaboration〉
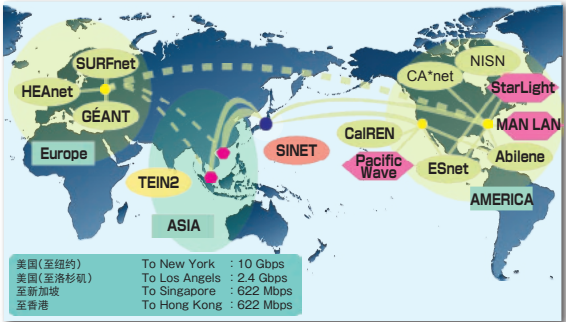
● 2006年度的线路速度　Line speed (Fiscal 2006 budget)

SINET(44节点)		SINET(44nodes)	1 Gbps*
超级SINET(35节点)		Super SINET(34nodes)	1 Gbps ～ 10Gbps
国际线路	日本－美国之间	International lines Japan-U.S.A	10 Gbps×1, 2.4Gbps×1
	日本－新加坡之间	Japan-Singapore	622 Mbps×1
	日本－香港之间	Japan-Hong Kong	622 Mbps×1

*部分节点除外　without some nodes

URL http://www.sinet.ad.jp/
问讯处：开发实业部 网络科
Inquiry: Network Division, Development and Operations Department
E-mail: net6@sinet.ad.jp

SURFnet
HEAnet
GÉANT
Europe
TEIN2
ASIA
CA*net
NISN
StarLight
MAN LAN
CalREN
Pacific Wave
SINET
Abilene
ESnet
AMERICA

美国(至纽约)	To New York ：10 Gbps
美国(至洛杉机)	To Los Angels ：2.4 Gbps
至新加坡	To Singapore ：622 Mbps
至香港	To Hong Kong ：622 Mbps

科学网格NAREGI项目　　Science Grid NAREGI Program

NAGARI项目作为"最尖端高性能通用超级计算机开发利用"工程的一个环节，通过产业界、学术界和政府之间强有力的合作机制，面向千万亿次量级时代的计算研究环境的构筑，进行网格中间件的研究开发。

The NAREGI Program is engaged in R&D on grid middleware linked to the creation of computerized research environments for the petascale era. This, as one aspect of the "Development and Application of Advanced High-performance Supercomputer Project", is to be achieved through a powerful system of collaboration with relevant bodies in the industrial, academic, and public sectors.

URL http://www.naregi.org/
问讯处：网格研究开发中心
Inquiry: Center for Grid Research and Development

全国大学共同电子认证基础设施（UPKI）的构筑　Construction of InterUniversity PKI(UPKI)

全国大学共同电子认证基础设施（UPKI）将通过连接各大学构筑的认证基础设施，实现相互间的电子认证，强化大学之间安全可靠的合作体制。为此，将制定并公开框架方针，推动应用程序技术的开发。

InterUniversity PKI (UPKI) will promote secure and reliable linkages between universities by linking the PKI systems created by the various universities and other institutions and facilitating electronic authentication between institutions etc. To that end, NII is promoting the formulation and disclosure of scheme policies and the development of application technology.

问讯处：开发实业部　计画调节科 合作系统推进室　　E-mail: upki@nii.ac.jp
Inquiry: Inter-Universities System Office, Planning and Coordination Division, Development and Operations Department

高端学术信息基础设施（CSI）的构筑 Construction of Cyber Science Infrastructure (CSI)

为了进一步促进日本的学术研究和教育活动，增强国际竞争力，与各所大学进行合作，构筑高端学术信息基础设施（Cyber Science infrastructure：CSI）。

The National Institute of Informatics (NII) is promoting the construction of the Cyber Science Infrastructure (CSI) through cooperation with universities and other organizations, in order to promote Japan's academic research and educational activities and to further strengthen whose international competitiveness.
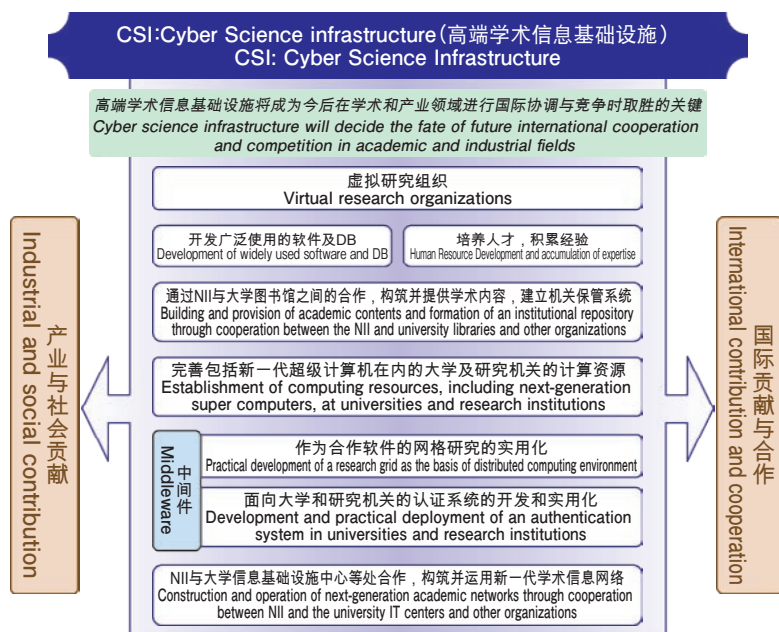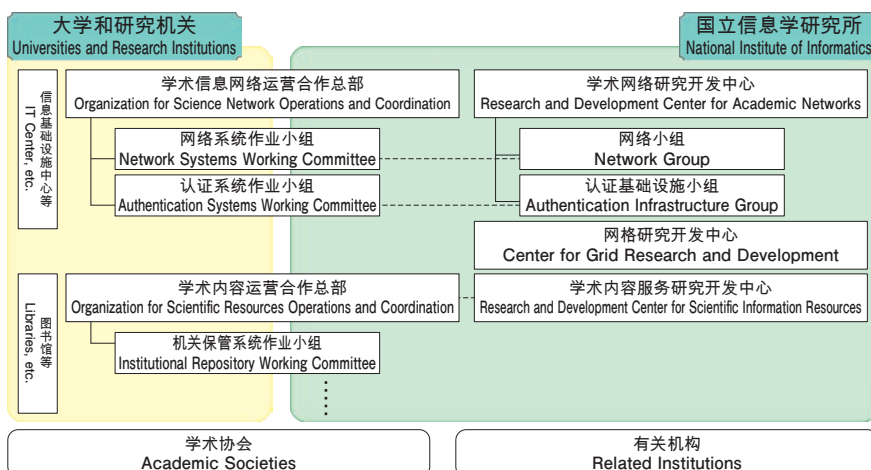

在CSI的框架中将扩展以往展开的各项开发项目，并将工作重点放在以下三点。
1. 通过NII与大学信息基础设施中心等的合作，完善新一代学术信息网络、全国性电子认证基础设施及网格环境。
2. 通过NII与大学图书馆等的合作，完善新一代学术内容的基础设施。
3. 创造未来价值创造开发型的全国信息学研究组织。

为了圆满地完成以上任务，NII将和大学等研究机构进行紧密的协作，把日本的学术界团结在一起，完善CSI的构筑体制，强有力地推动各项工作。

The NII put in strategic efforts to the following three areas, as expanding the various development projects and operations it has implemented to date within the framework of the CSI.
1. Establishment of next-generation academic networks, the infrastructure for grid environment nationwide authentication systems through cooperation between the NII, the university IT centers and other organizations
2. Establishment of the infrastructure for next-generation scientific information resources through cooperation between the NII, university libraries and other organizations
3. Formation of a nationwide informatics research alliance for future value creation

The NII, universities and other research institutions will collaborate and cooperate closely to facilitate the above, and Japan's academic community will work as one to prepare and vigorously promote the framework for advancing CSI construction.

问讯处：开发实业部 计画调节科　E-mail: plan@nii.ac.jp
Contact: Planning and Coordination Division, Development and Operations Department

构筑一个信息基础设施，目的在于通过大学与NII之间的紧密合作，建立并确保学术界必不可少的内容，赋予其附加价值并将其广泛传播。

NII, in close collaboration with universities, is attempting to generate and secure contents that are indispensable to the academic community, and to build an information infrastructure that will give added value to and broadly transmit these contents.

支援构筑学术机关保管系统　Support for Construction of Institutional Repositories

为了有助于完善新一代学术内容基础设施，与各机构进行合作，支援建设"学术机关保管系统"，收集并保存大学等研究机关产出的论文等研究成果，并将之面向学术界内外进行传播。

NII supports the construction of "institutional repositories" that harvest and store academic papers and other results of universities and other institutions, and transmit these both inside and outside the institutions to develop next-generation academic content infrastructure and collaborate with various institutions.

URL http://www.nii.ac.jp/irp/
E-mail: metadb@nii.ac.jp
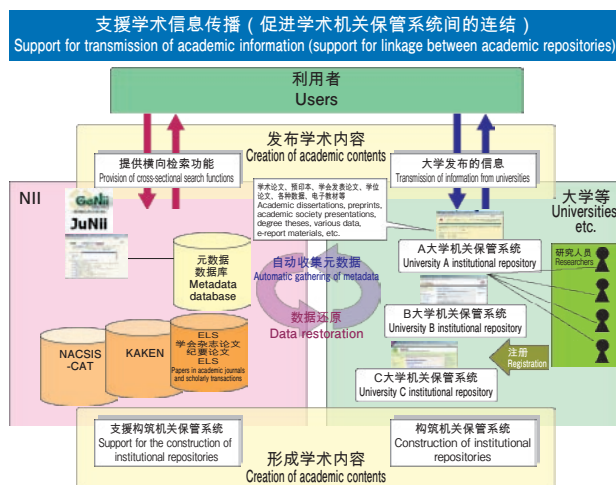
GeNii（NII学术内容门户）　GeNii: NII Academic Contents Portal

GeNii是综合提供学术研究中不可缺少的各种学术内容的门户服务。

目前，GeNii的服务内容分为四大部分：①论文信息：CiNii ②图书杂志信息：Webcat Plus ③研究成果信息：KAKEN ④专业学术信息：NII-DBR。在该门户中不仅可综合检索所有内容，而且可以根据各项内容的特征进行个别检索。原则上利用GeNii时不需要办理注册手续，可随意在因特网上使用，但是在论文信息（CiNii）中查阅部分资料时，需要办理注册手续（收费）。

GeNii is a portal site providing comprehensive information on academic research.

The site currently provides four content services: (1) academic papers (CiNii), (2) books/journals (Webcat Plus), (3) reports on Grants-in-aid research (KAKEN), and (4) database repository (NII-DBR). GeNii offers integrated search of all databases as well as individual search functions that maximize the features of each content type.

Although GeNii can be accessed free of charge through the Internet without a user registration, some of the for-fee contents in CiNii require institutional/individual registration.

URL http://ge.nii.ac.jp/
E-mail: geniiadm@nii.ac.jp

馆藏目录信息服务　Catalog Information Service

・目录系统 NACSIS－CAT: Cataloging System

该系统是为了支援学术研究活动而构筑的综合目录数据库，通过该系统可在瞬间查到全国各大学图书馆保存的学术资料。截止2006年3月末，该系统在已与1,146个单位相连接。

NACSIS-CAT is a system for constructing union catalog databases designed to provide at-a-glance information on academic information archived at university libraries across Japan. It serves as a useful tool for academic and research activities. As of the end of March 2006, 1,146 organizations were participated to NACSIS-CAT.

・图书馆馆际互借系统 NACSIS-ILL: Inter Library Loan System

为了便于向研究人员提供学术文献，该系统帮助开展各图书馆之间的文献复印及资料借用等互相利用业务。每年有120万件业务通过该系统完成。

The NACSIS-ILL system supports inter-library services for document reproduction and lending of literature to researchers. Some 1.2 million requests are handled.

URL http://www.nii.ac.jp/CAT-ILL/
E-mail:〈NACSIS-CAT〉catadm@nii.ac.jp
　　　　〈NACSIS-ILL〉illadm@nii.ac.jp

问讯处：开发实业部 内容课
Inquiry: Content Division, Development and Operations Department

研究生教育　Graduate Education

作为综合研究大学院大学的一部分开设信息学专业，进行研究生教育（为期五年及三年的博士课程）。该专业分为信息基础科学、信息基础设施科学、软件科学、信息媒体科学、智能系统科学和信息环境科学的六个领域，并设有用英语授课的国际研究生院课程，广泛招收国外的优秀人才。此外还协助多家大学开展硕士、博士课程教育。

NII joined the Graduate University for Advanced Studies and established the Department of Informatics to provide graduate education (5-year and 3-year Ph.D. programs). The department covers six research areas: Foundations of Informatics, Information Infrastructure Science, Software Science, Multimedia Information Science, Intelligent Systems, Science, and Information Environment Science. NII provides the international graduate courses and accepts excellent students from overseas. In addition, NII is cooperating in the provision of graduate education to graduate students pursuing Master's or Ph.D. degrees at many universities.

■ 学生人数 Number of Students （2006年 4月　April 2006）

		国内 Domestic	国外 Outside the country	共计 Total
综合研究大学院大学	The Graduate University for Advanced Studies	42	18(十个国家　10 countries)	60
其它研究生院	Other graduate schools	—	—	59

问讯处：国际研究合作部 研究合作科　E-mail: daigakuin@nii.ac.jp
Inquiry: Research Cooperation Division, International and Research Cooperation Department

合作研究、知识产权　Research Cooperation/Intellectual Property

国立信息学研究所积极利用外界资金开展各项研究活动，如利用科学研究费补助金进行研究，与民间机构等开展共同研究，以及接收外界委托进行研究等。同时努力创造、获得并管理知识产权，通过活用知识产权为社会作出贡献。

NII actively advances research with grants-in-aid for scientific research, with the private sectors and with external funds such as those for commissioned research, and also promotes contributing to society by utilizing intellectual property that is produced from research process and is managed by NII.

问讯处：国际研究合作部 研究合作科　E-mail: kaken@nii.ac.jp
Inquiry: Research Cooperation Division, International and Research Cooperation Department

普及研究成果　Dissemination of Research Results

为了广泛地将研究成果还原给社会，国立信息学研究所积极举办各种演讲会和研讨会，并出版发行各种书籍和机关杂志。

NII organizes lectures and symposia and publishes books and brochures in order to disseminate research findings widely to society.

- 研究所的对外开放／ Open House
- 举办的主要演讲会等／ Lectures and Symposia
  NII国际研讨会／ NII International Symposium
  轻井泽周六座谈会／ Karuizawa Saturday Salon
  国立信息学研究所市民讲座／ National Institute of Informatics Public Lectures
- 主要出版物／ Publications
  Progress in Informatics
  NII Technical Reportt
  信息研系列／ NII Series
- 主要机关手册／ Brochures
  国立信息学研究所要览(日文、英文)／ Outline of NII
  国立信息学研究所新闻(日文、英文)／ NII News

市民讲座(2005年 9月)

Progress in Informatics
（No. 2）

问讯处：国际研究合作部 宣传普及科　E-mail: seika@nii.ac.jp
Inquiry: Publicity and Dissemination Division, International and Research Cooperation Department

国际活动　International Activities

本研究所积极与国外的大学及研究机关签订协议，开展国际共同研究及研究人员的交流活动。在实业方面推动目录系统及GeNii等的国际化，为促进全球规模的学术信息流通，推动标准化活动作出贡献。

NII promotes memorandums of understanding with universities and research organizations abroad in order to facilitate international cooperative research and exchange of researchers. The Institute has contributed to international activities of scholarly information services such as NACSIS-CAT and GeNii and makes a meaningful contribution to promoting the worldwide dissemination of scholarly information and developing international standardization.

问讯处：国际研究合作部 国际科　E-mail: kokusai@nii.ac.jp
Inquiry: International Affairs Division, International and Research Cooperation Department

组织结构 Organization

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所长   Director General ──────────────┬── 顾问委员会   Advisory Board
                                      │
                                      ├── 运营会议   Administrative Council
        │
副所长   Deputy Director General
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研究领域 Research Division	● 信息学理论研究领域 ● 体系结构科学研究领域 ● 内容科学研究领域 ● 信息社会相关研究领域 ● Principles of Informatics Research Division ● Information Systems Archtecture Science Research Division ● Digital Content and Media Sciences Research Division ● Information and Society Research Division
研究设施 Research Center	● 网格研究开发中心 ● 联想信息学研究开发中心 ● 战略研究项目创造中心 ● 学术网络研究开发中心 ● 学术内容服务研究中心 ● Center for Grid Research and Development ● Research and Development Center for Informatics of Association ● Strategic Research Projects Incubation Center ● Research and Development Center for Academic Networks ● Research and Development Center for Scientific Information Resources
研究合作开发总部 Organization for Management and Outside Collaboration on R&D	● 学术信息网络运营合作总部 ● 学术内容运营合作总部 ● 未来价值创造型信息学研究组织 ● Organization for Science Network Operations and Coordination ● Organization for Scientific Resources Operations and Coordination ● Organization for Value Creation in informatics
合作研究部门 Collaborative Research Unit	
开发实业部 Development and Operations Department	● 计划调节科 ● 网络科 ● 内容科 ● Planning and Coordination Division ● Network Division ● Content Division
管理部 Administration Department	● 总务科 ● 会计科 ● General Affairs Division ● Budget and Accounts Division
国际研究合作部 International and Research Cooperation Department	● 研究合作科 ● 国际科 ● 宣传普及科 ● 研究成果普及推进室 ● Research Cooperation Division ● International Affairs Division ● Publicity and Dissemination Division ● Office for Public Relations Promotion
	● 计划推进室 ● 对外联络处 ● 信息资料中心 ● 国际学术信息流通基础设施构筑事业推进室 ● 社会、产业界、学术界合作活动推进总部 ● Planning and Promotion Strategy Office ● Global Liaison Office ● Library ● SPARC Japan Office ● Organization for Promoting Cooperation with Society and Industry

设施 Facilities

学术综合中心 (东京都千代田区)   National Center of Sciences (Chiyoda-ku, Tokyo)

国立信息学研究所设在位于东京一桥的学术综合中心大楼内。大楼的一部分为一桥纪念讲堂等会议用设施，用于举办由各国立大学等单位召开的国际会议及研究集会。

NII is located in the National Center of Sciences at Hitotsubashi, Tokyo. This building has some meeting rooms including, Hitotsubashi Memorial Hall, which are used for international meetings and workshops organized by national universities and academic societies.

网格研究开发推进基地 (东京都千代田区)   Center for GRID Research and Development (Chiyoda-ku, Tokyo)

为了推动网格研究，在靠近学术综合中心的另一幢大楼里设立了网格研究开发中心，加强了产业界、学术界、政府的三方合作体制。

In order to develop grid research, the center is located in a building near the National Center for Sciences, and the Collaborative Center for Research Grid has been established there. Closer cooperation among the government, and the academic and private sectors is expected at the Center.

千叶分馆 (千叶市稻毛区)   Chiba Annex (Inage-ku, Chiba City)

在东京大学生产技术研究所千叶试验场内修建了一栋电子计算机楼，配置了各种计算机系统，用于学术信息系统的运营，并提供各种学术信息服务。同是还设置了各种有关学术信息网络的机器。

The Chiba Annex is located in the Chiba Experiment Station of the Institute of Industrial Science of the University of Tokyo as a facility for computer systems and networking equipment, which are used to operate science information system and provide science information services.

国际研讨中心 (长野县轻井泽町)

International Seminar House for Advanced Studies (Karuizawa, Nagano Prefecture)

作为国际研究交流的场所，该中心设有会议室和住宿设施，用来举办国际会议、研讨会和培训，供各大学等广泛使用。

This house was built as a venue for international research exchange. It has a seminar room and accommodations and other facilities, which can be widely utilized by universities and research organizations to organize international meetings, seminars, and training.