

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

大学共同利用機関法人 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

2005-2006



国立信息学研究所成立于2000年4月。本研究所的主要工作是进行有关信息学的综合研究，同时作为大学共同利用机关，为促进学术信息的沟通，积极开发和完善各项先进基础设施。展望未来，国立信息学研究所广泛开展了从基础到应用的各项研究开发活动，其内容涉及到网络、软件、多媒体等多项信息相关领域。同时注重与全国各地的大学、国立研究机构及民间企业的研究所之间进行合作，力争综合性地推动信息学研究。

The National Institute of Informatics (NII) was founded in April 2000 as an inter-university research institute to conduct comprehensive research on informatics and develop an advanced infrastructure for disseminating scholarly information. NII covers a broad range of R&D from the basics to the application of information-related fields such as networks, software and multimedia from a long-term perspective, and at the same time, seeks a comprehensive approach to advancing informatics research by working closely together with universities, national research institutes, and private research institutions.

特色 Features of NII

从基础到应用，开展综合性研究

Comprehensive research from the basic to the applied

跨学科研究

Interdisciplinary approach

产业界、学术界、政府的三方合作

Partnership with industry, government and academic sector

国际性研究活动

International research activities

强化学术信息基础设施

Development of an infrastructure for scholarly information

开展研究生教育(博士课程)

Graduate education activities (Ph.D. programs)

“信息学”是一门围绕信息而展开的综合性学科，其研究范围广泛，不仅包括信息科学和信息工程，而且包括自然科学和人文社会科学，同时是所有学术领域的基础。国立信息学研究所拥有由三十七个部门构成的七大研究领域，以及由八个研究室构成的两个研究设施。在开展各种国际水平的研究的同时，致力于为信息社会培养具有高度专业知识和领导能力的人材。

“Informatics” is an interdisciplinary information-related research domain that covers information science and engineering, as well as natural science, the humanities and social sciences serving as the foundation of all types of scientific fields. NII has 37 research units under 7 research divisions and 8 laboratories under two research centers. NII conducts research on a variety of fields at an international level, and trains the personnel with highly qualified profession and leadership for the information society.

信息学基础研究领域

Foundations of Informatics Research Division

从计算论、信息数理、符号媒体论、认知、生命科学等多种角度来进行有关信息的基础研究，致力于形成信息学的基本概念和理论。

The division conducts a variety of research on basic information concepts and theory, including computing theory, mathematical informatics, symbolic and media reasoning, cognitive science and bioinformatics.

- 算法基础研究部门 ● 信息数理研究部门 ● 符号科学研究部门 ● 认知科学研究部门
- 量子计算研究部门 ● 生命信息科学研究部门*
- Foundations of Algorithms ● Mathematical Informatics ● Symbolic Reasoning ● Cognitive Science
- Quantum Computing ● Bioinformatics*

信息基础设施研究领域

Infrastructure Systems Research Division

开展各项研究活动，旨在通过利用高性能计算机系统、高速高性能网络、多种数字内容流通以及信息暗号技术，实现安全的信息通信系统运营，开创维护信息化社会的新型基础设施。

The division aims to represent a new foundation for the information society of the future through conducting research, including high-performance computing, high-speed and functional network, commerce of digital contents (d-commerce) and cryptography for information communication.

- 计算机体系结构研究部门 ● 网络体系结构研究部门 ● 高性能网络研究部门 ● 信息流通基础设施研究部门
- 暗号信息研究部门 ● 高端计算研究部门 ● 网络安全研究部门*
- Computer Architecture ● Network Architecture ● Functional Network ● Information Networking
- Cryptography ● High-End Computing ● Network Security*

软件研究领域

Software Research Division

针对构成信息处理核心部分的软件的各种概念开展研究活动。从记述语言、处理系统、开发方法等各侧面来进行系统性考察，致力于创造出崭新的软件理念。

The division is involved in research on various software concepts that are the core of information processing. It is performing a systematic examination of description languages, processing systems and development methods in order to create entirely new software concepts.

- 程序语言研究部门 ● 软件工程研究部门 ● 数据工程研究部门 ● 分散综合处理研究部门
- 实时处理系统研究部门 ● 高可靠性软件研究部门* ● 大型软件研究部门*
- Programming Languages ● Software Engineering ● Data Engineering ● Distributed Processing
- Real-time Software ● Software Reliability* ● Large-scale Software*

信息媒体研究领域

Multimedia Information Research Division

研究在表达、分析及检索文本、图像、语音等各种媒体时的有效处理方法，以此综合性考察人类与信息媒体的关系。

The division conducts research on cutting-edge methodology and systems implementation for representation, analysis, processing and retrieval of various media like text, audio and visual contents. This research also improves comprehensive understandings of the relationship between humans and information media.

- 图像信息处理研究部门 ● 综合媒体处理研究部门 ● 信息检索研究部门 ● 计算机视觉研究部门*
- Image Processing ● Multimedia Integration Processing ● Information Retrieval ● Computer Vision*

智能系统研究领域

Intelligent Systems Research Division

通过分析人类及自然界的各种智能活动, 研究开发可进行智能活动的系统、以及计算机和人类可携手解决各种难题的系统。致力于构筑能够支援并代替人类智能活动的系统。

The division is analyzing the various intelligent activities performed by people and other beings in the natural world in order to further research on systems capable of intelligent activity and computers that can effectively interact with people. The ultimate objective is to create systems that support or carry out intelligent human activities on our behalf.

- 知识处理研究部门 ● 计算智能研究部门 ● 人与机械共生研究部门 ● 机器人研究部门*
- Knowledge Systems ● Computational Intelligence ● Human-Machine Symbiosis ● Robotics*

人与社会信息研究领域

Human and Social Information Research Division

研究人类与社会环境中的信息问题。就信息的利用方法及社会、制度方面的各种问题进行考察, 致力于从人文、社会科学的角度出发, 推动信息学的系统化。

The division conducts research on information issues in the human and social environment. By examining how information is used and various social and systematic issues related to information, the division is attempting to create a system for informatics research from the perspective of the humanities and social sciences.

- 信息管理学研究部门 ● 信息利用学研究部门 ● 信息图书馆学研究部门 ● 信息制度论研究部门
- Information Management ● Information Use ● Library Information ● Information Institution

学术研究信息研究领域

Research Information Research Division

研究信息在学术研究中的作用, 以及让信息有效流通的系统。推动“学术信息基础设施的高度化”, 力争确立为学术研究服务的信息学。

The division performs research on the role of information and how information can be distributed in academic research area more effectively. The division is striving to advance the scholarly information base in order to provide the informatics needed for academic research.

- 人文社会领域研究信息研究部门 ● 理工领域研究信息研究部门 ● 生物领域研究信息研究部门
- Humanities and Social Sciences Information ● Science and Engineering Information ● Biosciences Information

实证研究中心

Research Center for Testbeds and Prototyping

作为实证性共同研究的核心组织, 为各研究机构提供参与项目的场所。通过仅由单独研究领域难以完成的试验床的开发以及原型的试制, 将研究成果实用于学术信息基础设施中。

The center provides the venue for the various research organizations to participate in projects that become the core of research collaboration. By developing testbeds and prototypes that are difficult for individual research divisions to develop, the center is helping the results of research to be utilized in the academic information infrastructure.

- 实证研究推进室 ● 共同研究计画推进室 ● 超高速网络研究室*
- 高质联网研究室* ● 全文本内容研究室* ● 虚拟图书馆研究室*
- Office for Promotion of Research Projects ● Office for Cooperative Research Programs
- High-Speed Network Laboratory* ● High Quality Networking Laboratory* ● Full-Text Contents Laboratory*
- Virtual Library Laboratory*

信息学资源研究中心

Research Center for Information Resources

该研究设施的主要目的是推进以内容为中心的有关信息资源的研究, 收集并提供推动研究所需的信息资源, 开展利用信息资源的共同研究。本中心将与研究所内的各部门、大学及产业界共同努力, 促进研究工作。

The center promotes research related to information resources with a focus on content. It collects and provides the required information resources for research and promotes joint research on the use of information resources. Promotion of research is performed in cooperation with organizations within NII, at university and in industry.

- 资源构筑利用推进室 ● 数据收集研究室*
- Office for Research Coordination and Promotion ● Data Collection Laboratory*

在研究生教育方面的贡献

Graduate Education

作为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(博士课程)。该专业分为信息基础设施科学、软件科学、智能系统科学和信息环境科学的四个领域,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材。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 (later part of Ph.D. program). The department covers four research areas; Foundations and infrastructure science, Software 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 at many universities pursuing Master's or Ph.D. degree.

■ 学生数 Number of Students

(2005年4月 April 2005)

	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	34	22 (九个国家 9 countries)	56
其它研究生院 Other graduate schools	—	—	37

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



大型项目 Big Project at NII

国家研究网格营造项目 (NAREGI)

NAREGI: National Research Grid Initiative



本项目是为了营造广域分散型研究用大规模计算环境,由产业界、学术界、政府共同合作实施的一个大型项目,旨在推动超高速网格用软件基础设施及超高速网络技术的研究和开发。

NAREGI is a collaboration project conducted through the cooperation of industry, academia, and government for the promotion of research and development of an ultrahigh-speed grid software infrastructure and ultrahigh-speed network technology for realizing a large-scale, wide-area, dispersed computing environment for research purposes.

URL <http://www.naregi.org/> 问讯处: 网格合作研究中心 E-mail: office@grid.nii.ac.jp
Inquiry: Collaborative Center for Research Grid

国际学术信息流通基础设施强化事业 (SPARC / JAPAN) International Scholarly Communication Initiative

通过加强日本的各学术协会发行的英文学术论文杂志的电子化和国际化,为改善学术信息流通的国际化基础设施作出贡献,同时力争使国内研究成果得到广泛普及。国立信息学研究所通过与日本的各学术协会、大学图书馆、科学技术振兴机构(JST)、欧美的SPARC等机关进行合作,致力于确立一个新的体制,该体制将不仅使日本的学术协会发行的学术杂志在国际上得到高度评价,并且在经济方面可维持电子学术杂志的发行。

The project for strengthening the electronic journals of the scholarly publications of Japan's academic societies, with a view to keeping in the hands of Japanese researchers the outstanding research results that are currently published abroad and of further promoting the international dissemination of research results. The NII has promoted the project in collaboration with academic societies and university libraries in Japan, with the Japan Science and Technology Agency (JST), and with SPARC (USA, Europe), helping to establish a system enabling affordable electronic publication of internationally recognized Japanese academic journals.

URL <http://www.nii.ac.jp/sparc/> 问讯处: 国际学术信息流通基础设施强化事业推进室 E-mail: sparc@nii.ac.jp
Inquiry: Scholarly Communication Office

本研究所与各研究组织及研究人员密切合作，为推动各种研究成果的实用化，将人员组织和制度进行组编，同时力争完善。NII works closely with research divisions and researchers in its activities related to development and operations in an effort to help strengthen

学术信息网络 (超级SINET / SINET)

Science Information Network (Super SINET/SINET)

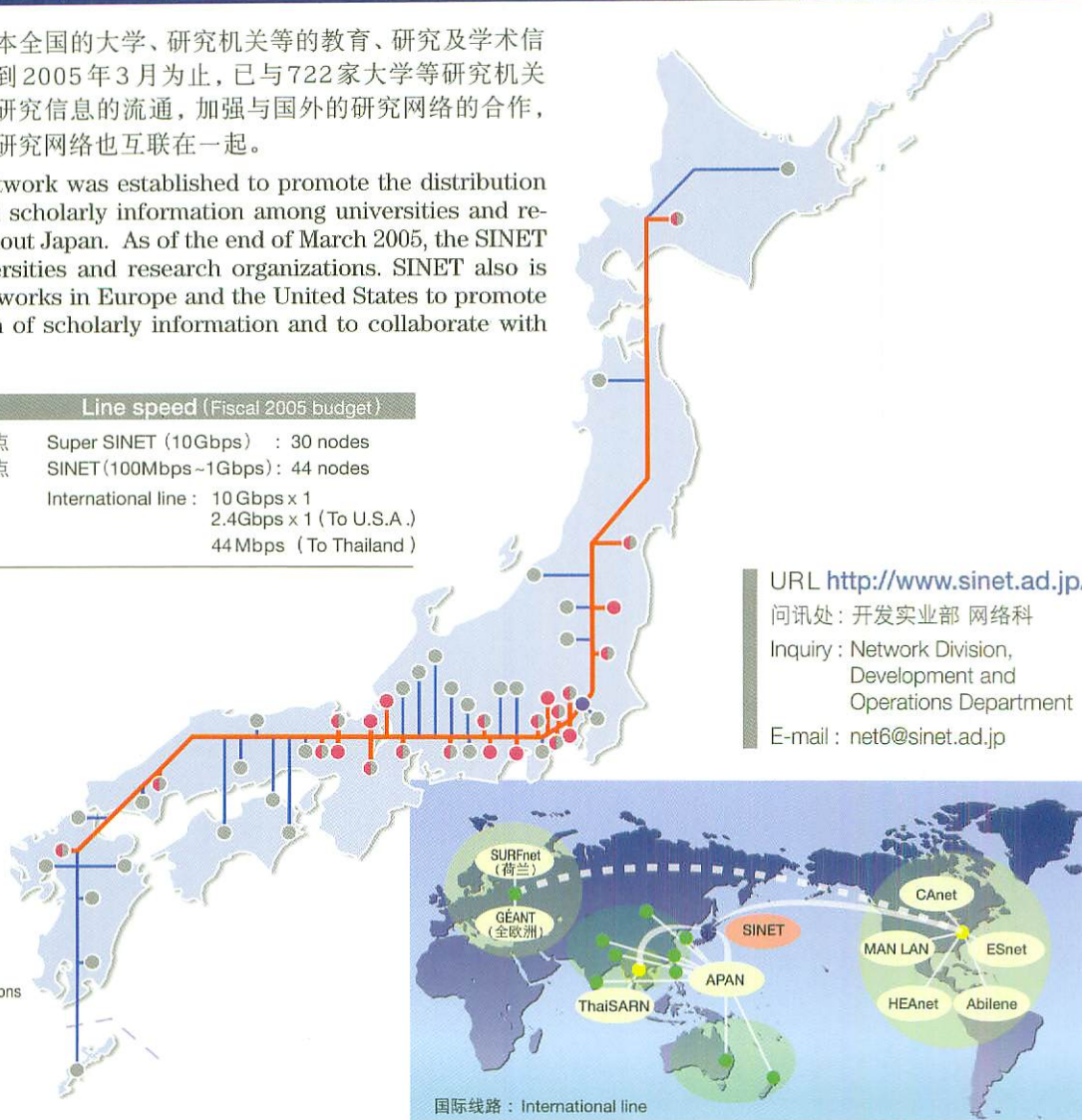
学术信息网络是旨在促进日本全国的大学、研究机关等的教育、研究及学术信息流通而建立的信息网络，到2005年3月为止，已与722家大学等研究机关连接。同时为了促进国际性研究信息的流通，加强与国外的研究网络的合作，该信息网络与欧美等各国的研究网络也互联在一起。

The Science Information Network 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 722 universities and research organizations. SINET also is connected with research networks in Europe and the United States to promote the international distribution of scholarly information and to collaborate with overseas research networks.

2005年度的线路速度	Line speed (Fiscal 2005 budget)
超级SINET (10Gbps) : 30 节点	Super SINET (10Gbps) : 30 nodes
SINET (100Mbps~1Gbps) : 44 节点	SINET (100Mbps~1Gbps) : 44 nodes
国际线路: 10Gbps x 1	International line: 10 Gbps x 1
2.4Gbps x 1 (至美国)	2.4Gbps x 1 (To U.S.A.)
44Mbps (至泰国)	44 Mbps (To Thailand)



- 超级SINET : Super SINET
- SINET : SINET
- 国立信息学研究所 : National Institute of Informatics
- 超级SINET节点机关 : Super SINET node organizations
- SINET节点机关 : SINET node organizations
- 超级SINET及SINET节点机关 : Super SINET and SINET node organizations



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。于2005年4月开始正式运营。

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 service portal providing comprehensive academic contents essential for various academic research. GeNii began official operation in April 2005.

GeNii presently provides four content services: (1) papers (**CiNii**), (2) books, journals, etc. (**Webcat Plus**), (3) research results (**KAKEN**), and (4) specialized academic information (**NII-DBR**). This portal offers a general search function for 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 procedure, some CiNii services for searches of papers require user registration (requiring a fee).



URL <http://ge.nii.ac.jp/>

问讯处: 开发实业部 内容科 E-mail: geniadm@nii.ac.jp

Inquiry: Contents Division, Development and Operations Department

并强化学术信息基础设施。

the foundation of scientific information while creating the necessary infrastructure to allow the results of research to be put in practical use.

馆藏目录信息服务

Catalog Information Services

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联合目录数据库,通过该系统可在瞬间查到全国各大学图书馆所保存的学术资料。该系统在2005年3月末已与1036个单位相连接。

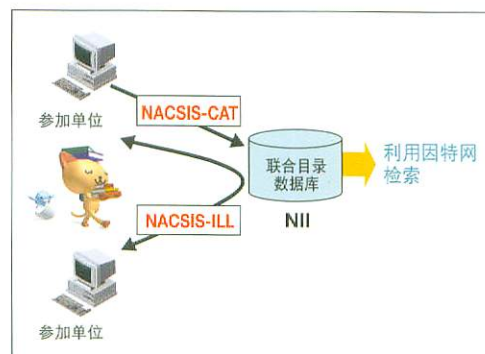
NACSIS-CAT is a system for constructing comprehensive catalog databases designed to provide at-a-glance information on academic information archived at university libraries across Japan. It serves as a useful tool for academic and research activities. As of the end of March 2005, 1,036 organizations were linked to NACSIS-CAT.

图书馆馆际互借系统

NACSIS-ILL : Interlibrary 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 literatures to researchers. Some 1.2 million requests are handled annually by this system.



URL <http://www.nii.ac.jp/CAT-ILL/>

问讯处: 开发实业部 内容科

Inquiry: Contents Division, Development and Operations Department

E-mail: <NACSIS-CAT> catadm@nii.ac.jp
<NACSIS-ILL> illadm@nii.ac.jp

※ NACSIS是国立信息学研究所(NII)的前身: 学术信息中心(NACSIS: National Center for Science Information Systems)的缩写。现在仍在服务项目名称中使用。
NACSIS stands for National Center for Science Information Systems which is a predecessor of NII. We keep names of services created at NACSIS.

其它服务项目

Other Services of NII

JuNii (大学信息元数据门户)

JuNii: Portal to Japanese Universities at NII

该门户是供日本国内的各大学和研究机关在网络上发表教育研究成果使用的学术信息专用门户(目前正在提供试验性服务)。JuNii is a portal Web site making available the academic output of Japanese universities, research institutions, etc. through the Internet (currently in trial service).

■ URL <http://ju.nii.ac.jp/> E-mail: metadb@nii.ac.jp

在线学术用语集

Sciterm : Online Scientific Terms

在因特网上提供文部科学省和各学术协会发行的《学术用语集》。

Sciterm is a portal Web site providing an Internet version of the Collection of Scientific Terms published by the Ministry of Education, Culture, Sports, Science and Technology and concerned academic societies.

■ URL <http://sciterm.nii.ac.jp/> E-mail: sciterm@nii.ac.jp

学术协会信息发布服务

Academic Society Home Village

提供链接各学术协会网页的链接集。/ Listing of links to the websites of academic societies in Japan.

■ URL <http://wwwsoc.nii.ac.jp/> E-mail: wwwsoc@nii.ac.jp

■ 问讯处: 开发实业部 内容科 / Inquiry: Contents Division, Development and Operations Department

支援构筑学术机关保管系统

Support for Construction of Institutional Repositories

学术机关保管系统是网络上的保管用书库,用来收集、保存并发表各大学及研究机关等的数字型学术成果。国立信息学研究所正全力支援学术机关保管系统的构筑。

An "institutional repository" is a digital collection on the Internet for collecting, preserving, and allowing access to the intellectual output of universities, research institution, etc. NII provides support for activities involved in the creation of institutional repositories.

问讯处: 开发实业部 内容科 E-mail: metadb@nii.ac.jp

Inquiry: Contents Division, Development and Operations 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、获得及管理知识产权，通过活用知识产权为社会作出贡献。

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

■ 问讯处：知识产权本部 E-mail: chizai@nii.ac.jp

■ Inquiry: Intellectual Property Office

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 the society.

● 研究所的对外开放 / Open House

● 举办的主要演讲会等 / Lectures and Symposia

公开演讲会、NII 国际研讨会 / Open Lecture, 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 / Progress in Informatics

NII Technical Report / NII Technical Report

信息研系列《丸善图书馆》/ NII Series "Maruzen Library"

信息学系列 / Informatics Series

● 主要机关手册 / Brochures

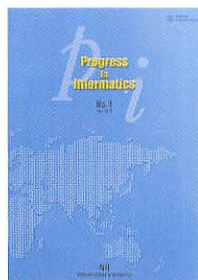
国立信息学研究所要览 (日文、英文)

/ Outline of NII

(Japanese and English)

国立信息学研究所新闻 (日文、英文)

/ NII News (Japanese and English)



■ 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 of memorandums of understanding with universities and research organizations abroad in order to facilitate international cooperative research and exchange of researchers. NII 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 an international standardization.

■ 问讯处：国际研究合作部 国际科 E-mail: int-op@nii.ac.jp

■ Inquiry: International Affairs Division, International and Research Cooperation Department

培训活动 Education and Training Programs

为了培养在大学及研究机构的学术研究支援活动中担任中坚力量的职员，国立信息学研究所开办了各种讲座，如有关学术门户及网络的专业讲座、有关构筑联合目录数据库的讲座等。同时基于人材培养是学术研究活动支援项目中的核心部分，本研究所与各有关部门合作，开展了各项培训活动。

We provide a variety of specialized training programs related to academic portals and networks as well as user-training programs on the construction of comprehensive catalog databases for those who play key roles in supporting academic and research activities at universities and research institutions. With the cooperation of other related organizations, we also offer a variety of training courses aimed at fostering human resources key to academic and research activities in the future.

■ URL <http://www.nii.ac.jp/hrd/>

■ 问讯处：开发实业部 计画调科 E-mail: edu@nii.ac.jp

■ Inquiry: Planning and Coordination Division, Development and Operations Department

组织结构 Organization



设施 Facilities

学术综合中心 (东京都千代田区) National Center of Sciences (Chiyodaku, 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.

网络研究开发推进基地 (东京都千代田区) Center for Grid Research and Development (Chiyodaku, 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合作研究中心,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 placed in the building near the National Center for Sciences and Collaborative Center for Research Grid is established there. The closer cooperation among government, academic and private sector is expected at the center.



千叶分馆 (千叶市稻毛区) Chiba Annex (Inageku, 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 a computer systems and networking equipments, which are used to operate the science information system and provide the science information services.

国际高级研讨中心 (长野县轻井泽町)

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



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

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.

地址



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