



2023

NAIST Introduction

*N a r a
I n s t i t u t e o f
S c i e n c e a n d
T e c h n o l o g y*

A Japanese national institute focused solely on graduate school education based on its research achievements in the leading fields of science and technology

Location

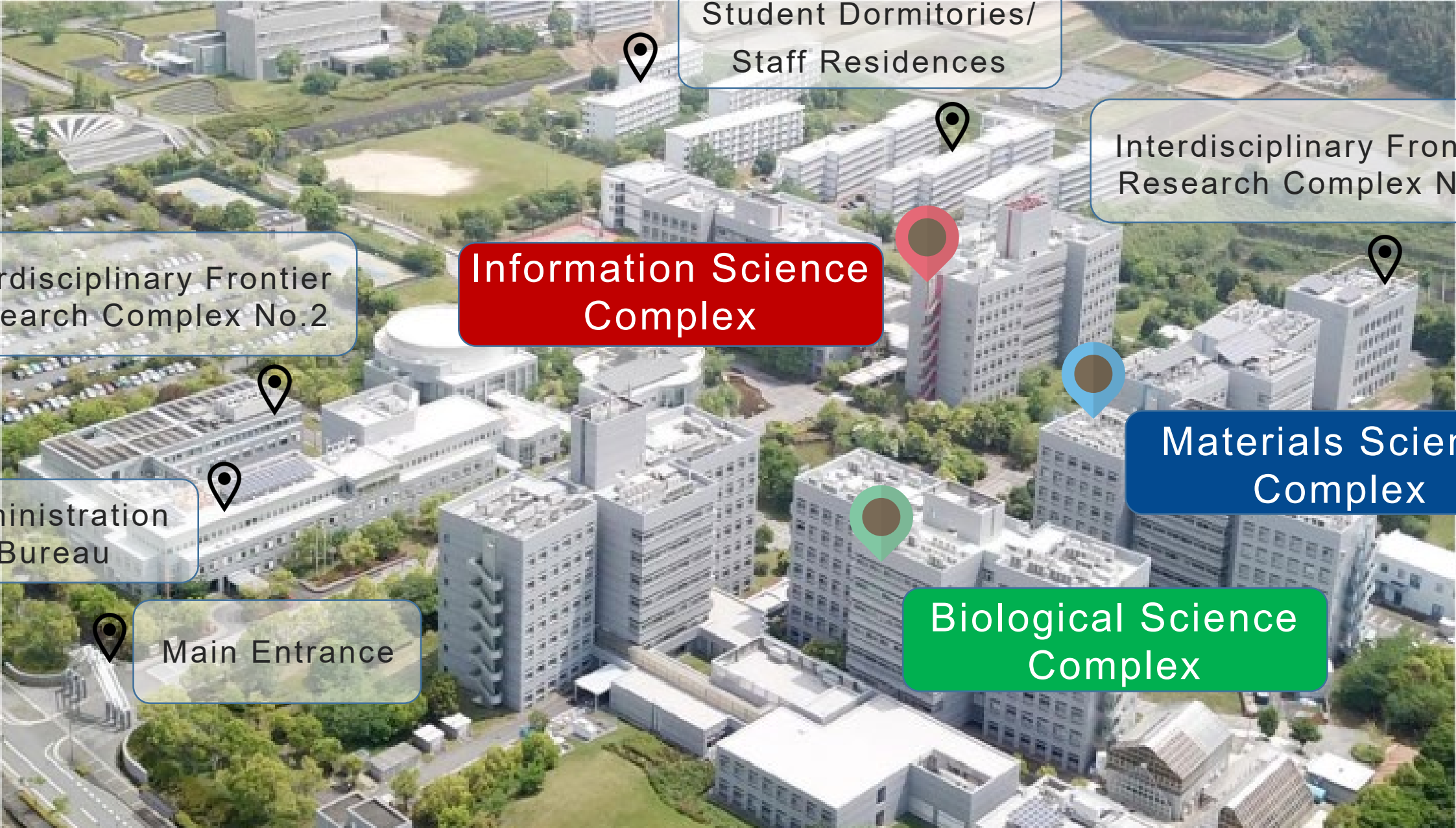
Nara Prefecture



- ▶ Home of **the first official capital** of Japan
- ▶ Rich history as a center for international trade and relations
- ▶ Conveniently located in close proximity to Kyoto and Osaka



Campus Map



Student Dormitories/
Staff Residences

Interdisciplinary Frontier
Research Complex No.1

Interdisciplinary Frontier
Research Complex No.2

**Information Science
Complex**

**Materials Science
Complex**

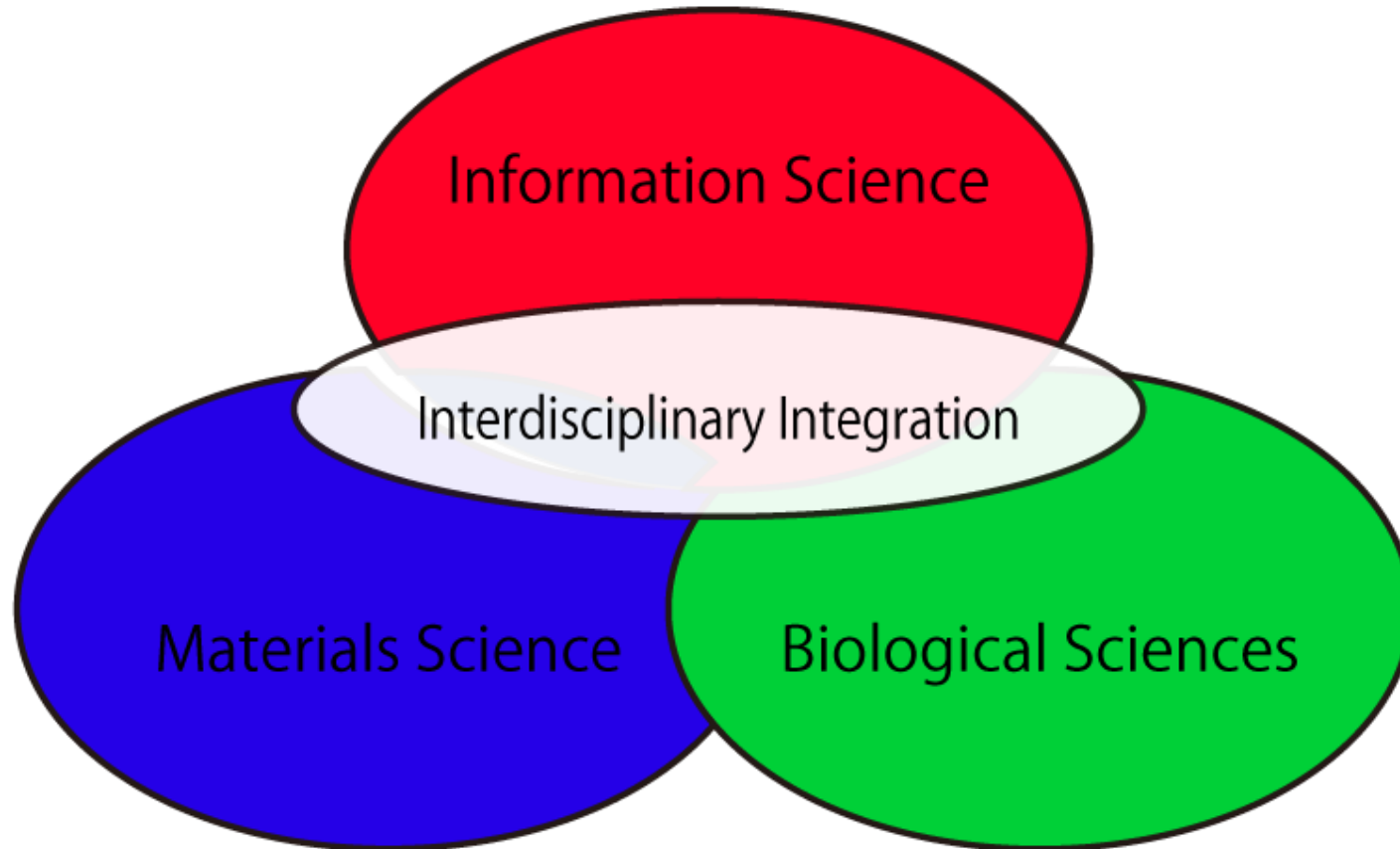
Administration
Bureau

**Biological Science
Complex**

Main Entrance


NAIST Beginnings

Founded in 1991 as a unique national university composed **solely of graduate schools**, NAIST focused on **three priority areas (Information, biological and materials science) and their fusion domains** of science and technology.



NAIST: 30 Years at a Glance

1991	NAIST established on October 1 st (Graduate School of Information Science)
1992	Graduate School of Biological Sciences and Information Technology Center established
1996	Graduate School of Materials Science established
2004	NAIST became a National University Corporation
2009	Center for International Relations established
2017	Data Science Center established
2018	Three original graduate schools merged to create Graduate School of Science and Technology (7 program structure)
2021	Center for Digital Green-innovation established
2022	Current 5 Education Program structure



*Graduate School of
Science and Technology*



Division of Information Science

The core focus of the division is on communication between society, people and computers, as well as the computing infrastructure to support sustainable growth and societal development.

The division offers a wide range of courses covering

- **Computer Science**
- **Media Informatics**
- **Applied Informatics**

Various practical programs in cooperation with collaborative laboratories and Universal Communications Laboratory are also offered .



Division of Biological Science

The Division of Biological Science develops cutting-edge research and education on a wide range of life science studies, technically based on molecular biology and cell biology.

Laboratories are generally divided into:

- **Plant Science**
- **Biomedical Science**
- **Systems Biology**



Division of Materials Science

New functional materials and new devices are essential to developing modern science and advancing technology.

The division is now promoting 'photonic nanoscience,' which focuses on understanding materials through their interaction with photons.

Division laboratories are grouped into 2 categories according to their areas of research focus.

- **Physics / Device engineering**

Physics and its application for photonics and material engineering

- **Chemistry / Bionano**

Chemistry and its application for photonics and material engineering

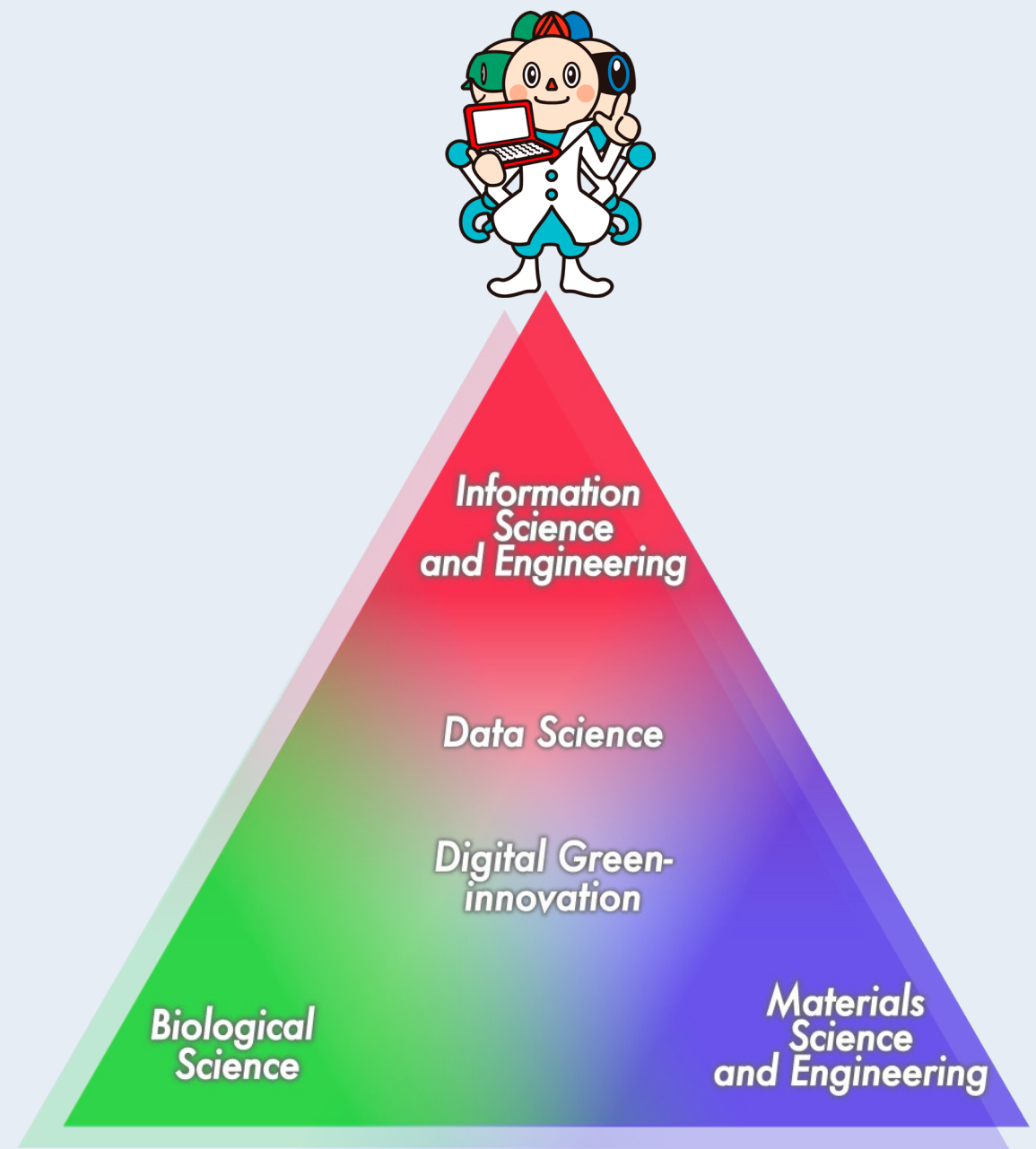


Five 

Education
Programs

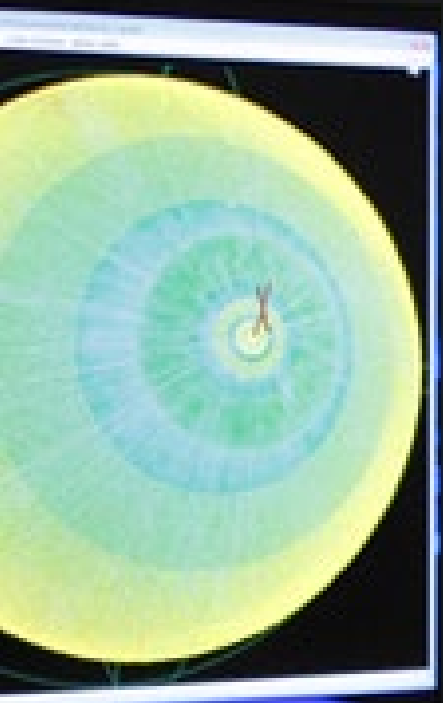
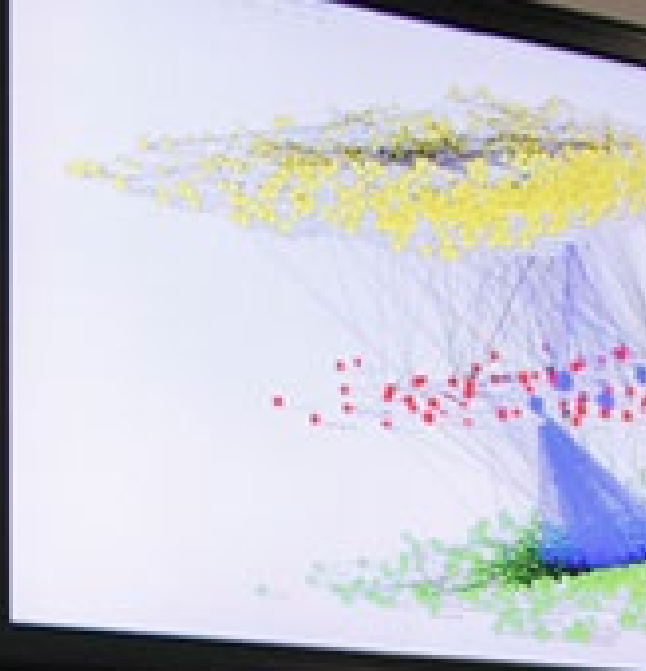
Multidisciplinary-focused Education Programs

The **five** Education Programs of the Graduate School of Science and Technology span the three original fields of research at NAIST (**information**, **biological** and **materials** sciences) and include the developing interdisciplinary fields that emerge independent of traditional academic divisions to pursue current trends in science and technology. All laboratories belong to one or more Education Program and students choose the type of degree they will pursue depending on their studies and the focus of their research.



Information Science and Engineering

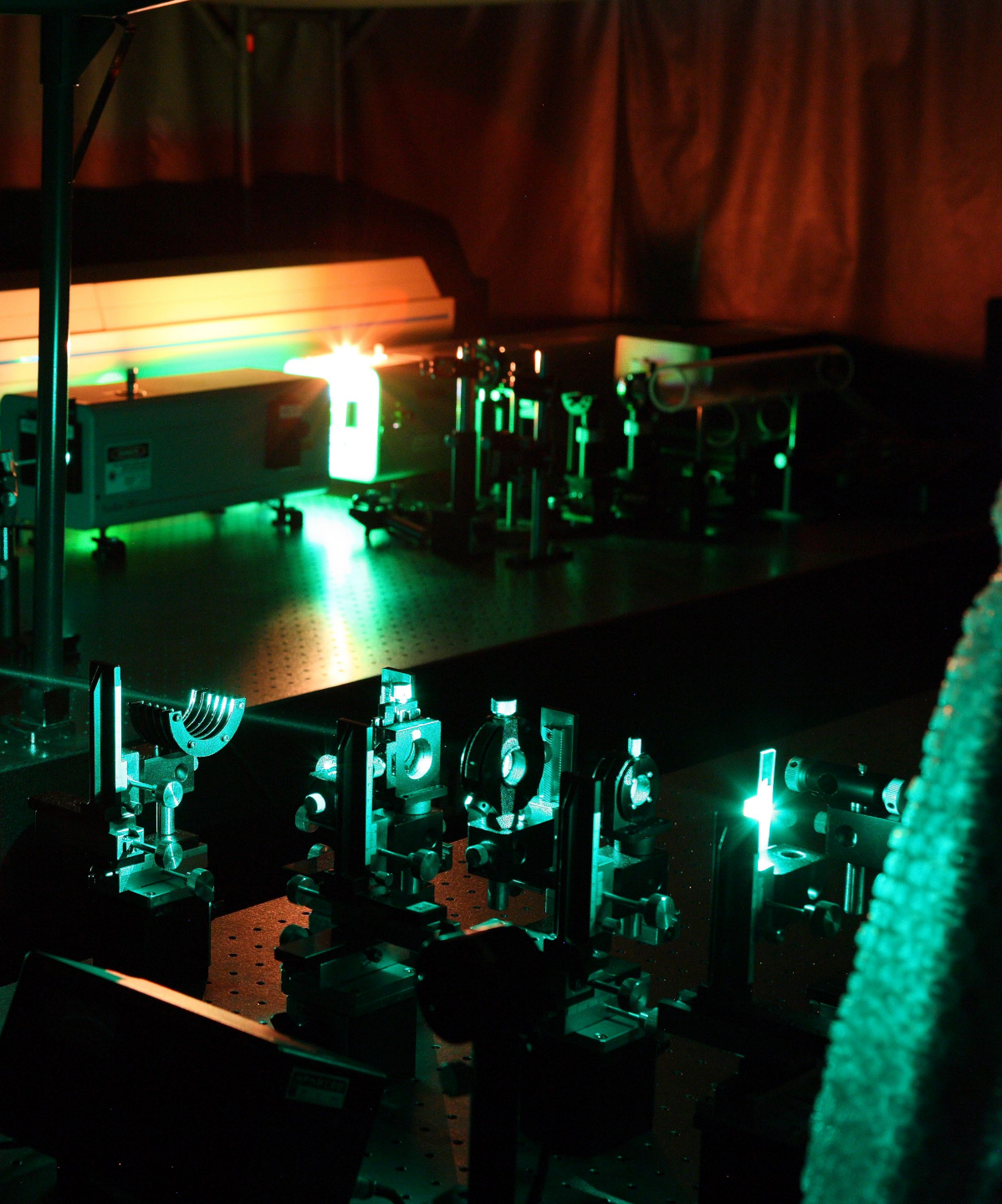
A focused program fostering students to support our dynamic advanced information society, implementing further achievements in diverse fields. This program cultivates specialized knowledge and skills in computer hardware/information network technology, computer/human interaction and media technology, and computer systems for robotics utilization.





Biological Science

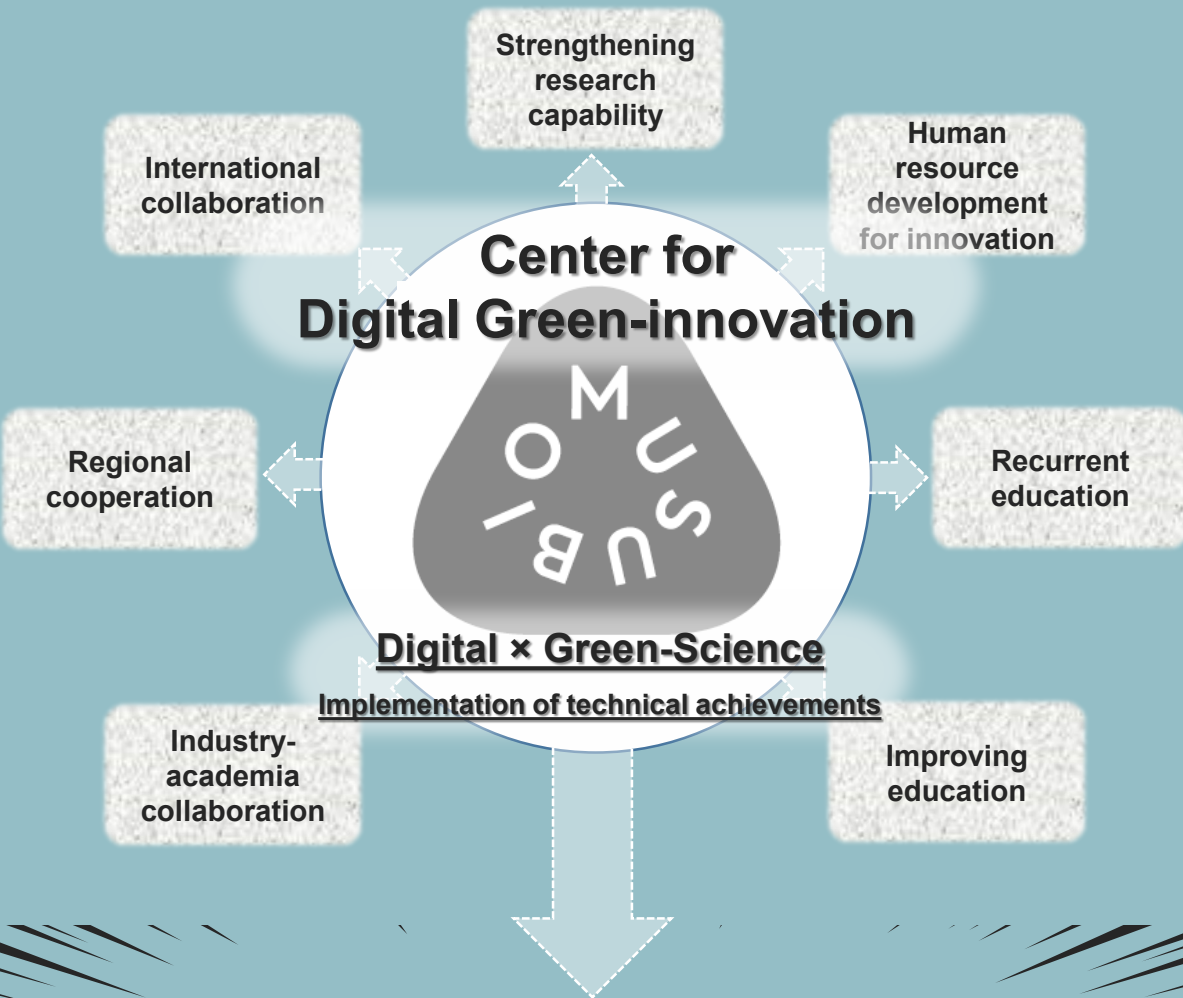
A focused biological science program which fosters students who are able to contribute to the development of humankind and the conservation of the global environment through research and development related to the environment, energy, food and natural resources, and human health and longevity by equipping them with cutting-edge knowledge and skills in a wide range of fields, from the basic principles of life phenomena to the diversity of living organisms in animals, plants, and microorganisms.



Materials Science and Engineering

A focused program fostering students with foundational knowledge of materials science and advanced knowledge to fully utilize their expertise in a program spanning solid state physics, device engineering, molecular chemistry, polymeric materials and bionano-engineering, and undertake next generation science and technology to maintain affluent living and support societal development.

Digital Green-innovation



Contribution to SDGs

- Solving environmental, food and energy problems
- Building a prosperous and sustainable society

An interdisciplinary program fostering students with a wide range of expertise in data- and AI-driven sciences in information, biological, and materials sciences, to find hidden 'value' and 'truth' through data processing, visualization, and analysis of huge amounts of data to contribute to science, technology, and societal development.

Data Science

An information, biological, and materials sciences interdisciplinary program which fosters students with advanced expertise in these three fields which support society and the economy, as well as comprehensive backgrounds to understand the adjacent interdisciplinary research fields, especially the interdisciplinary fields that encompass green and digital fields. These students can approach issues from various perspectives throughout society and will lead the utilization of digital green science and technology, which continues to develop in the green and digital fields, and innovation in society.





NAIST Numbers

International Student Enrollment

As of October 2022

- Belgium
- Czech Republic
- France
- Germany

- Netherlands
- Russia

16

- Canada
- Mexico
- USA

5

- Armenia
- Iran

3

- Bangladesh
- China
- India
- Indonesia
- Korea
- Laos
- Malaysia
- Myanmar

- Nepal
- Pakistan
- Philippines
- Taiwan
- Thailand
- Vietnam

259

- Brazil
- Columbia
- Jamaica
- Venezuela

9

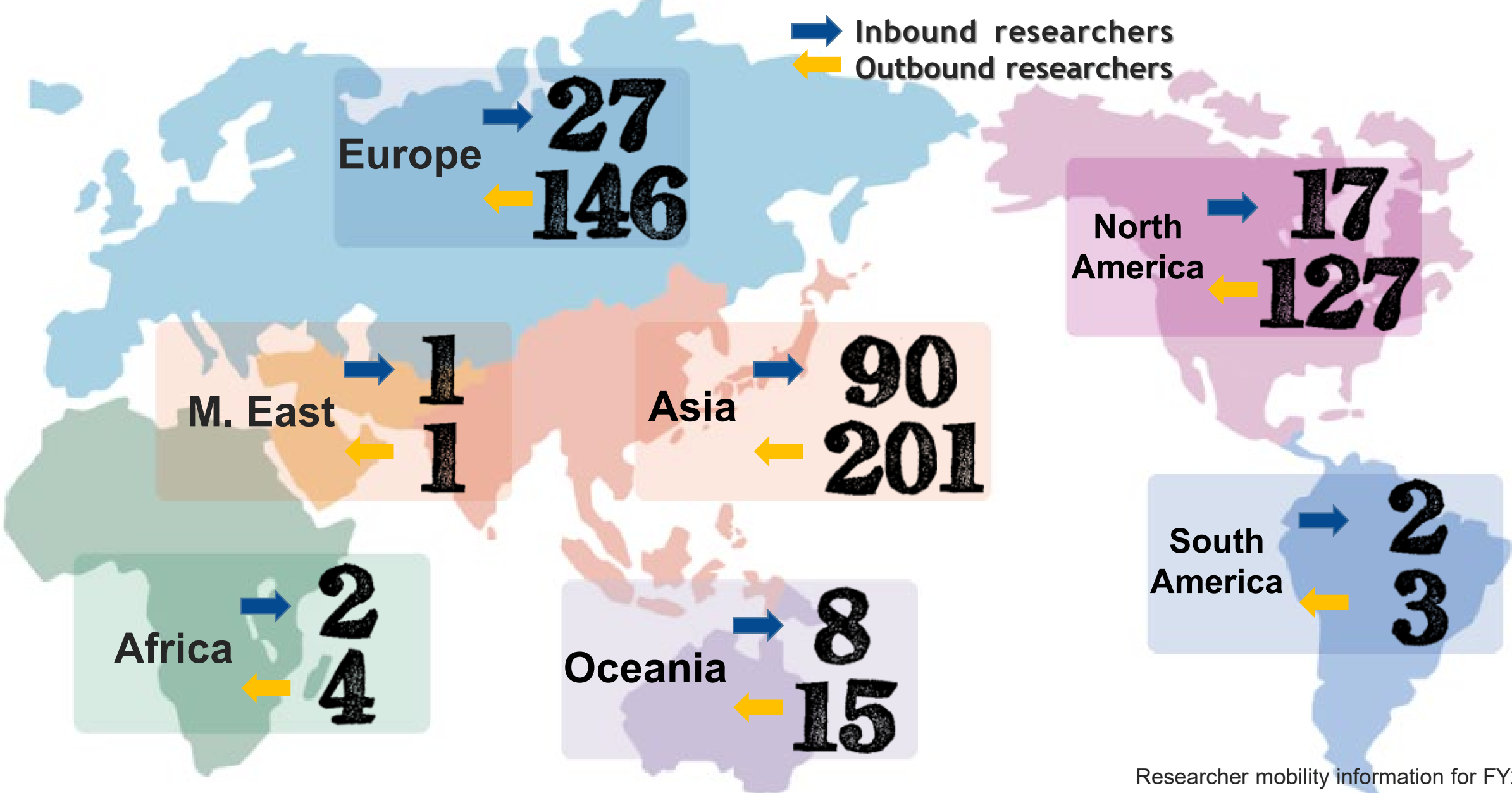
- Algeria
- Burkina-Faso
- Côte d'Ivoire
- Egypt
- Ethiopia
- Kenya
- Madagascar
- Mauritius
- Morocco
- Nigeria
- Sudan
- Tanzania
- Tunisia
- Uganda

17

Total : 309

Researcher Exchange

-Active research collaboration with global partners-



Academic Exchange Agreements

As of November 2022

110
28

institutions from
countries / regions

EUROPE **38**

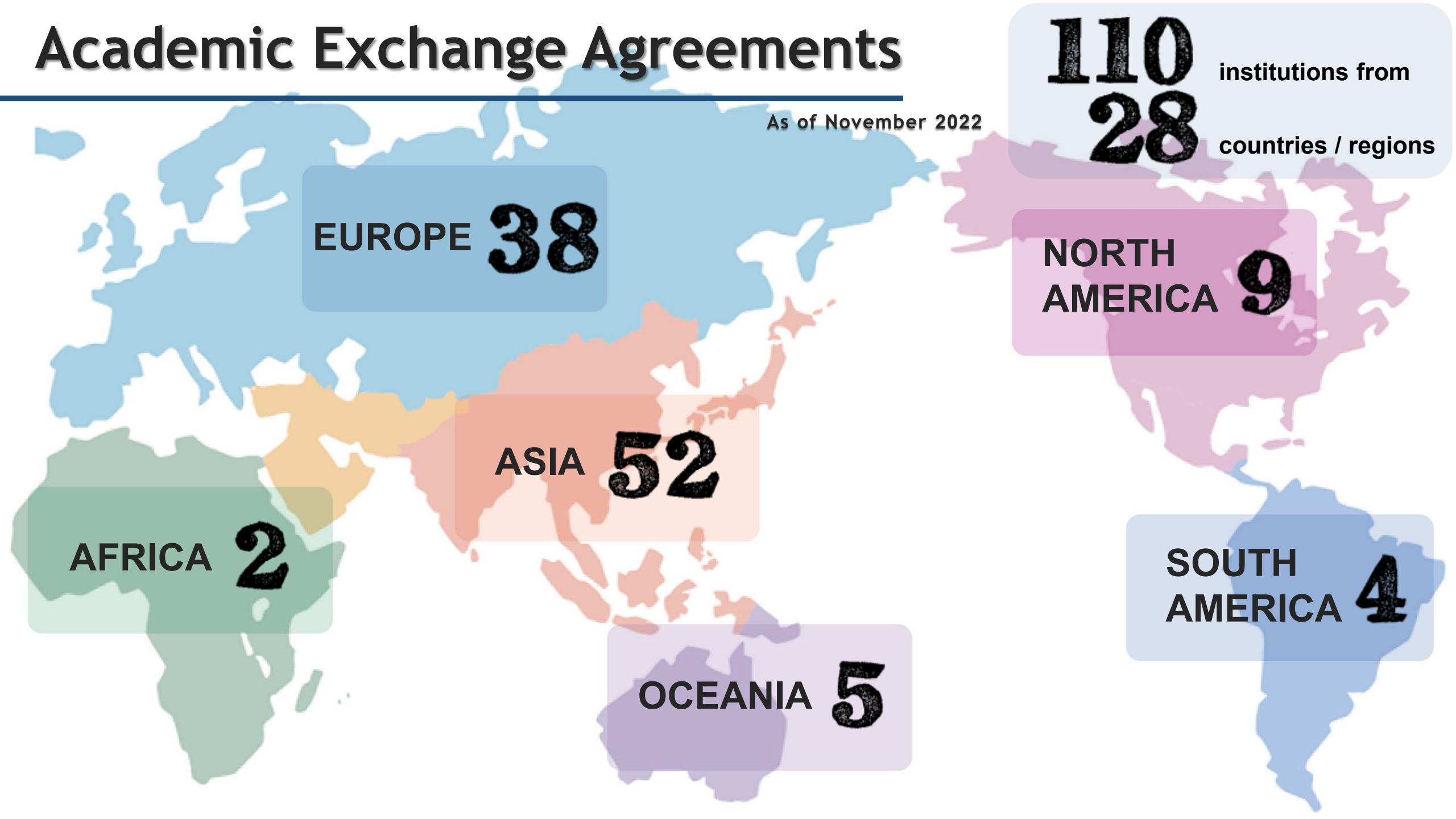
NORTH
AMERICA **9**

ASIA **52**

AFRICA **2**

OCEANIA **5**

SOUTH
AMERICA **4**



Academic Exchange Agreements

Asia

As of November 2022

China (9)

- ❑ Institute of Genetics and Developmental Biology, Chinese Academy of Sciences
- ❑ Tianjin University of Technology
- ❑ School of Chemistry and Chemical Engineering, Nanjing University
- ❑ Liaoning University
- ❑ Department of Computer Science, City University of Hong Kong
- ❑ Northeast Normal University
- ❑ School of Information Science and Engineering, Yunnan University
- ❑ College of Life Sciences, Nanjing Agricultural University
- ❑ School of Life Sciences, Nanjing University

Taiwan (4)

- ❑ National Yang Ming Chiao Tung University
- ❑ Institute of Biophotonics, National Yang-Ming University
- ❑ The National Taiwan University of Science and Technology
- ❑ National Cheng Kung University

Korea (2)

- ❑ Hanbat National University
- ❑ Graduate School of Electronics Engineering, Kyungpook National University

Vietnam (11)

- ❑ Institute of Biotechnology, Vietnam Academy of Science and Technology
- ❑ Institute of Materials Science, Vietnam Academy of Science and Technology
- ❑ Institute of Information Technology, Vietnam Academy of Science and Technology
- ❑ Hanoi University of Science, Vietnam National University
- ❑ University of Engineering and Technology, Vietnam National University
- ❑ Faculty of Electronics and Telecommunications, Ho Chi Minh City University of Science, Vietnam National University
- ❑ Vietnam National University Ho Chi Minh City, University of Information Technology
- ❑ Department of Electronic and Telecommunication Engineering, University of Science and Technology - The University of Danang, Vietnam
- ❑ Hue University of Sciences
- ❑ University of Science and Technology of Hanoi
- ❑ Posts and Telecommunications Institute of Technology Ho Chi Minh City Campus

Academic Exchange Agreements

Asia

As of November 2022

Thailand (5)

- ❑ Mahidol University
- ❑ Chulalongkorn University
- ❑ Kasetsart University
- ❑ Chiang Mai University
- ❑ King Mongkut's University of Technology Thonburi

Malaysia (5)

- ❑ University of Science, Malaysia
- ❑ University of Malaya
- ❑ University of Technology, Malaysia
- ❑ Universiti Tunku Abdul Rahman
- ❑ Universiti Kebangsaan Malaysia

Phillipines (2)

- ❑ Ateneo de Manila University
- ❑ University of the Philippines Diliman

Indonesia (8)

- ❑ Gadjah Mada University
- ❑ IPB University
- ❑ University of Indonesia
- ❑ Hasanuddin University
- ❑ Bandung Institute of Technology
- ❑ Jenderal Soedirman University
- ❑ Electronic Engineering Polytechnic Institute of Surabaya
- ❑ Faculty of Industrial Technology, Sepuluh Nopember Institute of Technology

India (4)

- ❑ Indian Institute of Science Education and Research, Thiruvananthapuram
- ❑ KIIT College of Engineering
- ❑ Indian Institute of Technology Jodhpur
- ❑ Indira Gandhi Delhi Technical University for Women (IGDTUW)

Bangladesh (2)

- ❑ Bangladesh University of Engineering and Technology
- ❑ School of Health and Life Sciences, North South University

Academic Exchange Agreements

Europe

As of November 2022

Germany (11)

- ❑ Faculty of Engineering, RheinMain University of Applied Sciences
- ❑ RWTH Aachen University
- ❑ Justus Liebig University Giessen
- ❑ Karlsruhe Institute of Technology
- ❑ Faculty of Engineering and Computer Science, University of ULM
- ❑ University of Regensburg
- ❑ Department of Informatics, Technical University of Munich
- ❑ Department of Electrical and Computer Engineering, Technical University of Munich
- ❑ Coburg University of Applied Sciences and Arts
- ❑ Faculty of Mathematics and Natural Sciences, Heinrich Heine University Düsseldorf
- ❑ DFKI (The German Research Center for Artificial Intelligence)

France (15)

- ❑ Paul Sabatier University
- ❑ Ecole Polytechnique
- ❑ Ecole Normale Supérieure Paris-Saclay
- ❑ Telecom SudParis
- ❑ Science and Technology, University of Lille 1
- ❑ École Supérieure d'Ingénieurs en Électrotechnique et Électronique (ESIEE) Paris
- ❑ École nationale supérieure d'ingénieurs de Caen (ENSICAEN)
- ❑ Telecom Paris (Telecom ParisTech)
- ❑ Sorbonne University
- ❑ University of Paris-Saclay
- ❑ Université de Rennes 1
- ❑ ESIGELEC
- ❑ Ecole Normale Supérieure de Lyon
- ❑ The University of Picardie Jules Verne
- ❑ University Bourgogne Franche-Comté
- ❑ Delft University of Technology

Academic Exchange Agreements

Europe

As of November 2022

Belgium (1)

- University of Louvain

Switzerland (1)

- Faculty of Science, University of Zurich

Italy (2)

- University of Cagliari
- University of Trento

Spain (1)

- University of Granada

Austria (1)

- Institute of Solid State Physics, Graz University of Technology

UK (2)

- University of Edinburgh
- Department of Statistical Science, University College London

Netherlands (2)

- Faculty of Science, Leiden University
- Faculty of Electrical Engineering, Mathematics and Computer Science
Delft University of Technology

Finland (1)

- Faculty of Medicine, University of Turku
RWTH Aachen University

Russia (1)

- The St. Petersburg State Polytechnical University

Academic Exchange Agreements

As of November 2022

North America
South America

Canada (2)

- ❑ Faculty of Science, University of British Columbia
- ❑ Queen's University at Kingston

U.S.A. (7)

- ❑ Biotechnology Institute, University of Minnesota
- ❑ University of California Davis
- ❑ The Regents of the University of Michigan on behalf of its Macromolecular Science & Engineering program
- ❑ University of Hawaii at Manoa
- ❑ University of California, San Diego
- ❑ Mississippi State University
- ❑ Lawrence Berkeley National Laboratory, Joint Genome Institute

Brazil (4)

- ❑ Universidade Federal de São Paulo
- ❑ The University of Sao Paulo Center of Nuclear Energy in Agriculture
- ❑ The University of Sao Paulo Higher School of Agriculture "Luiz de Queiroz"
- ❑ The University of Sao Paulo Institute of Mathematics and Statistics

Academic Exchange Agreements

As of November 2022

Africa
Oceania

Australia (4)

- ❑ University of Technology Sydney
- ❑ Macquarie University
- ❑ The University of Newcastle
- ❑ University of Adelaide

New Zealand (1)

- ❑ Unitec Institute of Technology

Kenya (1)

- ❑ University of Nairobi

Senegal (1)

- ❑ Cheikh Anta Diop University



NAIST *Rankings*

Domestic university rankings

~ Based on paper citations ~

NAIST is ranked:

2nd in the field of Biology and Biochemistry

1st in the field of Animal and Plant Studies

9th in the field of Chemistry

(From the domestic university 2023 ranking published by Asahi Shimbun newspaper)

NAIST's research activity

measured by Grants-in-Aid for scientific research (Kakenhi) and number of publications

National ranking	Institution	Grants-in-Aid (Kakenhi) per researcher (\$)	Number of publications per researcher (Original publication and review)
1	University of Tokyo	¥5,755,000 (\$42,007.30)	2.77
2	Nara Institute of Science and Technology	¥4,891,000 (\$35,700.73)	2.49
3	Kyoto University	¥4,062,000 (\$29,649.64)	2.19
4	Nagoya University	¥3,463,000 (\$25,277.37)	1.92
5	Osaka University	¥3,178,000 (\$23,197.08)	1.87
6	Tohoku University	¥3,034,000 (\$22,145.99)	1.80
7	Kyushu University	¥2,976,000 (\$21,722.63)	1.76

Top Plant and Animal Biology Universities in Japan as Compiled by Clarivate in April, 2022

~ Based on Top 1% Citation Papers ~

National ranking	Institution	Top 1% citation paper (Number)	Top 1% citation paper (Ratio)
1	*RIKEN	109	6.6%
2	University of Tokyo	98	2.1%
3	Kyoto University	52	1.2%
4	Nagoya University	44	3.0%
5	Okayama University	38	3.2%
6	*National Agriculture and Food Research Organization	34	2.9%
7	Tohoku University	34	2.3%
8	Hokkaido University	30	0.9%
9	Tsukuba University	26	1.8%
10	Nara Institute of Science and Technology	25	4.8%

※Not an educational institution

Top Computer Science universities in Japan compiled by Research.com in Dec, 2021

~ Based on H-index ~

World ranking	National ranking	Institution	Scholars (H-index=40 or higher)	Σ H-Index
58	1	University of Tokyo	108	6,668
223	2	Osaka University	78	5,125
272	3	Kyoto University	74	4,516
298	4	Tohoku University	60	3,426
340	5	Tokyo Institute of Technology	49	2,820
359	6	Nara Institute of Science and Technology	44	2,648
371	7	Waseda University	43	2,625
383	8	Nagoya University	40	2,217
474	9	Kyushu University	12	782
521	10	Muroran Institute of Technology	15	781

Top Chemistry universities in Japan compiled by Research.com in Dec, 2021

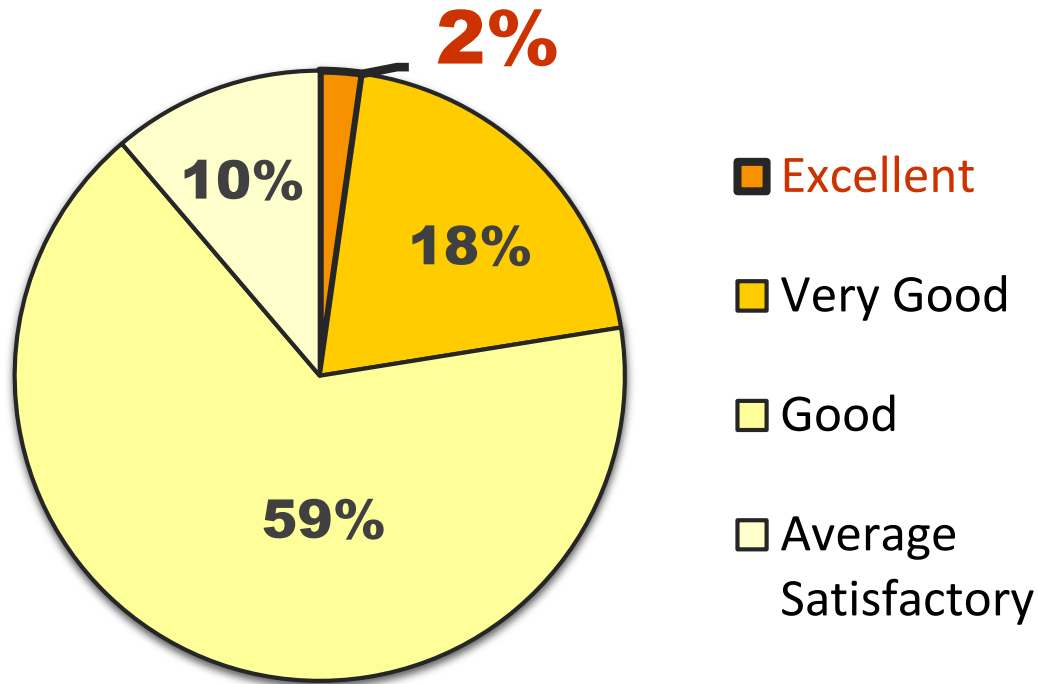
~ Based on H-index ~

World ranking	National ranking	Institution	Scholars (H-index=40 or higher)	Σ H-Index
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46	8	Hokkaido University	40	2,217
232	9	Tokyo University of Science	12	782
234	10	Hiroshima University	15	781
359	24	Nara Institute of Science and Technology	6	352

Interim (2016-2019) Evaluation of 89 National Universities

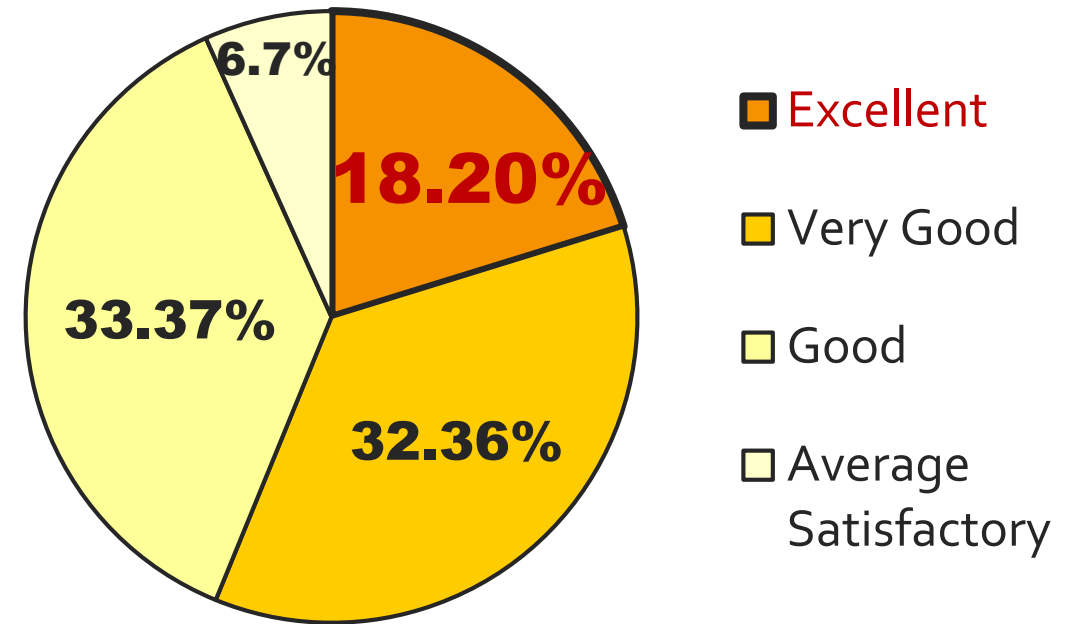
by Ministry of Education, Culture,
Sports, Science and Technology (MEXT)

1. Education



- **Nara Institute of Science and Technology**
- Tokyo University of the Arts

2. Research



- **Nara Institute of Science and Technology**

Flagship projects by the Ministry of Education, Culture, Sports, Science and Technology, Japan

◇Program for Promoting the Enhancement of Research Universities

(25 Million US dollars / 10 years) 2013-2022

One of 22 universities that obtained 10-year funding to promote research and international collaboration.

◇Top Global University Project

(8.7 Million US dollars / 10 years) 2014-2023

One of 37 universities that obtained special 10-year funding to enhance our global presence in higher education.

**NAIST is one of 17 acclaimed universities
selected for both projects.**

President's Vision 2030

~Co-create Tomorrow~



President's Vision

NAIST President, Dr. Kazuhiro Shiozaki, issued his vision for the future of NAIST based on its prominent achievements over the past three decades and centered upon the idea of “co-creation” of societal value through collaboration and exchange, as it fulfills its mission as a national postgraduate university to advance science and technology and create our future.

The Declaration of Co-creative Community

to enrich our campus environment through diversity

The Nara Institute of Science and Technology (NAIST) is a community that encompasses students, faculty and staff of diverse identities and backgrounds. As members of this community, we must create and maintain an environment where we all can study and work to our full potential in order for NAIST to continue its contributions to the development of science, technology and society.

*Thank you
for your attention!!*

