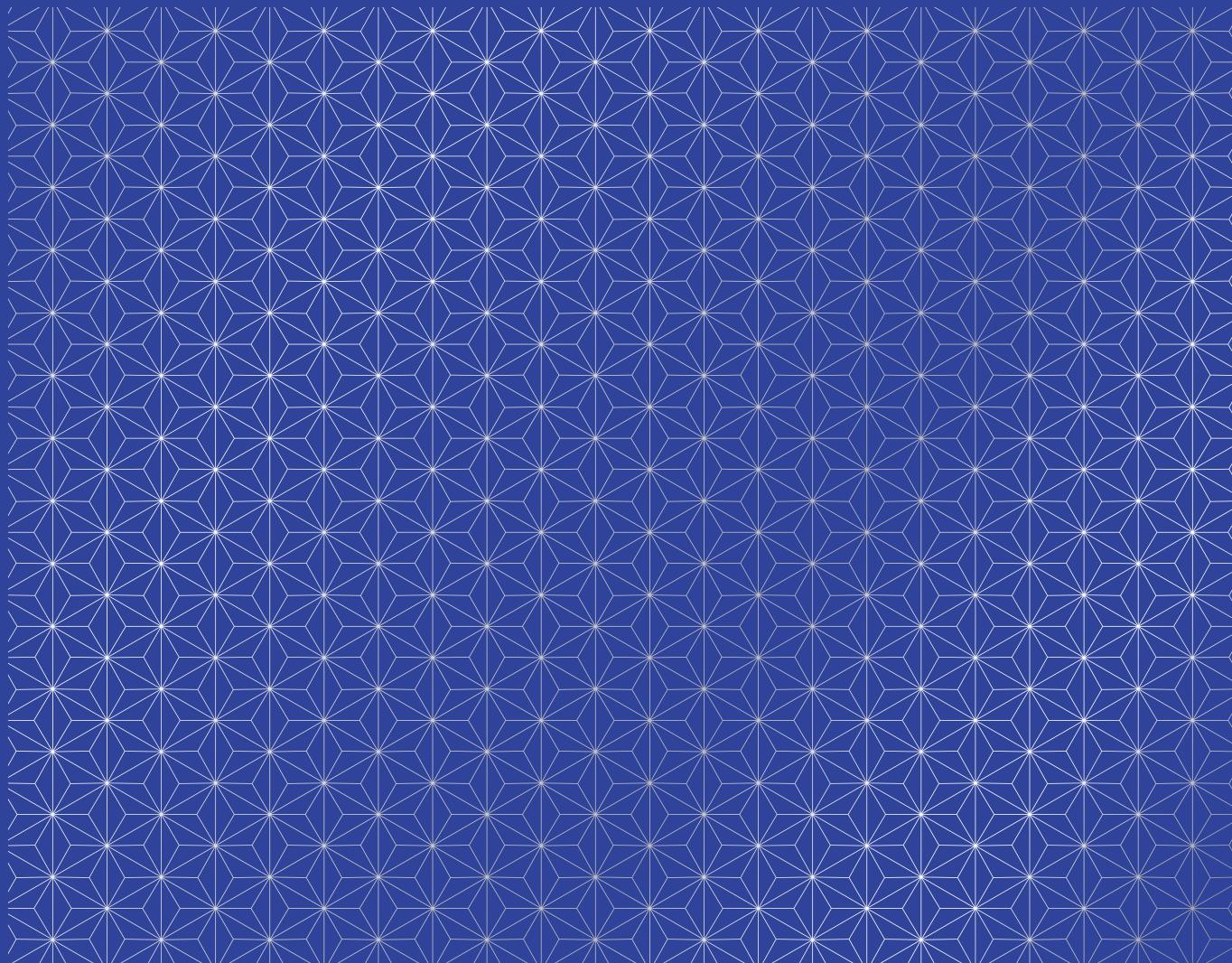


# OSAKA UNIVERSITY PROSPECTUS 2019

Portrait of the University



Osaka University at a Glance	<i>Where You Can do it all</i>	01
Research and Education	<i>Co-Creation with Society and for Society</i>	07
Global Engagement	<i>Strong Connections with International Partners</i>	17
Osaka University Basics	<i>A World-Leading Innovative University</i>	25

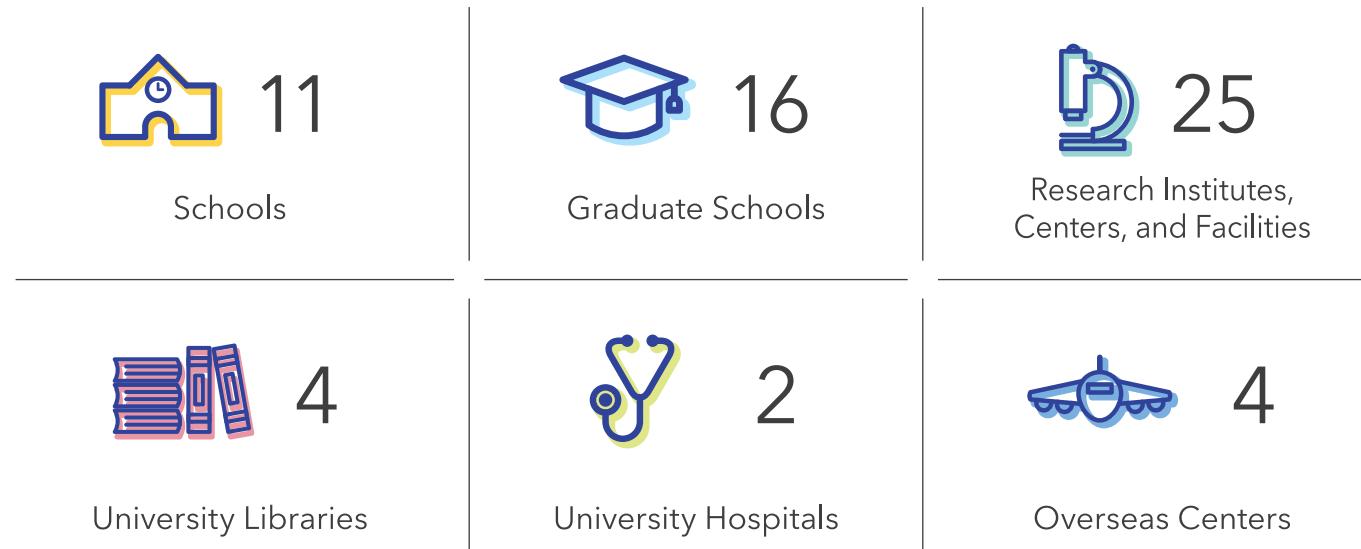
# Osaka University at a Glance

*Where You Can do it all*



# Facts and Figures

## Organization (as of August 1, 2018)

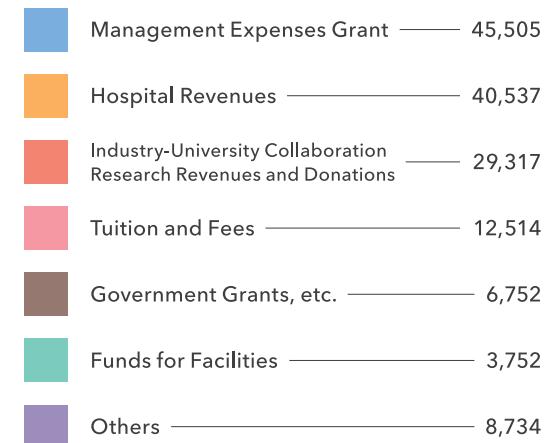
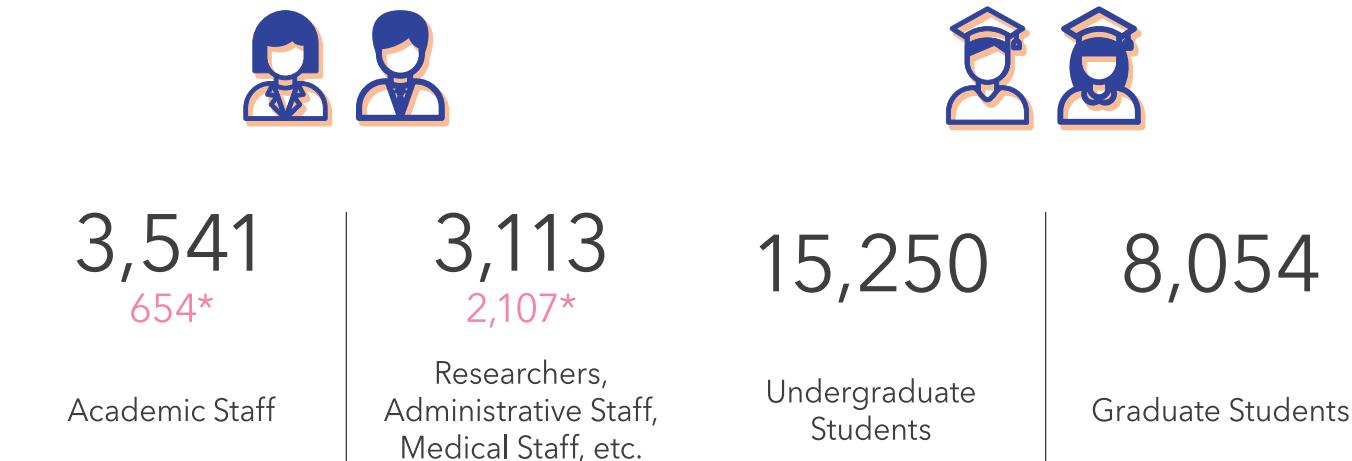


## Budget FY2018, in millions of yen



## Faculty and Staff \* female staff (as of May 1, 2018)

## Students (as of May 1, 2018)



# Facts and Figures

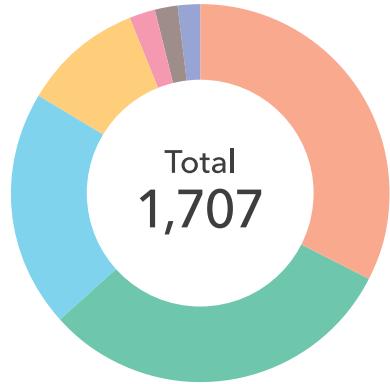
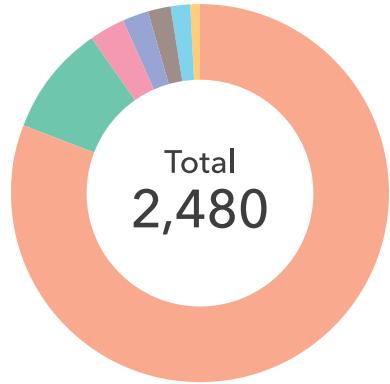
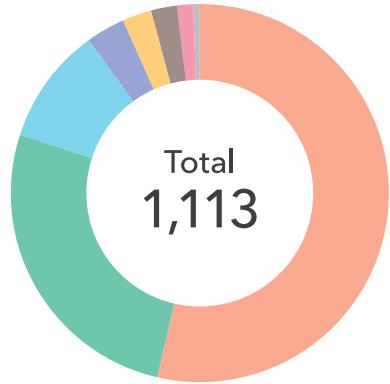
## International Exchange



International Researchers (Inbound)  
(April 1, 2017 - March 31, 2018)

International Students (Inbound)  
(as of May 1, 2018)

Students Studying Abroad (Outbound)  
(April 1, 2017 - March 31, 2018)



Asia	598
Europe	295
North America	109
Africa	38
Oceania	27
Middle East	27
Central and South America	13
Others	6

Asia	2,009
Europe	235
Central and South America	71
Africa	55
Middle East	52
North America	42
Oceania	16

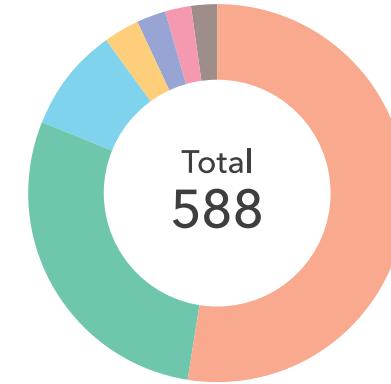
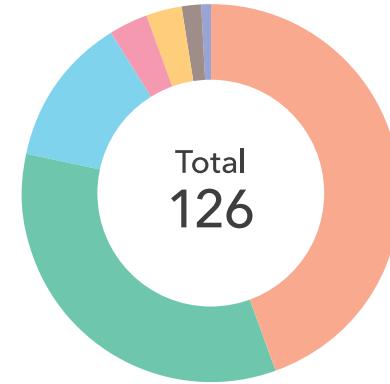
Asia	556
Europe	526
North America	346
Oceania	176
Central and South America	41
Middle East	33
Africa	29

## Academic Exchange Agreements



Inter-University Academic Exchange Agreements  
(as of September 1, 2018)

Inter-Faculty Academic Exchange Agreements  
(as of September 1, 2018)



Asia	56
Europe	43
North America	16
Oceania	4
Central and South America	4
Middle East	2
Africa	1

Asia	309
Europe	168
North America	53
Oceania	18
Africa	14
Central and South America	13
Middle East	13

## Prizes and Awards

### Nobel Prize



1949, Physics

### Lasker Award



1982

### Gairdner International Award



2011



2015

### Wolf Prize



1986, Medicine



2002-2003, Mathematics

### Crafoord Prize



2009



2017

### Claude E. Shannon Award



1999

### Japan Prize



2011

### Kyoto Prize



2017



Research and Education

Co-Creation with Society and for Society



**Keishin INABA**

Professor  
Graduate School of Human Sciences

“I hope to be able to help implement a society where we support each other and have transcended race, national borders, and ideologies. Each time I observe societal issues unfold in real time, I am strongly reminded of the importance of “collaboration.”

Professor Keishin INABA is a sociologist of religion who became interested in disaster-prevention by volunteering at the Great Hanshin-Awaji Earthquake in 1995 and is now researching ways for temples and shrines to become evacuation areas. His research contributed much during the 2011 Great East Japan Earthquake. He gathered data from all over Japan detailing evacuation shelters and religious sites to develop an application that helps victims of disasters by directing them to the nearest evacuation site.

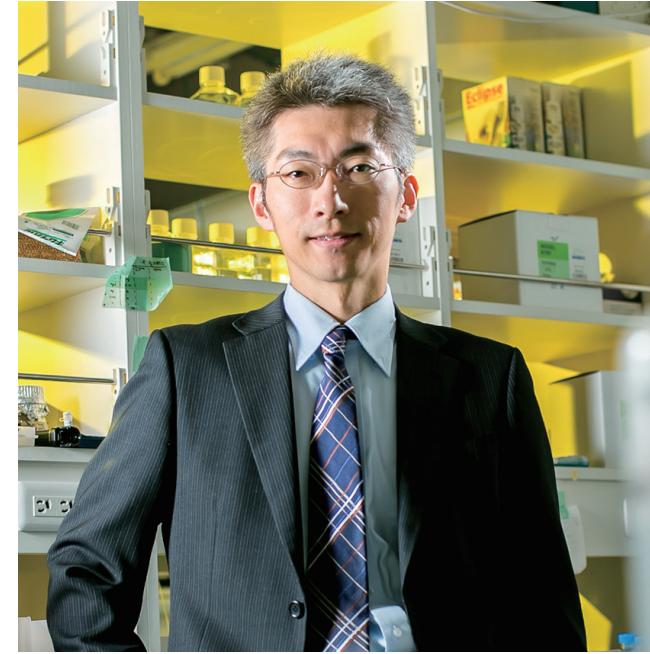


**Sastia PRAMA PUTRI**

Assistant Professor  
Graduate School of Engineering

“Osaka University is a highly global environment. I am able to surround myself with top Japanese and international students, and researchers. I feel this is a great environment to develop my career as a researcher.

Assistant Professor Sastia PRAMA PUTRI researches bioresource engineering. She came to Osaka University in 2006 to earn her master's degree, and subsequently her PhD. She is now employed by the university, and is extremely pleased to work in an international environment and conduct her research in English. She now has an eight year old daughter, and appreciates the work life balance Osaka University is able to provide for her family.



**Masahiro YAMAMOTO**

Professor  
Research Institute for Microbial Diseases

“During my time as a graduate student, I worked alongside Professor Shizuo AKIRA, the leading figure of immunology research, and understood just what world-leading research is. After graduation, I combined parasitology with immunology and developed immunoparasitology, a new field that can compete on the world stage.

In the 2016/2017 lists of Highly Cited Researchers, compiled by Clarivate Analytics, Professor Masahiro YAMAMOTO has been a top-runner in the immunoparasitology field as a young researcher. He has deviated from traditional research and is focusing on the interaction between “host” and “parasite.” As a young researcher, he has earned a research lab with cutting-edge equipment and top-class researchers, and, along with them, is contending to strive to be the best in the world.



**Nobu ISHIGURO**

Associate Professor  
Graduate School of Language and Culture

“I am doing research on elder care by comparing Denmark to Japan under my belief that “the truth is in the field.” I am aiming to create a societal infrastructure where people can continue to have quality of life as they grow older.

Associate Professor Nobu ISHIGURO is a social welfare specialist with roots spanning back to her high school days. She was first attracted to welfare studies through her fascination with Denmark. She decided to become a researcher while studying Danish and Danish culture in Osaka University. Currently, she is engaged in research centered on welfare as well as pouring her efforts into guiding students. She is passionate toward education, and her seminars are always filled to bursting with energy.

# Research Outcomes

## Rankings



67 (4)\*

\* Rank among universities in Japan.

QS World University Rankings 2019



34 (2)\*

\* Rank among universities in Japan.

Reuters Top 100:  
The World's Most Innovative Universities  
2017



31 (1)\*

\* Rank among universities in Japan.

Nature Index 2017 Innovation

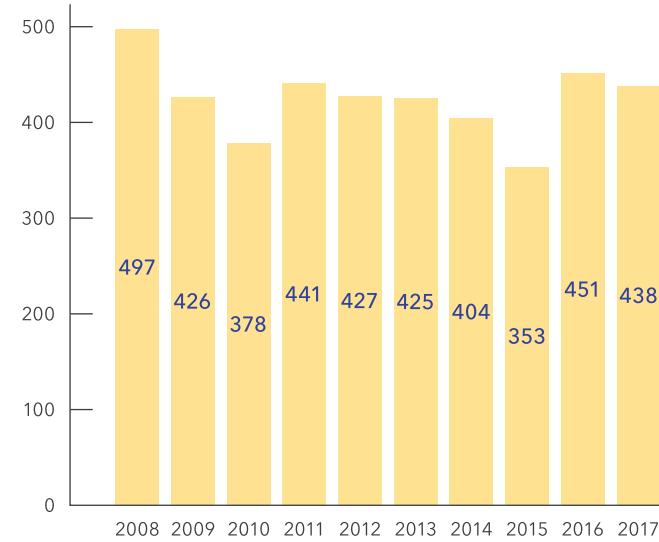


5 Immunology    2 Chemistry    1 Plant & Animal Science

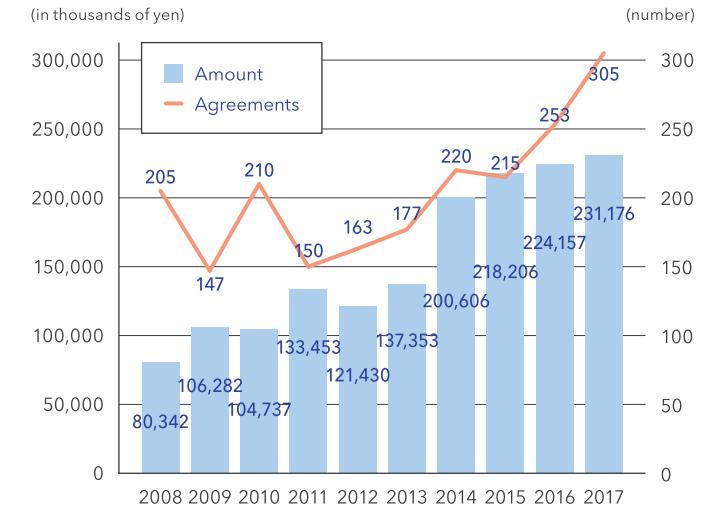
Highly Cited Researchers by Clarivate Analytics  
"The Most Influential Scientific Minds" for 2017

Osaka University had the most cited researchers among universities in Japan for this publication.

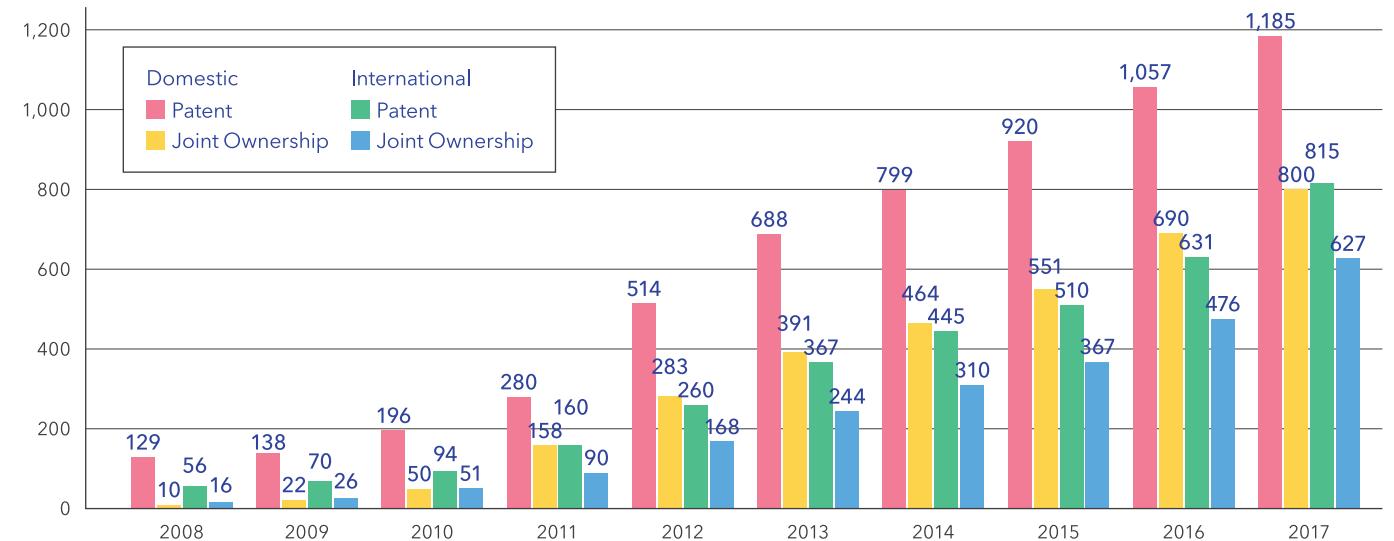
## The Number of Invention Disclosures



## License Agreements and Income (including licensing, assignment and MTA)



## The Number of Patents Held by Osaka University



## Industry-University Co-Creation

Under the concept of "Industry on Campus," Osaka University is a pioneer in designing joint research with researchers from the business world.



**42**  
Endowed Chairs  
(as of August 1, 2018)

Endowed Chairs are education and research units run by donations from companies.



**65**  
Joint Research Chairs  
(as of August 1, 2018)

Joint Research Chairs are research units sponsored by companies who are fully dedicated to joint research on campus.

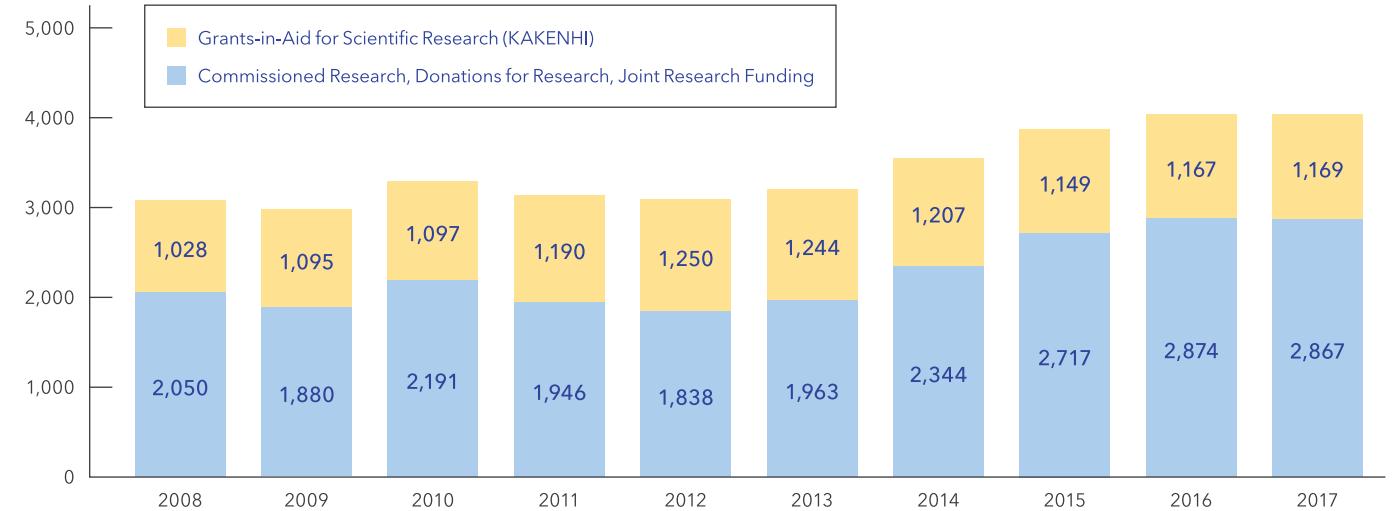


**16**  
Research Alliance  
Laboratories  
(as of August 1, 2018)

Research Alliance Laboratories are research bases for various industry-university collaborations by attracting company-based R&D organizations to Osaka University.

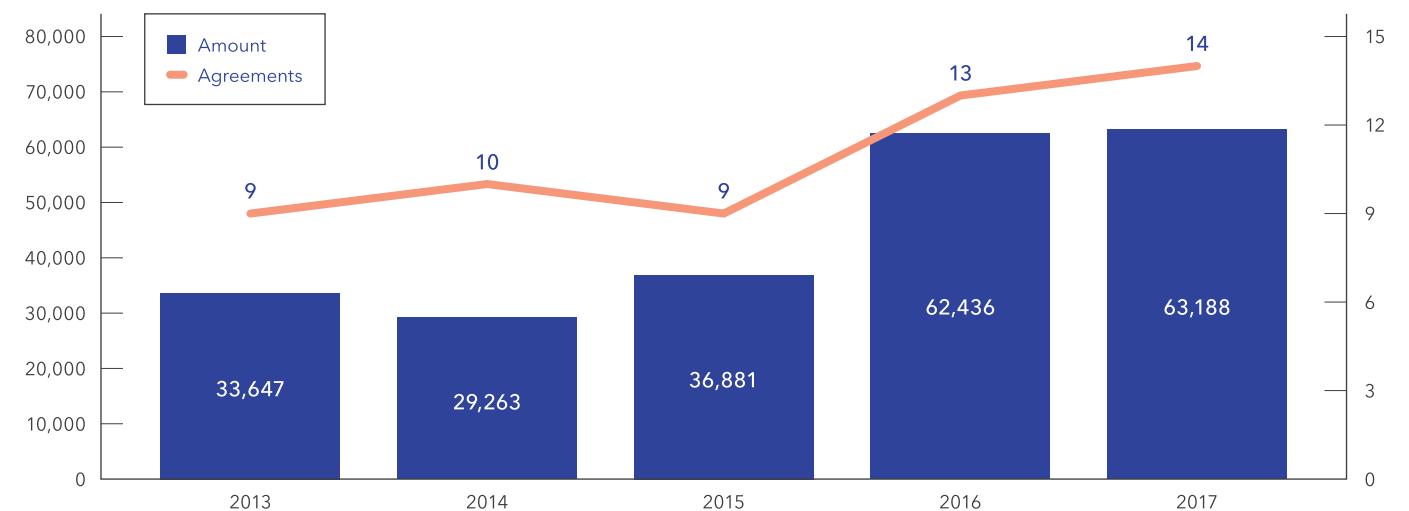
## External Funding

(in 10 millions of yen)



## Collaborative Research Agreements with Private Organizations Overseas

(in thousands of yen)





**Natsu MATSUMOTO**

5th Year Bachelor's  
School of Dentistry  
(Japan)

I have been interested in working as a researcher for some time, especially in underdeveloped fields where the next discovery is just around the corner. That is why I chose dentistry. There is only a system at Osaka University to pursue autonomous research, and the professors are also passionate with their guidance. My confidence in my research was boosted at the "Student Clinician Research Program," where I placed 2nd. In the future, I want to help those with special needs and give them the support they require to visit dental clinics not covered by general dentistry.



**Sašo DOLINŠEK**

2nd Year Master's  
Graduate School of Human Sciences  
(Slovenia)

I came to Osaka University as an exchange student and became so fond of the city and the university that I decided to return and enter a graduate program here. The professors here always make time to talk to students and the office workers have always assisted me when I had any trouble with formal procedures. Due to my wonderful time here my Japanese has greatly improved, which opens up a whole new world of potential research materials for me to read. However, more than anything, I have changed. It has truly been a privilege living and studying here.

### Double Degree Programs

The double degree program allows graduate students to register as a regular student at Osaka University and a foreign university simultaneously and obtain degrees from both. For details, please contact the office of the relevant graduate school.

#### Master's Programs (as of August 1, 2018)

Graduate School	Partner Institutions
Science	Al-Farabi Kazakh National University
	Bandung Institute of Technology
	University of Malaya
	Vietnam National University - Ho Chi Minh City
Engineering	Bandung Institute of Technology
	King Mongkut's University of Technology Thonburi
	Mahidol University
	Tongji University
Engineering Science	Justus Liebig University Giessen
Language and Culture	Mahidol University
International Public Policy	De La Salle University
	University of Groningen

#### Doctoral Programs (as of August 1, 2018)

Graduate School	Partner Institutions
Law and Politics	National Taiwan University
Science	Al-Farabi Kazakh National University
	Bandung Institute of Technology
	De La Salle University
	National Tsing Hua University
	Shanghai Jiao Tong University
	University of Malaya
Medicine	Vietnam National University - Ho Chi Minh City
	Tianjin University of Traditional Chinese Medicine
Engineering	Bandung Institute of Technology
	De La Salle University
	Philippine Normal University
	Universiti Sains Malaysia
Information Science and Technology	Macquarie University

## ASEAN Campuses

Based on the long-standing research labs in the region, these campuses aim to further tackle social issues and provide lasting education

In 2018, Osaka University established "Osaka University ASEAN Campuses," and plans to sequentially establish more in four countries in the ASEAN region in cooperation with universities and institutions in those regions. Together with the ASEAN region, we will carry and nurture the next generation of global individuals, and to move forward in our mission to contribute to the quality growth of the ASEAN region, Osaka University will implement international co-creation platforms with local and Japanese businesses in each country holding one of our ASEAN Campuses.

**Collaboration Fields** | Bioengineering, Applied Physics, Infectious Diseases, Environmental Engineering, Halal Science, Biodiversity and Bioresource, and Japanese Language and Culture



Mahidol University

Thailand



Bandung Institute of Technology

Indonesia



Vietnam Academy of Science and Technology

Vietnam



Universiti Brunei Darussalam

Brunei Darussalam



Sultan Sharif Ali Islamic University

Brunei Darussalam



Universiti Teknologi Brunei

Brunei Darussalam

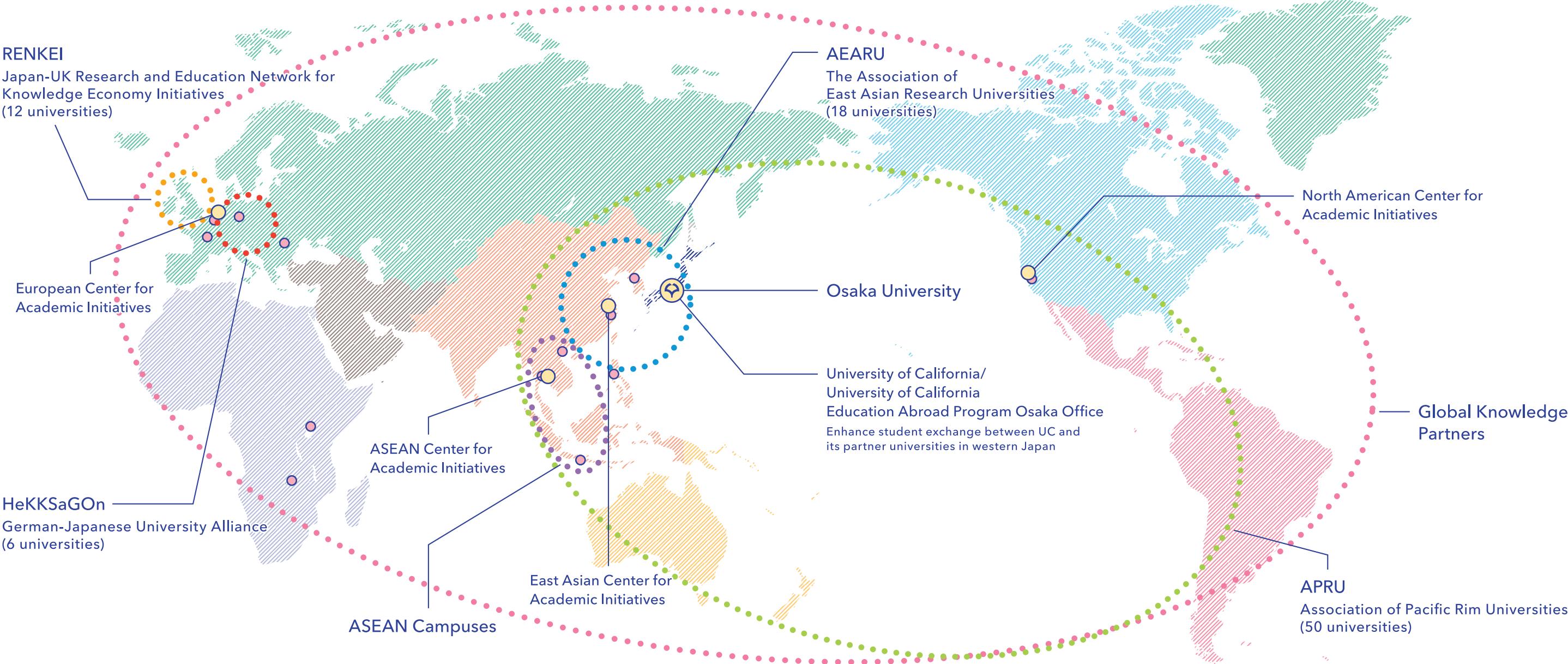


### Global Engagement

Strong Connections with International Partners

# Global Academic Network (as of September 1, 2018)

● Osaka University Overseas Centers   
 ● Overseas Departmental Centers



# Inter-University Academic Exchange Agreements (as of September 1, 2018)

## Europe

### Austria

- University of Vienna

### Belgium

- IMEC

### Denmark

- University of Copenhagen

### Finland

- Åbo Akademi University
- University of Helsinki

### France

- Aix-Marseille University
- Communauté Universit  Grenoble Alpes
-  cole Polytechnique
- The National Center for Scientific Research (CNRS)
- Sorbonne University
- Universit  Paris-Saclay
- University of Bordeaux
- University of Strasbourg

### Germany

- Bielefeld University
- Friedrich-Alexander-Universit  Erlangen-N rnberg
- Goethe University Frankfurt
- Heidelberg University
- Karlsruhe Institute of Technology
- Ludwig-Maximilians-Universit  M nchen
- Ruhr-Universit  Bochum
- RWTH Aachen University
- Technical University of Munich
- Technische Universit  Berlin

- University of Augsburg
- The University of G ttingen

### Hungary

- E tv s Lor nd University

### The Netherlands

- Delft University of Technology
- University of Groningen

### Russia

- Russian Academy of Sciences
- Saint Petersburg University

### Spain

- Universidad Aut noma de Madrid
- University of Valladolid

### Sweden

- Karolinska Institutet
- KTH Royal Institute of Technology
- University of Gothenburg

### Switzerland

-  cole Polytechnique F d rale de Lausanne (EPFL)
- Eidgen ssische Technische Hochschule Z rich

### UK

- King's College London
- University College London
- University of Durham
- University of Leeds
- The University of Nottingham
- The University of Sheffield

## Middle East

### Qatar

- Qatar University

### Saudi Arabia

- King Abdulaziz University

## Africa

### Egypt

- Alexandria University

## Oceania

### Australia

- Australian National University
- Monash University
- The University of Adelaide
- The University of Queensland

## Asia

### Brunei Darussalam

- Sultan Sharif Ali Islamic University
- Universiti Brunei Darussalam
- Universiti Teknologi Brunei

### China

- Beijing Normal University
- The Chinese University of Hong Kong
- Fudan University
- The Hong Kong University of Science and Technology
- Nanjing University
- Peking University
- Shanghai Jiao Tong University
- Tongji University
- Tsinghua University
- The University of Hong Kong
- Wuhan University

- Xi'an Jiaotong University
- Zhejiang University

### India

- Indian Institute of Technology, Hyderabad

### Indonesia

- Airlangga University
- Bandung Institute of Technology
- Universitas Gadjah Mada
- Universitas Indonesia

### Korea

- Changwon National University
- Chonnam National University
- Chung-Ang University
- Chungnam National University
- Daegu Gyeongbuk Institute of Science & Technology (DGIST)
- Gyeongsang National University
- Hanyang University
- Pusan National University
- Seoul National University
- Yonsei University

### Mongolia

- National University of Mongolia

### Myanmar

- University of Yangon

### The Philippines

- Ateneo de Manila University
- De La Salle University
- University of the Philippines

### Singapore

- Nanyang Technological University
- National University of Singapore

### Taiwan

- National Cheng Kung University
- National Chiao Tung University
- National Taiwan University
- National Tsing Hua University

### Thailand

- Chiang Mai University
- Chulalongkorn University
- Department of Medical Sciences, Ministry of Public Health
- Kasetsart University
- King Mongkut's University of Technology Thonburi
- Mahidol University
- Thammasat University

### Vietnam

- Can Tho University
- Hanoi Medical University
- Hanoi University of Science and Technology
- Vietnam Academy of Science and Technology
- Vietnam Japan University
- Vietnam National University, Hanoi
- Vietnam National University-Ho Chi Minh City

## North America

### Canada

- McMaster University
- TRIUMF
- The University of British Columbia
- University of Toronto

### USA

- Cornell University
- Lawrence Livermore National Laboratory
- Nazareth College of Rochester
- Purdue University
- Rice University
- Texas A&M University
- University of Georgia
- University of California
- University of California, Berkeley
- University of California, San Diego
- University of Washington
- Wesleyan College

## Central and South America

### Brazil

- University of Campinas
- University of S o Paulo

### Mexico

- National Autonomous University of Mexico

### Peru

- Pontifical Catholic University of Peru

## Home Institutions of Researchers in International Joint Labs (as of August 1, 2018)

International Joint Labs bring researchers from overseas together for collaborative research at Osaka University. Please find out outcomes of International Joint Labs at: [resou.osaka-u.ac.jp/en/highlight](https://resou.osaka-u.ac.jp/en/highlight)

Asia	
China	Nanjing Audit University
	National Center for Nanoscience and Technology, Chinese Academy of Science
	Northeast Normal University
	North University of China
	Shanghai Jiao Tong University
	The University of Hong Kong
India	Indian Institute of Technology, Hyderabad
	Tata Institute of Fundamental Research
Indonesia	Indonesian Institute of Sciences
Korea	Seoul National University
Malaysia	Universiti Sains Malaysia
The Philippines	University of the Philippines
Singapore	Singapore Management University
	Singapore Management University
Taiwan	Academia Sinica
	National Taiwan University
Thailand	Chulalongkorn University
Vietnam	Hanoi University of Science and Technology

Oceania	
Australia	European Molecular Biology Laboratory at Monash University
	Monash University
	Royal Melbourne Institute of Technology University
North America	
Canada	TRIUMF
	University of Montreal
	University of Victoria
USA	Baylor College of Medicine
	California Institute of Technology
	Iowa State University
	Johns Hopkins University
	Purdue University
	Rice University
	University of California, Los Angeles
	The University of Chicago
	University of Hawaii at Manoa
	University of Kentucky
	University of Minnesota
	University of Rochester
	University of Texas at Austin

Europe	
Austria	Johannes Kepler University Linz
Czech Republic	Masaryk University
Denmark	University of Copenhagen
Finland	Åbo Akademi University
	University of Helsinki
France	École Centrale de Nantes
	École Polytechnique / The National Center for Scientific Research (CNRS)
	Université Paris Nanterre
	University of Strasbourg
Germany	Leibniz Universität Hannover
	Leibniz-Zentrum Allgemeine Sprachwissenschaft
	Physikalisch-Technische Bundesanstalt
	Ruhr-Universität Bochum
Hungary	Institute for Solid State Physics and Optics, Wigner Research Centre for Physics, Hungarian Academy of Sciences
Italy	Istituto Italiano di Tecnologia
	University of Naples Federico II
Russia	Russian Academy of Sciences
Slovakia	Slovak Academy of Sciences

Spain	Carlos III University of Madrid
	Universidad Politécnica de Madrid
Sweden	Uppsala University
Switzerland	Eidgenössische Technische Hochschule Zürich
	University of Lausanne
The Netherlands	University of Amsterdam
UK	Imperial College London
	King's College London
	The University of Manchester
	University of Oxford
Africa	
Morocco	Moroccan Foundation for Advanced Science, Innovation and Research

## Global Knowledge Partners

### Develop strategic partnerships with overseas institutions to impact global challenges

Osaka University explores deeper routes of collaboration through joint research and education with our "Global Knowledge Partners" to approach global issues, synergize through discovery across all fields of academia, and make an impact on resolutions to those issues worldwide.

Through four of our Overseas Centers, Osaka University is enhancing our collaborations and strengthening our reach to our Global Knowledge Partners, and by utilizing this global network, we will establish world-leading research institutes, increase our global-scale networks, and cultivate outstanding talent.

### Seeking Solutions to Social Challenges Worldwide



## Osaka University Basics

A World-Leading Innovative University

## Schools/Faculty

Letters  
 Human Sciences  
 Foreign Studies  
 Law  
 Economics  
 Science  
 Medicine  
 Dentistry  
 Pharmaceutical Sciences  
 Engineering  
 Engineering Science

## Graduate Schools

Letters  
 Human Sciences  
 Law and Politics  
 Economics  
 Science  
 Medicine  
 Dentistry  
 Pharmaceutical Sciences  
 Engineering  
 Engineering Science  
 Language and Culture  
 International Public Policy  
 Information Science and Technology  
 Frontier Biosciences  
 Law School  
 Child Development

## Research Institutes, Centers, and Facilities

Research Institute for Microbial Diseases  
 The Institute of Scientific and Industrial Research  
 Institute for Protein Research  
 Institute of Social and Economic Research  
 Joining and Welding Research Institute  
 Institute of Laser Engineering  
 Low Temperature Center  
 Research Center for Ultra-High Voltage Electron Microscopy  
 Research Center for Environmental Preservation  
 Center for International Education and Exchange  
 International Center for Biotechnology  
 Research Center for Solar Energy Chemistry  
 The Museum of Osaka University  
 Health and Counseling Center  
 Global Center for Medical Engineering and Informatics  
 Center for Mathematical Modeling and Data Science  
 Center for Scientific Instrument Renovation and Manufacturing Support  
 Center for Japanese Language and Culture  
 Institute for NanoScience Design  
 Intellectual Property and Legal Practice Center  
 Research Center for Nuclear Physics  
 Cybermedia Center

## Education and Research Support Organizations

Institute for Advanced Co-Creation Studies  
 Institute for Transdisciplinary Graduate Degree Programs  
 Institute for Open and Transdisciplinary Research Initiatives  
 Institute for Datability Science  
 Institute for Radiation Sciences  
 Center for Education in Liberal Arts and Sciences  
 Center for Multilingual Education  
 Center for the Study of Higher Education and Global Admissions  
 Center for Gender Equality Promotion  
 Center for the Study of Co\* Design  
 Center for Global Initiatives  
 Tekijuku Commemoration Center  
 Kaitokudo for the 21st Century  
 Office for Information and Communications Technology Services  
 Department for the Administration of Safety and Hygiene  
 Office of the General Counsel

## Overseas Centers

North American Center for Academic Initiatives  
 European Center for Academic Initiatives  
 ASEAN Center for Academic Initiatives  
 East Asian Center for Academic Initiatives

## University Libraries

Main Library  
 Life Sciences Library  
 Science and Engineering Library  
 International Studies Library

## University Hospitals

Osaka University Hospital  
 Osaka University Dental Hospital

Administration Bureau  
 Co-Creation Bureau  
 Social Solution Initiative

Osaka University  
 Nakanoshima Center

International Advanced  
 Research Institute

Immunology Frontier  
 Research Center

Institute for Advanced  
 Interdisciplinary Research

Center for Information and  
 Neural Networks  
 Osaka University-RIKEN Center  
 for Science and Technology



## History

Osaka University's roots can be traced to Kaitokudo and Tekijuku, two academies that delivered front-line scholarship during the Edo period (1603-1867). This tradition is inherent in Osaka University today which continues to achieve cutting-edge research results worthy of international recognition and provide society with distinguished researchers and professionals.

### 1724 Kaitokudo

Kaitokudo was an academy founded in 1724 by Osaka merchants. It contributed to the development of education and business morality for the remaining 140 years of the Edo period, playing an important role in education in Osaka as a civic and liberal arts college.



### 1838 Tekijuku

Tekijuku was a private academy in Osaka founded in 1838 by OGATA Koan, a physician and renowned educator. Young minds from all over Japan gathered there to learn, and many of them later played leading roles in the modernization of Japan during the Meiji period.

### 1931 Osaka Imperial University

Osaka Imperial University was founded in 1931 with passionate support from the local government, the Kansai business community, and the citizens of Osaka as a "citizen-led imperial university."



Celebrating the approval of Osaka Imperial University Foundation Plan by the House of Peers (March 1931, at Tokyo Station)



### 1949

Osaka University



### 2004

National University Corporation  
Osaka University

### 2007

#### Integration of Osaka University and Osaka University of Foreign Studies

Established originally as Osaka School of Foreign Languages in 1921, it was founded with the money donated to the government by an Osaka-based businesswoman who was passionate about establishing a "school capable of nurturing internationally-minded people in Osaka." Thus, Osaka School of Foreign Studies shares a similar background to that of Osaka University.

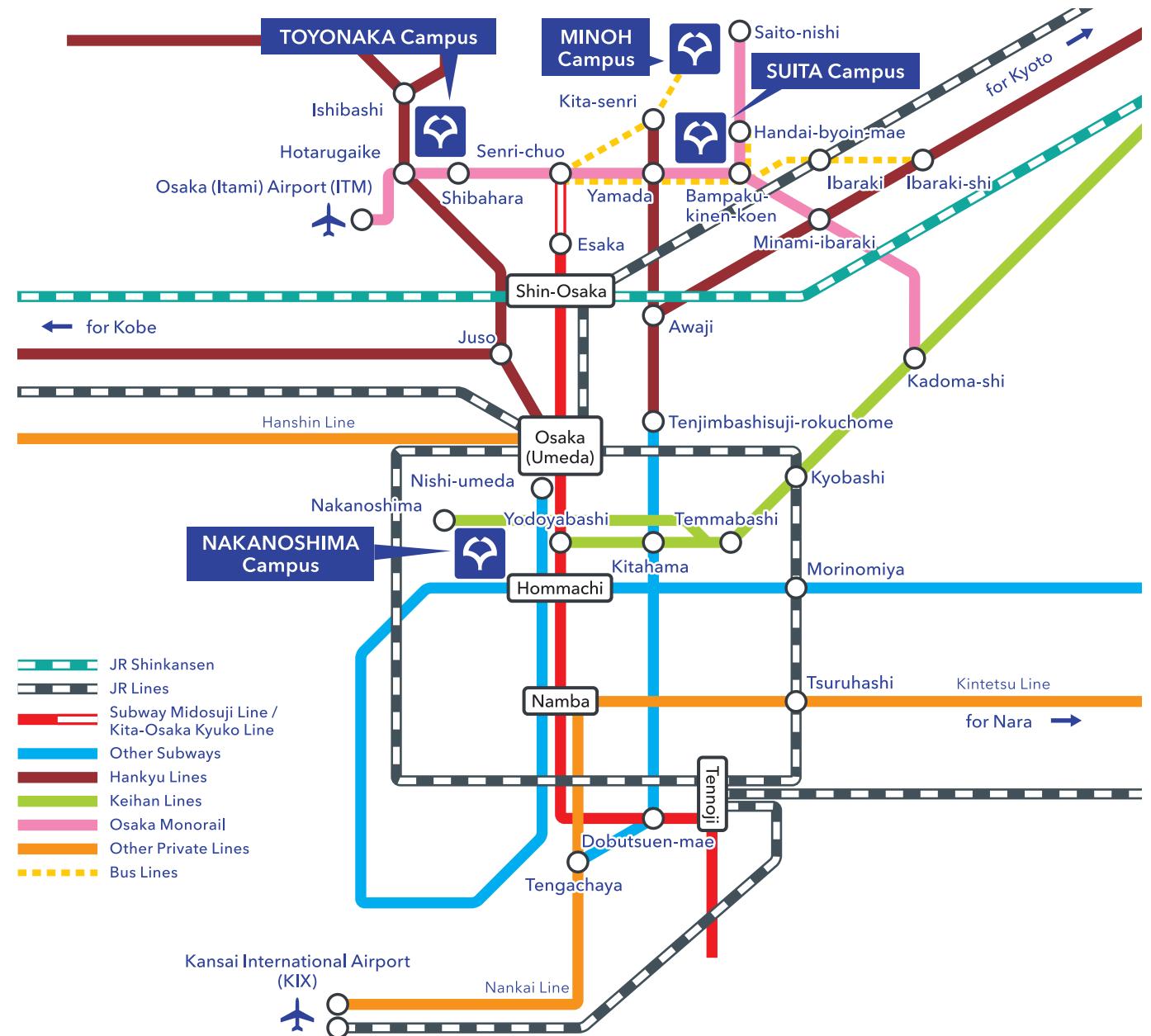
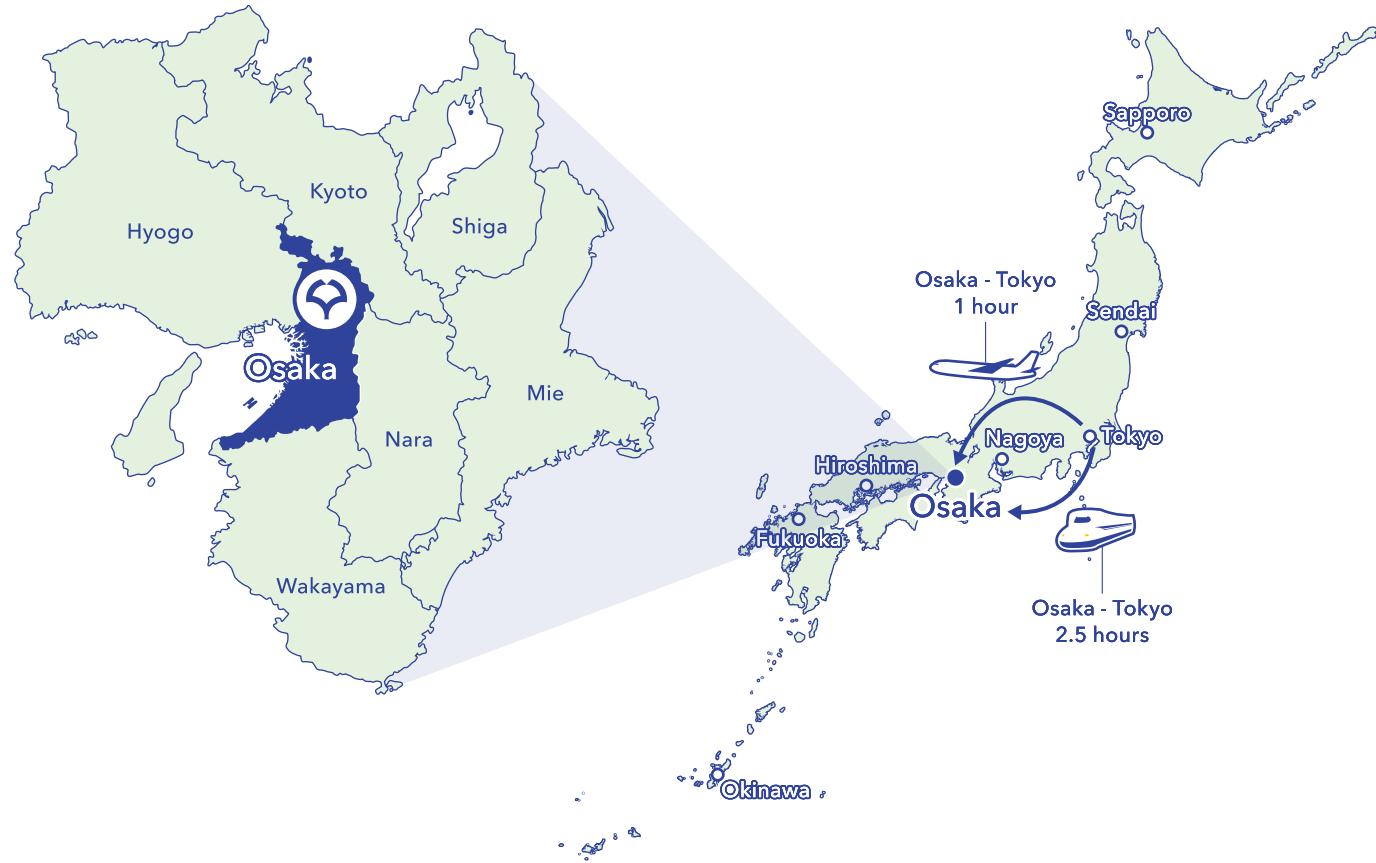


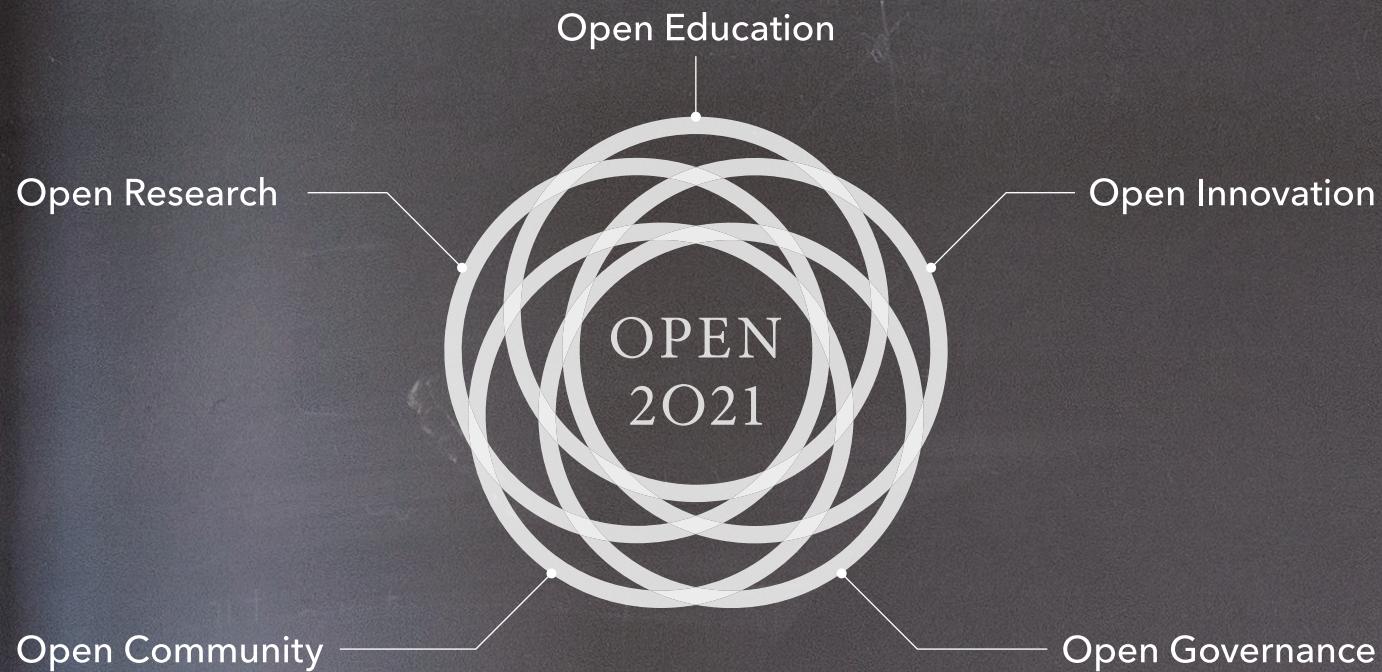
### 2021

90th Anniversary of  
Osaka University

100th Anniversary of  
Osaka University of  
Foreign Studies

# Campus Locations and Transportation





### Open Education

Train students to search for the truth and explore knowledge beyond university campuses in the larger society. Achieve Open Education by integrating resources in the university with those in civil society, government and industry to discover new knowledge relevant and meaningful to society.

### Open Research

Support Open Research by respecting the freedom and encouraging the passion of individual researchers. Establish academic partnerships across the world so as to cultivate new frontiers of knowledge.

### Open Innovation

Initiate a fundamental shift from "industry-university collaboration" to "industry-university co-creation." Discover new themes and tasks in basic science by assessing emerging social demands. Undertake Open Innovation through which to create new social values.

### Open Community

Help solve local and global issues and contribute to optimal social development through our strength in science, culture, art and medicine. Create an Open Community, a social space where diverse knowledge and people meet and interact.

### Open Governance

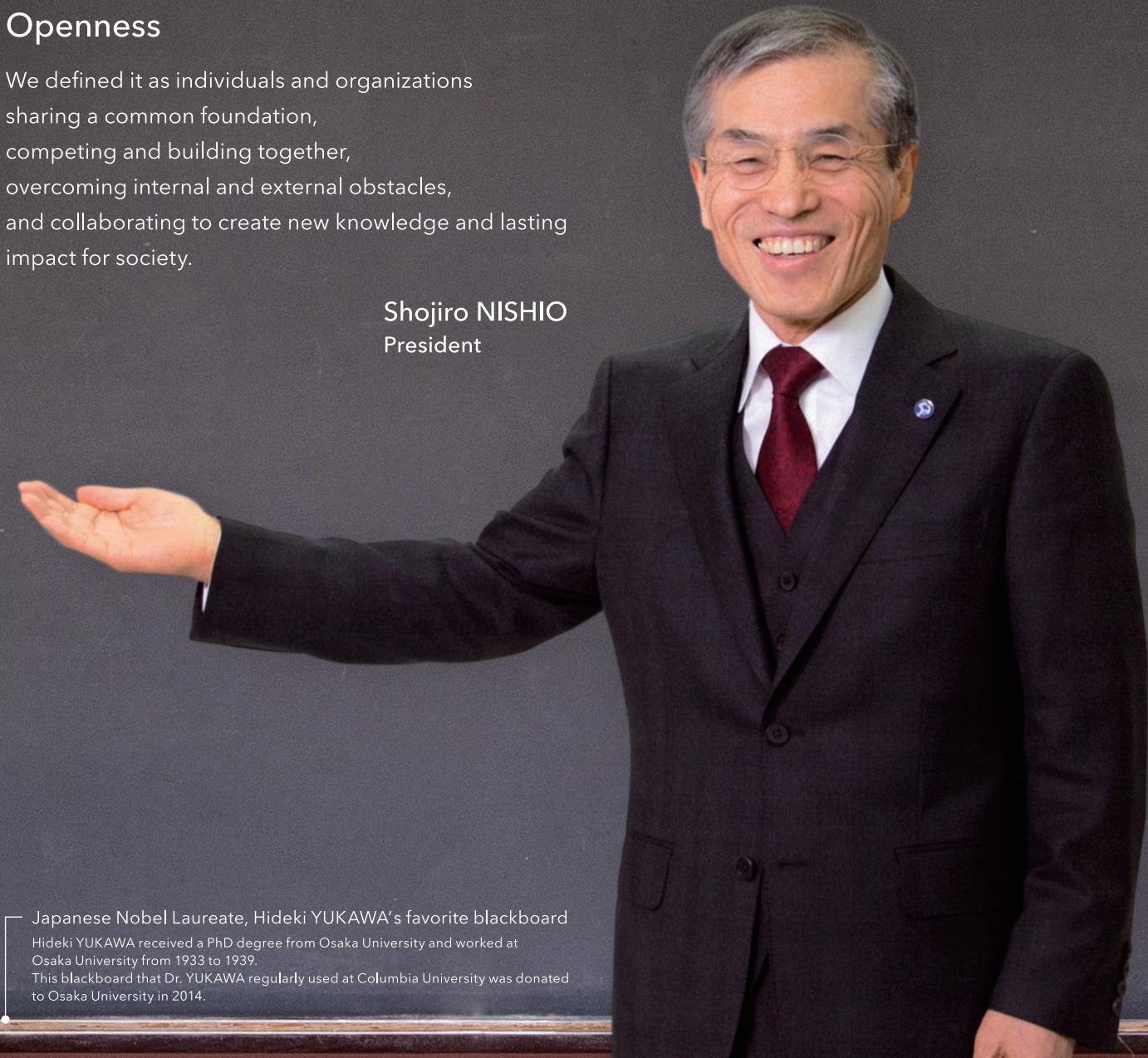
Exceed the expectations of society through continual reform and improvement by maximizing the agency of every member of the university. Implement Open Governance: a solid and transparent university management system that balances leadership and consensus.

# Be the member of Osaka University.

## Openness

We defined it as individuals and organizations sharing a common foundation, competing and building together, overcoming internal and external obstacles, and collaborating to create new knowledge and lasting impact for society.

Shojiro NISHIO  
President



Japanese Nobel Laureate, Hideki YUKAWA's favorite blackboard  
Hideki YUKAWA received a PhD degree from Osaka University and worked at Osaka University from 1933 to 1939. This blackboard that Dr. YUKAWA regularly used at Columbia University was donated to Osaka University in 2014.

