

APAIE 2024



PERTH, AUSTRALIA 4-8 MARCH 2024

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Collaborating for sustainable impact: partnerships across the Asia Pacific

APAIE Perth 4 - 8 March 2024

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Session 11A: Weds 6th March, 16:15 – 17:00

**Building Collaborative Partnerships cross the Asia Pacific
for Sustainable Impact**

Anna Marshall
Penn State, USA

Yoshitaka Kasukabe
Tohoku University, Japan

Rose Tan
The Hong Kong Polytechnic University, Hong Kong

Chair
Anna Marshall
Penn State, USA

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Building Collaborative Partnerships cross the Asia Pacific for Sustainable Impact

Dr. Anna Marshall, The Pennsylvania State University
Professor Yoshitaka Kasukabe, Ph.D., Tohoku University
Ms. Rose Tan, The Hong Kong Polytechnic University

March 6, 2024
4:15PM - 5:00PM

Content

- **Section One:** Missions, visions and strategies
- **Section Two:** Best practices in student mobility and research collaborations
- **Section Three:** Building collaborative partnerships across the Asia-Pacific for sustainable impact

Section One

Missions, Visions and Strategies



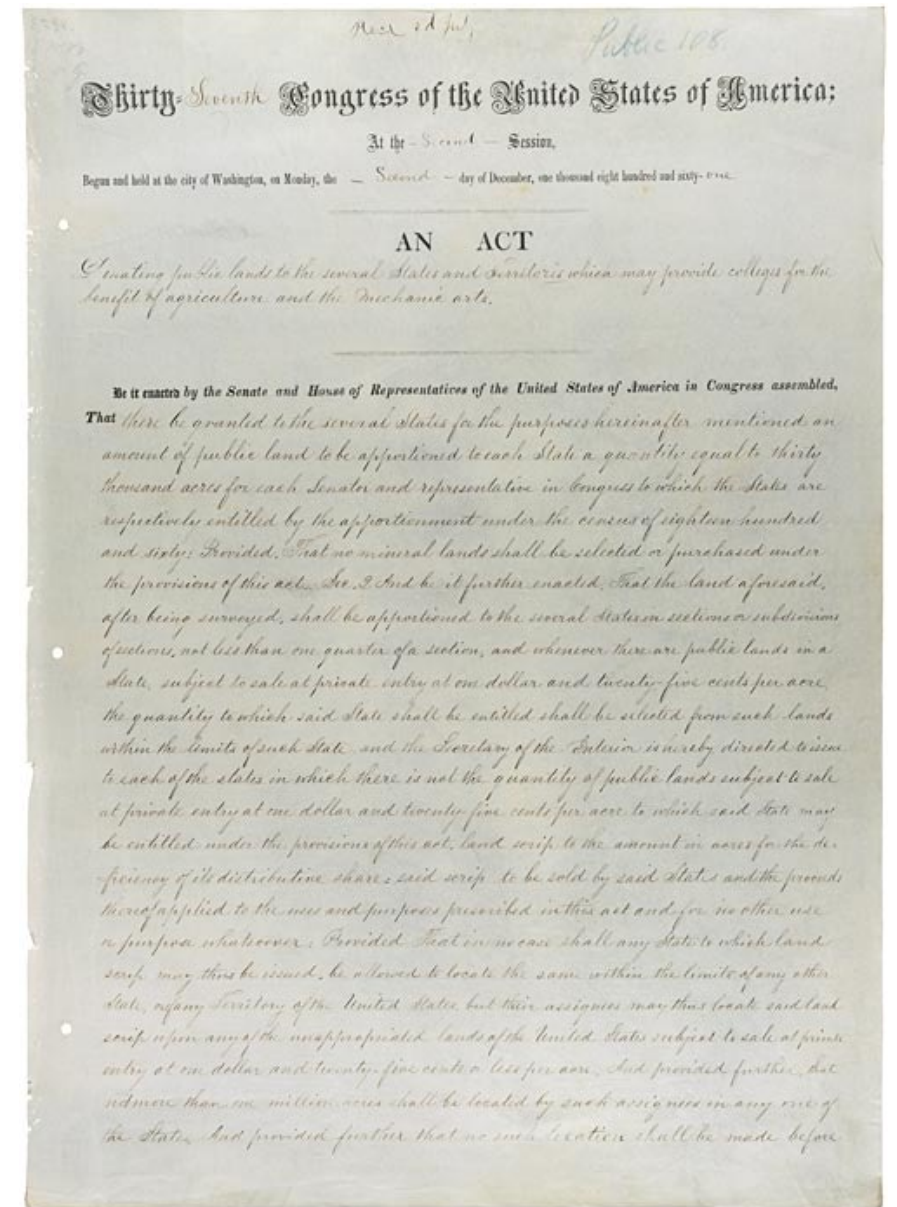
19th Penn State University President
President Neeli Bendapudi, Ph.D.

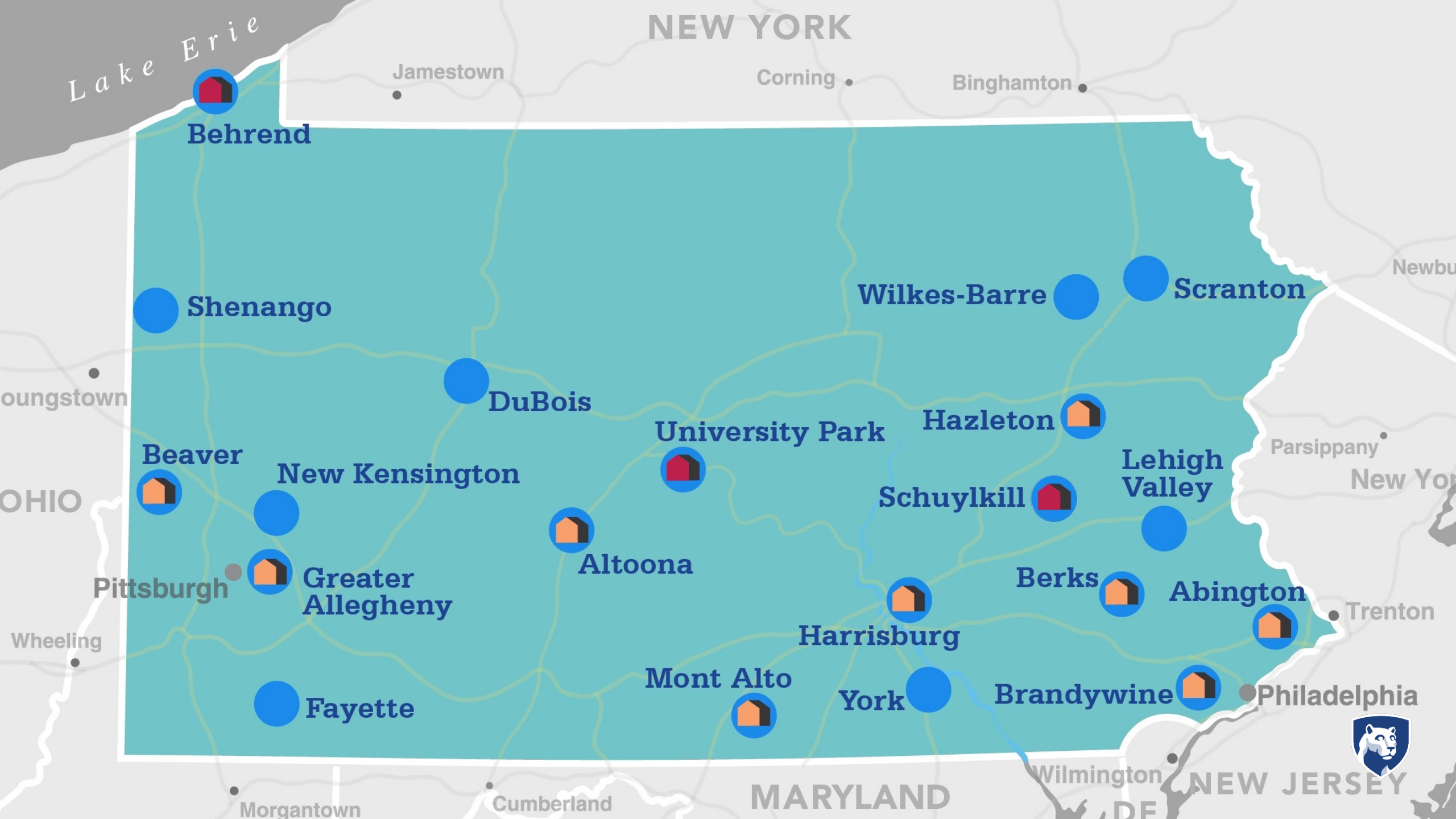
Penn State Mission

The Pennsylvania State University is a multi-campus, land-grant, public research university that educates students from around the world and supports individuals and communities through integrated programs of teaching, research, and service.

Land Grant Mission

- In 1862, President Lincoln signed the Morrill Act into law, which provided federal land to each state for the establishment of colleges focused on agriculture, science, and engineering.
- The first (and only) in Pennsylvania to be declared a land grant university.
- Providing accessible and practical education to the broader community.
- Commitment to making a positive impact on society and fostering a culture of public service and community engagement.





#1

TOP PRODUCER OF
FULBRIGHT SCHOLARS

2022-23

10,000
Int'l Students

FROM 140+
COUNTRIES

#3

FOR SUSTAINABILITY IN
THE U.S.

According to Times Higher Education

Points of Pride

#8

TOP PUBLIC
UNIVERSITIES IN AMERICA

According to QS Rankings

#2

GRADUATING CEOs

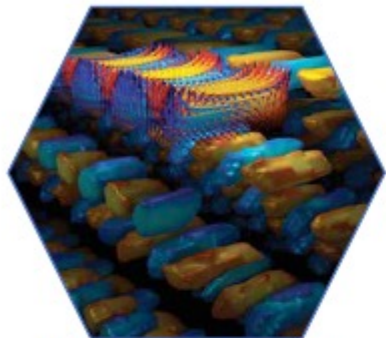
According to Bloomberg

\$15 million

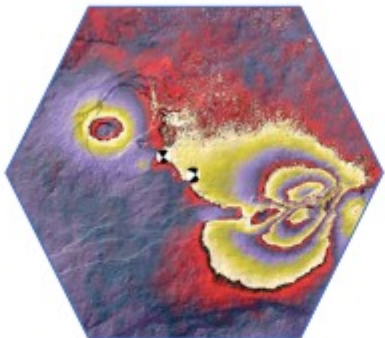
RAISED FOR CANCER
PREVENTION BY STUDENT-
LED THON



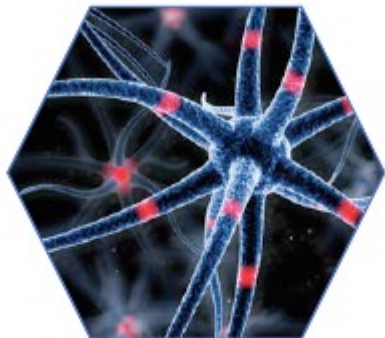
Interdisciplinary Research Institutes



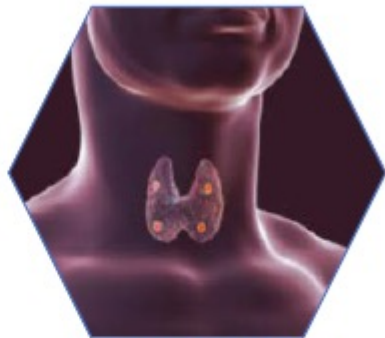
Materials Research
Institute



Institute for
Computational & Data
Sciences



Huck Institutes of the
Life Sciences



Penn State Cancer
Institute



Clinical and Translational
Science Institute



Institutes of Energy and
the Environment



Social Science Research
Institute



Applied Research
Lab

...it's the culture

Profoundly
different
approach to
leveraging
our expertise

#1 Materials Science
#2 Materials Engineering
#2 Mechanical Engineering
#2 Psychology
#4 Sociology
#4 Electrical Engineering
#4 Total Engineering
#6 Aeronautical & Astronautical Engineering
#6 Industrial/Manufacturing Engineering
#7 Mathematics & Statistics
#8 Computer & Information Sciences,
#10 Atmospheric/Meteorology

Source: National Science Foundation Higher Education Research
and Development Survey FY2020, released Jan 2022

12 Fields Ranked in Top 10 for Research Expenditures

- 12 research fields ranked in Top 10; only three universities in nation have more
- Consistently ranked in top 30
- Testament to our excellence, breadth, and depth

...many disciplines about to break
into Top 10

Agriculture Anthropology
Bio-Engineering Earth-Sciences
Astronomy Geology Physics

Penn State awarded the
most undergraduate STEM
degrees in US:

In 2019-20,

6,473 STEM degrees

*Towards a sustainable future for international education in the Asia
Pacific*

APAIE Perth: 4-8 March 2024

Penn State Global Partnership Strategic Goals

Multidimensional, Robust Engagements

- student exchanges
- faculty research collaborations
- academic articulations like 3+1+1, 2+2, etc.

Multidisciplinary Collaborations

- faculty from multiple disciplines engaged
- expanding range of collaborative activities

Sustainable, Transformative Impacts

- long-term global partnerships
- Achieving broader, sustainable impacts

Section 1

About The Hong Kong Polytechnic University (PolyU) – Mission & Vision

Ms. Rose Tan
Associate Director of Global Engagement





Established in **1937**

87 Years of history in expanding knowledge, nurturing students & growing with Hong Kong

477,700 Alumni around the world

7,100+ Full-time staff

65 Research Centres/
Facilities

160+ Programmes

9 Faculties/Schools

About 20%
Undergraduates with
non-local learning
experiences

29,400+ Students

(Doctoral / Research Postgraduate / Taught Postgraduate / Undergraduate / Sub-degree)

Over 86 Years of Impact for Societal Benefit



Government
Trade School

1937



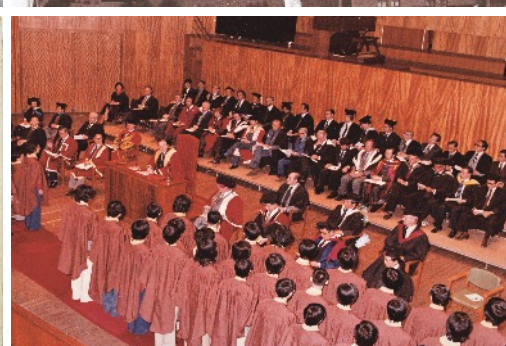
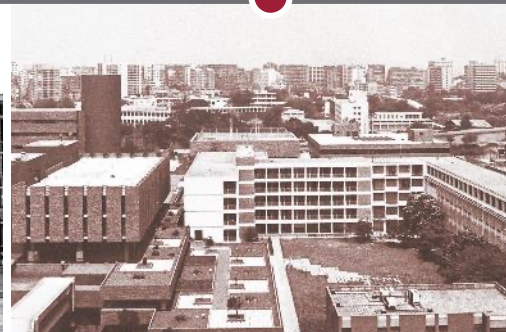
Hong Kong
Technical College

1947



Hong Kong
Polytechnic

1972



The Hong Kong Polytechnic University

1994



PolyU Today





MOTTO

To learn and to apply, for the **benefit of mankind**
開物成務 勵學利民

VISION

Be a leading university that advances and transfers knowledge,
and provides the best holistic education for the **benefit of Hong
Kong, the Nation and the world**

We aim to excel in both basic research and
applied research to address societal challenges

9 Faculties and Schools



Business



Design



Humanities



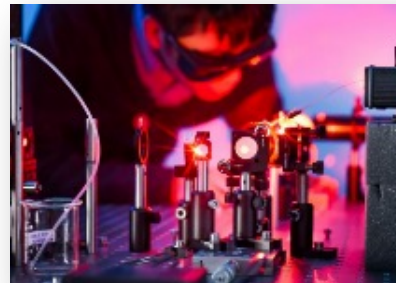
Science



**Fashion and
Textiles**



**Construction and
Environment**



Engineering

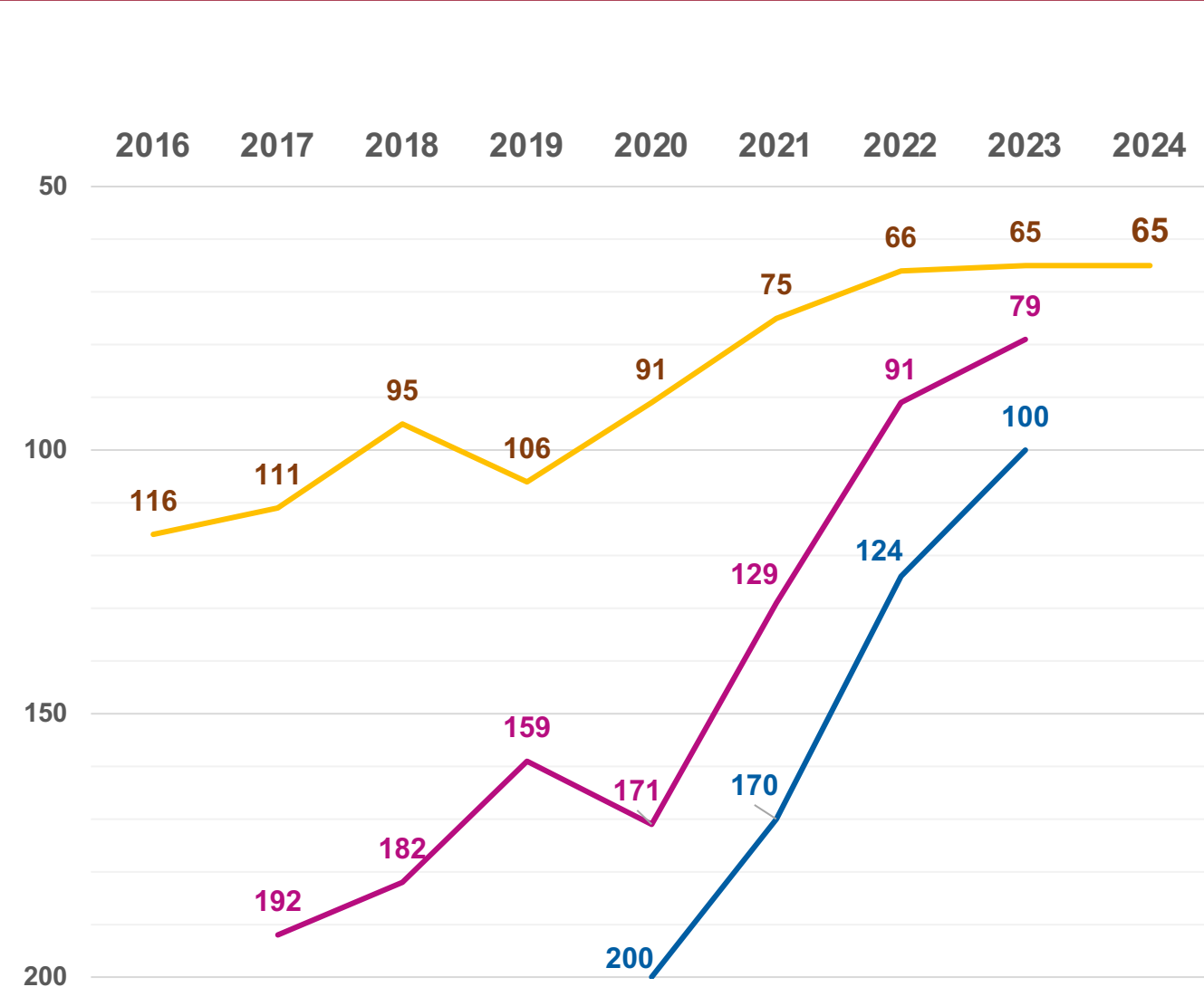


**Health and
Social Sciences**



**Hotel and Tourism
Management**

PolyU Ranked among the World's Top 100 Universities



World University Rankings	QS 2024 (2023)	THE 2023
HKU	26 (21)	31
CUHK	47 (38)	45
HKUST	60 (40)	58
PolyU	65 (65)	79
CityU	70 (54)	99

Taking the Lead in Numerous Disciplines



GLOBAL RANKINGS BY SUBJECTS



BY SUBJECT | 2023



BY SUBJECT | 2024



BY SUBJECT | 2022



BY SUBJECT | 2023

#12 Hospitality & Leisure Management	#16 Architecture & Built Environment	#38 Engineering	#45 Business & Economics	#2 Civil Engineering	#6 Engineering	#1 Hospitality & Tourism Management	#1 Management
#20 Art & Design	#22 Civil & Structural Engineering	#80 Social Sciences	#89 Arts & Humanities	#14 Mechanical Engineering	#25 Social Sciences & Public Health	#2 Transportation Science & Technology	#3 Civil Engineering
#56 Business & Management Studies	#62 Environmental Sciences	#87 Computer Science				#9 Mechanical Engineering	

Ranked first in Hong Kong

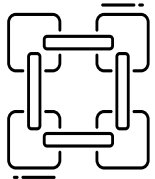
Best University for Blockchain in the World



PolyU is ranked **1st globally** in CoinDesk's "Best Universities for Blockchain 2022"

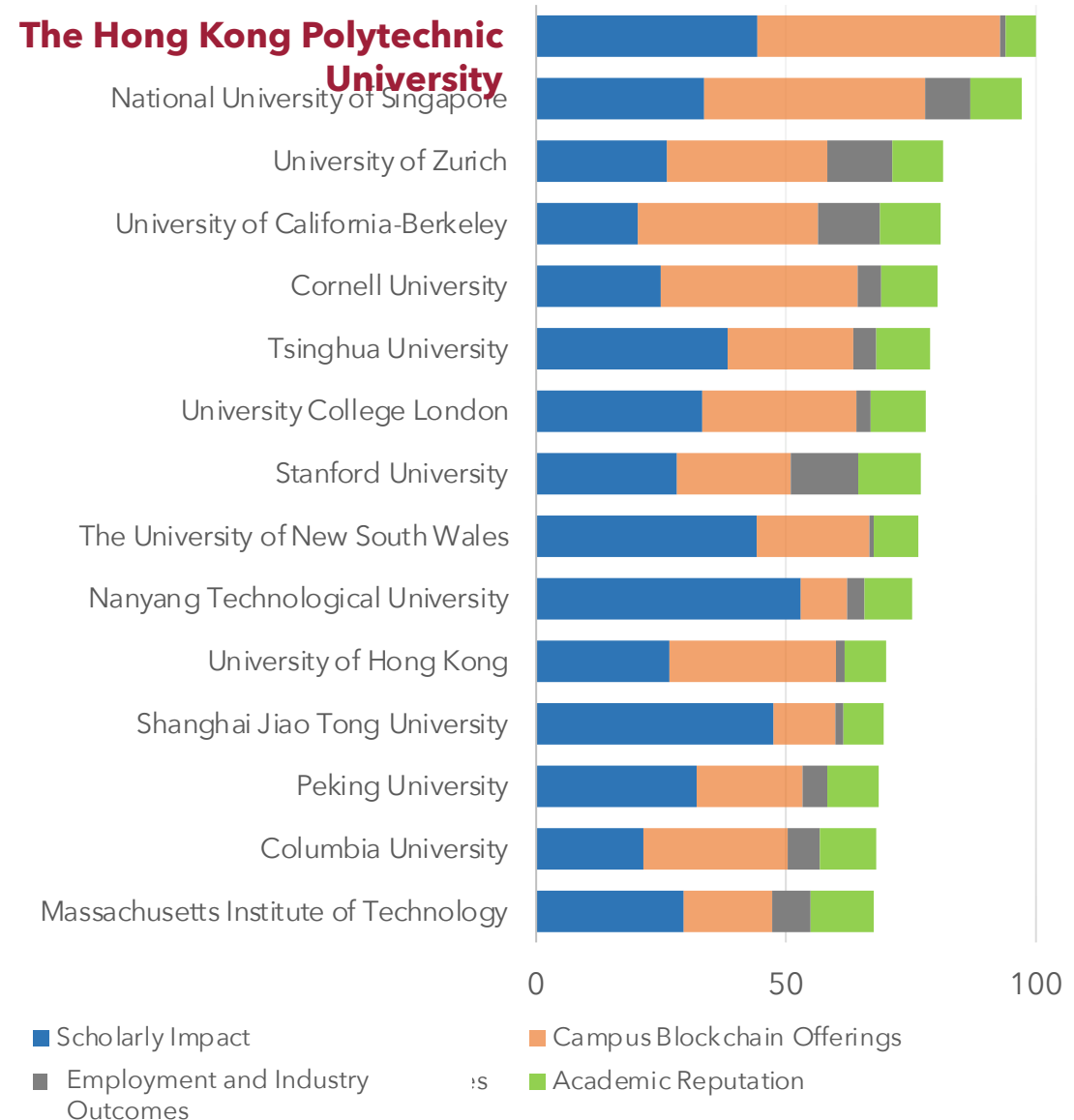


Hong Kong's first MSc programme in Blockchain Technology



The **first research centre in Hong Kong** to pursue research in full-stack blockchain technology

The Hong Kong Polytechnic University



Championing an International Learning Environment



- Ranked **6th** in the “World’s Most International Universities 2023” by Times Higher Education
- **Partnerships with leading institutions worldwide** to facilitate **international academic exchanges**, and promote **cultural diversity** and an appreciation of global issues among students
- Aim to provide **every undergraduate student access** to a **non-local study opportunity by 2027/28**



Holistic Education to Nurture Future-Ready Leaders



PolyU strives to nurture critical thinkers, effective communicators, innovative problem solvers and socially responsible global citizens

**Holistic
Education**



Service
Learning



Work-
Integrated
Education

Student
Exchange



Leadership
Development



Entrepreneurship
Education



PolyU Academy for
Interdisciplinary Research
香港理工大學高等研究院

As a hub and catalyst for basic and translational research, PAIR will focus on **high impact areas** to **address key societal challenges**.



18 interdisciplinary
research institutes and
centres



More than **450** Senior
Researchers from all over
the world

11 RESEARCH INSTITUTES

- Otto Poon Charitable Foundation Smart Cities Research Institute
- Otto Poon Charitable Foundation Research Institute for Smart Energy
- Advanced Manufacturing
- Artificial Intelligence of Things
- Future Food
- Intelligent Wearable Systems
- Land and Space
- Photonics
- Smart Ageing
- Sports Science and Technology
- Sustainable Urban Development



7 RESEARCH CENTRES

- Chinese Medicine Innovation
- Deep Space Explorations
- Digital Transformation of Tourism
- Mental Health
- Resources Engineering towards Carbon Neutrality
- SHARP Vision
- Textiles for Future Fashion



Over 200 of World's Top 2% Most-Cited Scientists in 2023



208 scholars ranked among
the **WORLD'S TOP 2% MOST-CITED
SCIENTISTS** by Stanford University,
based on career-long impact.

The largest number of top
2% scientists globally



19 in **Building and
Construction**



13 in **Civil Engineering**

The largest number of top
2% scientists in Hong Kong*



14 in **Energy**



9 in **Environmental
Sciences**



9 in **Optoelectronics
and Photonics**



7 in **Nursing**

*in addition to **Building and Construction** and **Civil Engineering**

The Stanford rankings reflect the **significant influence and research excellence** of PolyU's scientists and the University's determination to cement its **position as a world-class institution with leading research** in multiple disciplines



TOHOKU
UNIVERSITY

Tohoku University

Leading Innovation



Established in 1907
as Japan's 3rd National University

I. Research First

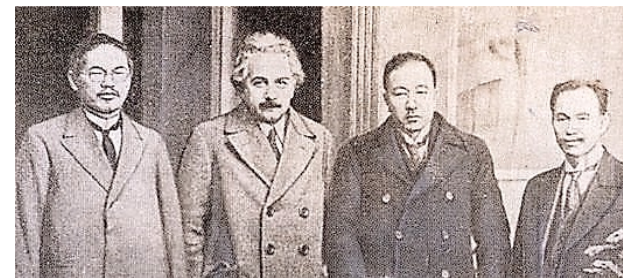
Consistently prioritize research excellence

II. Open Doors

Diversity and inclusion have been our core values
Admitted the first female students in Japan in 1913

III. Creating Social Value

Committed to creating value through research



Albert Einstein visited (1922)



The first female students in Japan (1913)



Shunichi
Iwasaki



Perpendicular
Recording



Fujio
Masuoka



Flash Memory

Recent topics about TU

**Selected as the only remaining finalist in the
"Univ. for Int'l Research Excellence" program**
(to be supported by the Japanese government's
10 trillion-yen university endowment fund)

**Ranked Number 1 in
THE Japan University
Rankings**
(from 2020 to 2023)





Tohoku University ~ In round numbers

27

18,000 Students

3,000 Faculty members

3,000 Staff members

3,000 Temporal staff members

\$ 1.2 Billion Total operating expense,

including hospital's **\$ 320 M**

Research income (2022)

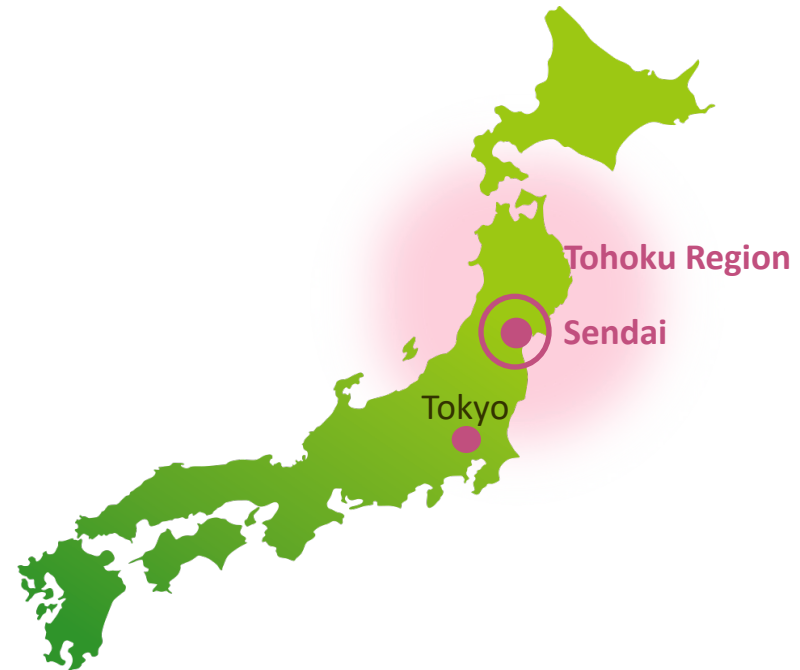
Public \$ 210 M

Private \$ 85 M

Location of Sendai

300 km north and

90 min from **Tokyo**





Organizational Structure

28

15 Graduate Schools **3** Professional Graduate Schools

10 Undergraduate Schools **6** Research Institutes

Graduate Schools				
Arts & Letters	Economics & Management	Dentistry	Agricultural Science	Life Sciences
Education	Science	Pharmaceutical Sciences	International Cultural Studies	Environmental Studies
Law	Medicine	Engineering	Information Sciences	Biomedical Engineering

Professional Schools	Undergraduate Schools		Research Institutes	
Law School	Arts & Letters	Medicine	Materials Research	Electrical Communication
School of Public Policy	Education	Dentistry	Development, Aging and Cancer	Multidisciplinary Research for Advanced Materials
Accounting School	Law	Pharmaceutical Sciences	Fluid Science	Disaster Science
	Economics	Engineering		
	Science	Agriculture		

As of May 1, 2023



Materials Science

Leading the way in materials science through outstanding research at various research institutes of Tohoku University

- Largest group with 400 researchers



Spintronics

Pioneering spintronics research, advancing global industry collaboration in integrated electronic systems

- World-leading research cluster



Data-Driven Medicine

Contributing to next-generation medicine through large-scale biobank and first-ever 3-generation cohort study (150K participants)

- Personalized medicine and healthcare



Disaster Science

Pioneering disaster science as a new interdisciplinary research field

- Global Center for Disaster Statistics with UNDP



Other prominent research clusters at Tohoku University

Cosmic
Physics

Env. & Earth
Science

Integrated
Chemistry

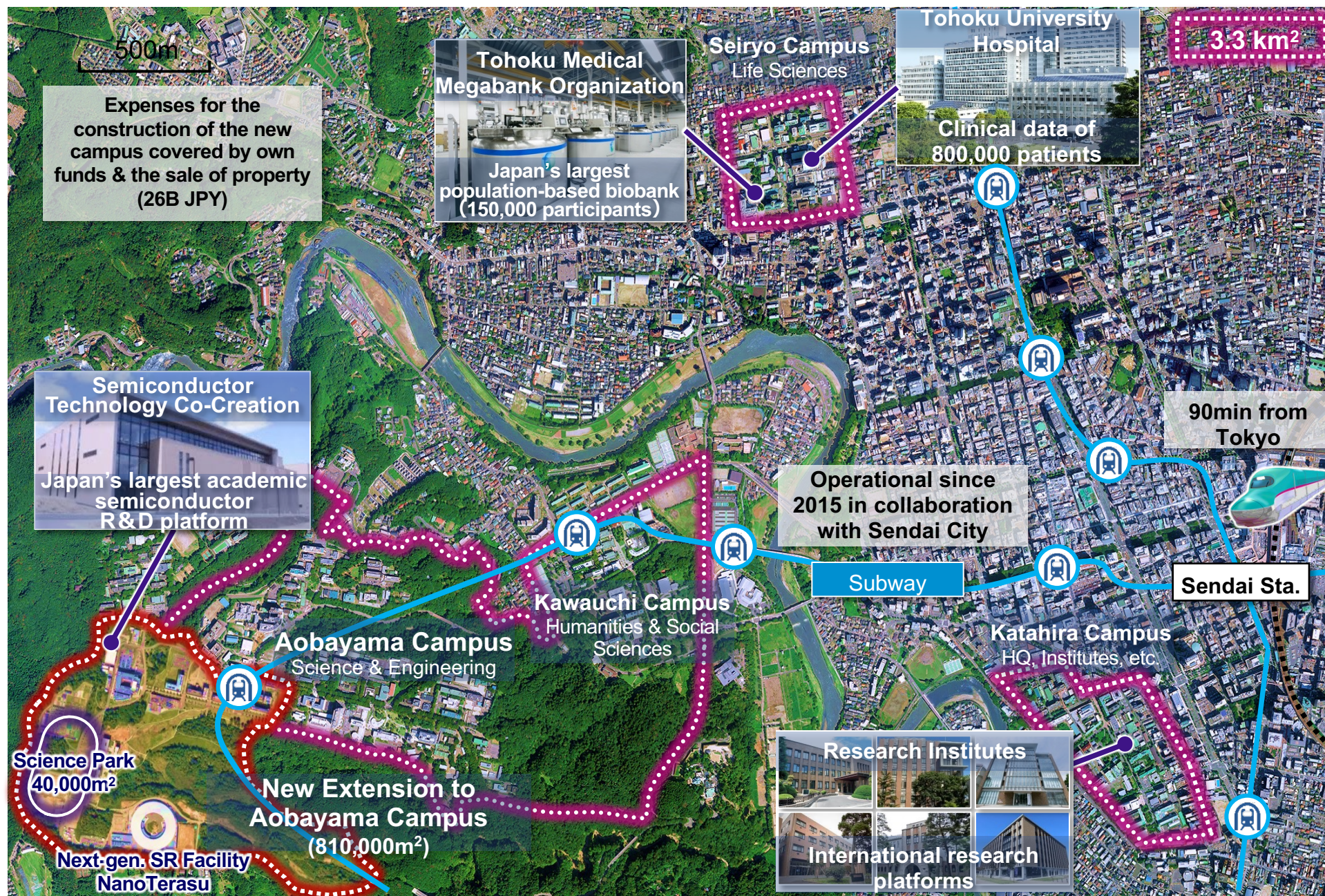
Machine
Science

Data Science

Japanese
Studies



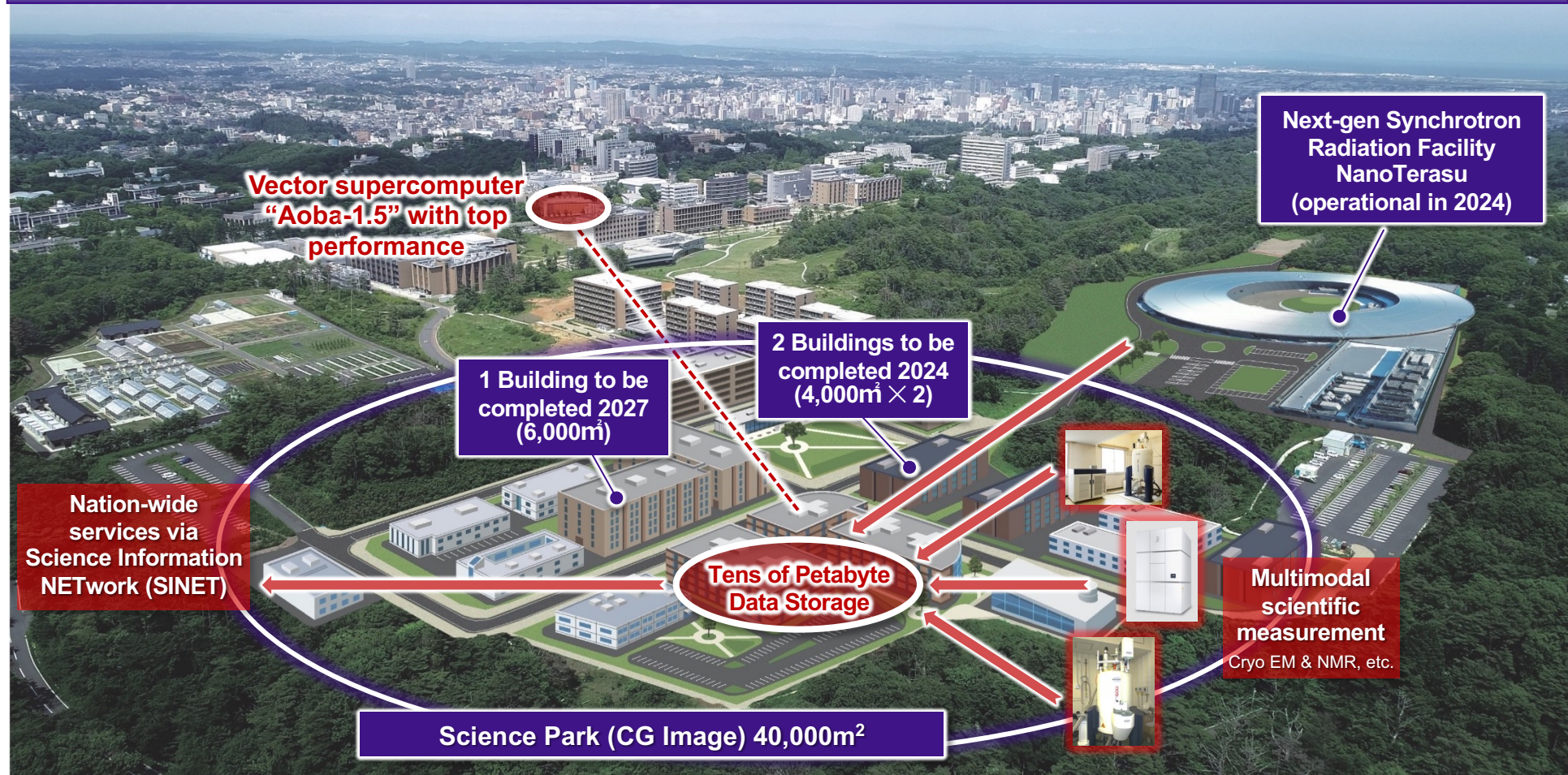
Urban Campuses as a Hub of Innovation





On the 40,000m² space reserved for the Science Park, we will create R&D centers by utilizing university bonds and private investments, and develop the university's own "Science Park Project" that brings together various public-private actors.

Center for state-of-the-art industry collaboration,
accelerating business growth and responding to social needs



Section Two

Best Practices in Student Mobility and Research Collaborations



Tohoku University Short-Term Exchange Program



Research-Oriented Student Mobility Programs at Tohoku University:

***JSD, COLABS,
JYPE, TSSP, T-SRIP and so on***

Yoshitaka Kasukabe

Global Learning Center, Tohoku University

<http://www.insc.tohoku.ac.jp/cms/index-e.cgi>



STEM-Based Student Mobility Programs at Tohoku University

		Undergraduate				Graduate				
Year		First (Freshman)	Second (Sophomore)	Third (Junior)	Fourth (Senior)	Graduate First	Graduate Second	Graduate Third	Graduate Fourth	Graduate Fifth
Mobility Programs	Degree-Seeking	Future Global Leadership (FGL) Program- Undergraduate: <ul style="list-style-type: none"> Advanced Molecular Chemistry (AMC) International Mechanical and Aerospace Engineering (IMAC-U) Applied Marine Biology (AMB) 				Future Global Leadership (FGL) Program-Graduate				
						<ul style="list-style-type: none"> Tohoku University Double Degree (DD) Program, Double Degrees Tohoku University Jointly Supervised Degree (JSD) Program, One Degree 				
	Non-Degree-seeking			Tohoku University Junior Year Program in English (JYPE), Semester-based		Tohoku University Cooperative Laboratory Study Program (COLABS), Semester-based				
		Tohoku University STEM Summer Program (TSSP), 4-Weeks		Tohoku University STEM Research Internship Program (T-SRIP), 6-Weeks		Tohoku University Research-Oriented Incoming Student (ROIS) Scholarship Program, Non-Semester-based, 10 days-12 months				

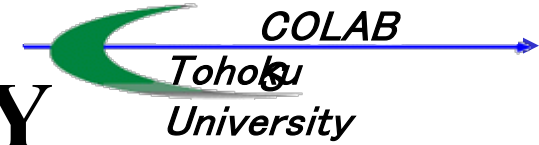
Planning

3E:

Explore

Experience

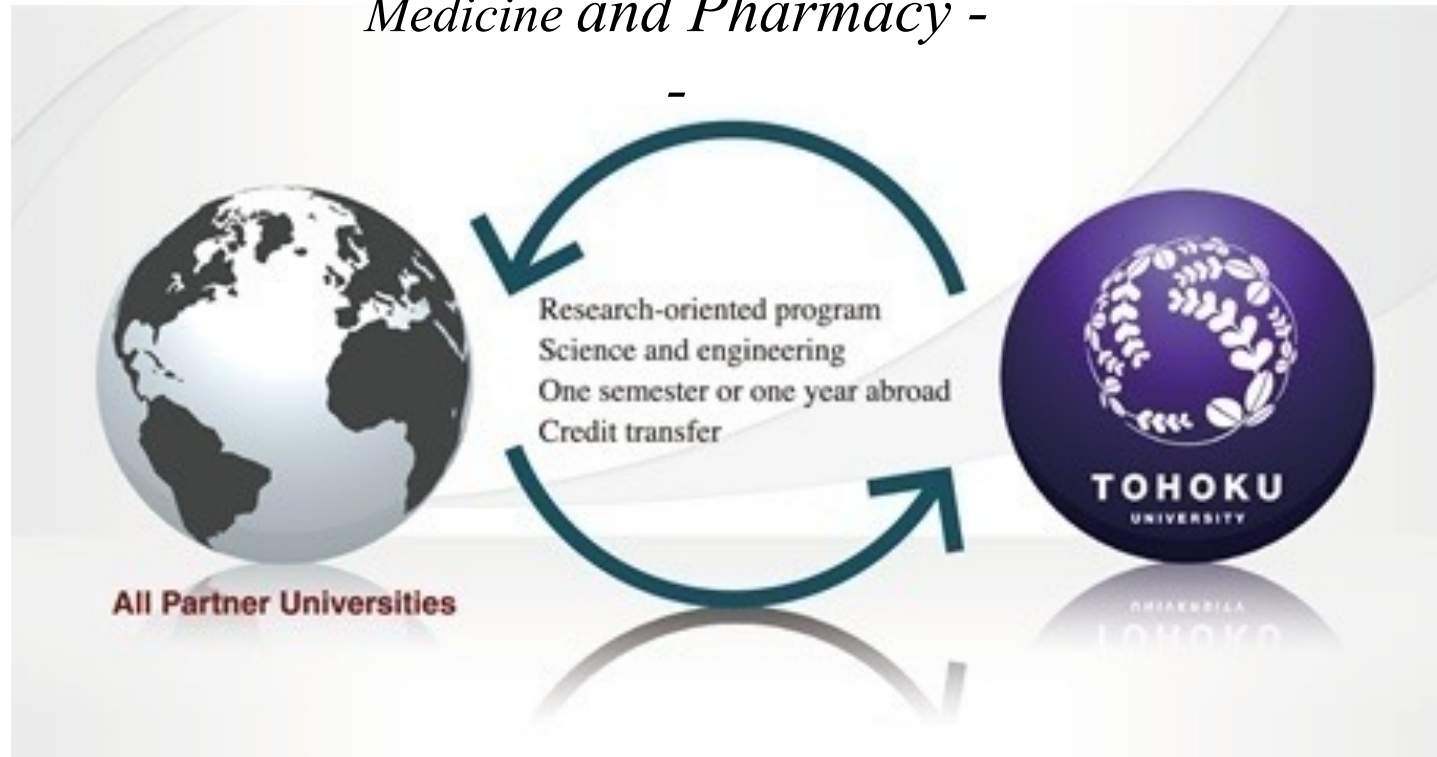
Execution of real research



TOHOKU UNIVERSITY

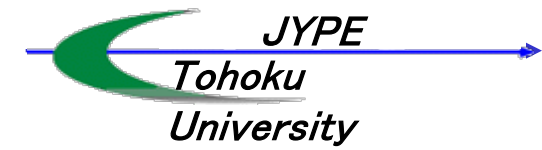
Cooperative Laboratory Study Program (COLABS)

*- Science, Engineering, Information Sciences, Agricultural Science,
Life Sciences, Environmental Studies, Biomedical Engineering, Dentistry,
Medicine and Pharmacy -*





Short-Term Exchange Program
: <http://www.insc.tohoku.ac.jp/english/exchange>



TOHOKU UNIVERSITY

JUNIOR YEAR PROGRAM IN ENGLISH (JYPE)

Science, Engineering and Agricultural Science



Yoshitaka Kasukabe

Global Learning Center/Department of Metallurgy Tohoku University, Sendai 980-8576, Japan

E-mail: yoshitaka.kasukabe.c3@tohoku.ac.jp

Individual Research Training

with the support of Professors and research groups



10 Classes
per Week
(20 Classes
for IRT
Senior)



**Scenes of Individual
Research Training**

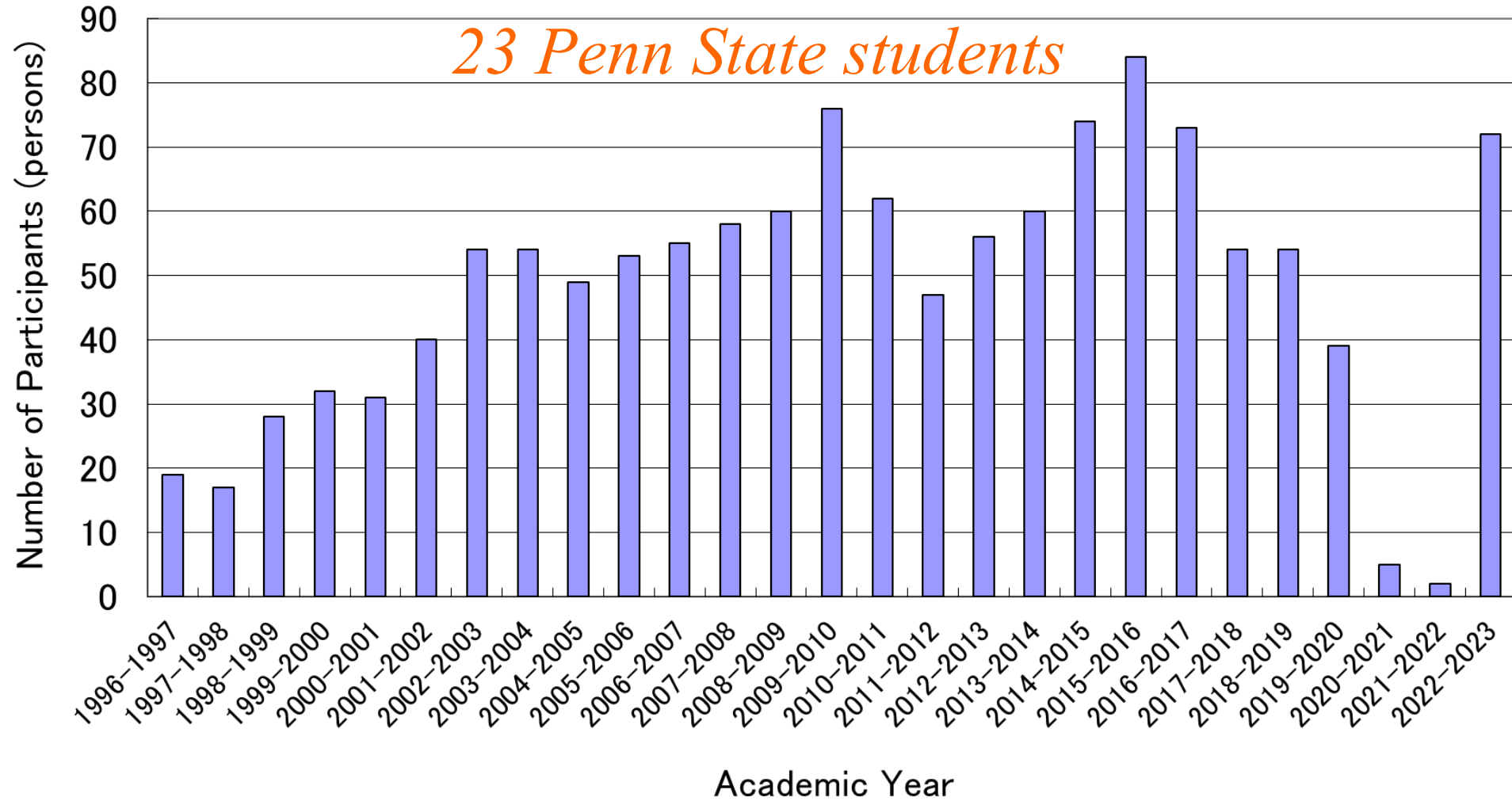
**With Friends in a
Research Group**

Individual Research Presentation

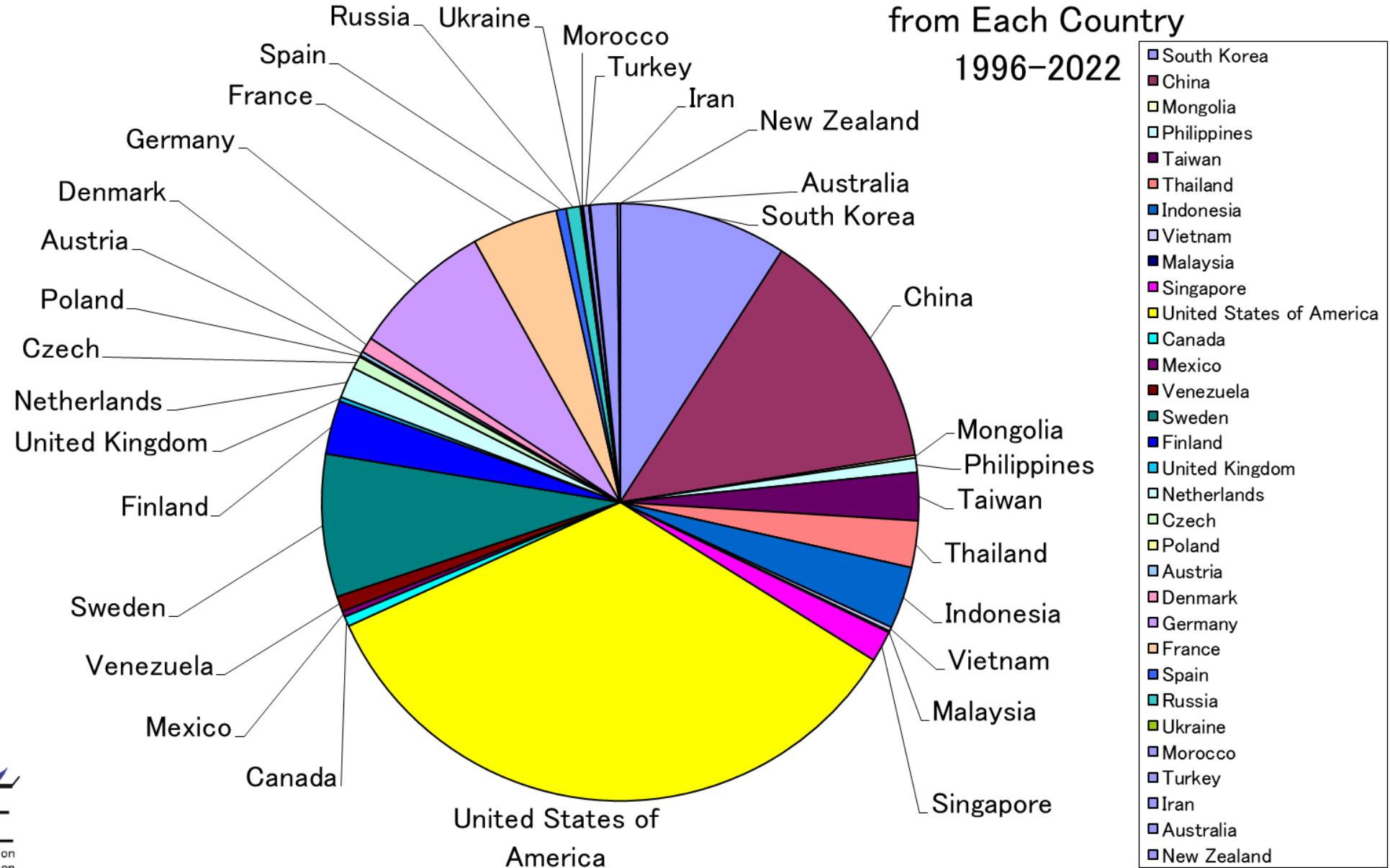


Scenes of Individual
Research Presentation

Number of Participants in Each Academic Year in JYPE

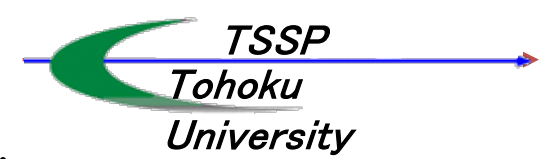


Fraction of Number of Participants from Each Country 1996-2022



Tohoku University

STEM Summer Program (TSSP)



- *Science, Technology, Engineering and Mathematics*
- *Theme: “Exploring the Frontier of Science and Technology”*
- *Cutting edge lectures in advanced sciences and engineering, including Challenging Experiments for Quantum Theory, Paper Aircraft Group Work and Fastest Paper Clip Motor Competition*
- *Insight into what world society needs based on advanced science and technology in the future*

Topics: •Introduction to Spintronics •Introduction to aircraft design
•How to see things using waves and role of an accelerator •Robotics for Space Exploration • Research Expedition in Antarctic Waters
• Secrets of the Japanese swords •The 2011 Tohoku earthquake
•Use of cyclotron in science, technology, and medicine
• Structural Metallic Materials for Industry Innovation
• Nonverbal Information to Enrich Future Telecommunication
• Humanities Approaches to Disasters • Geomicrobiology
• Japanese language and Culture • Laboratory visits and Field Trips



To

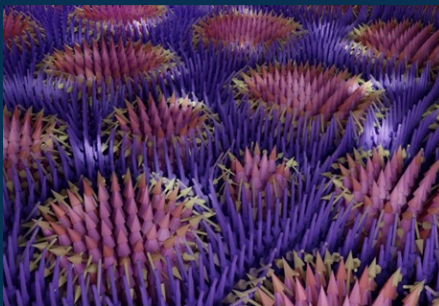
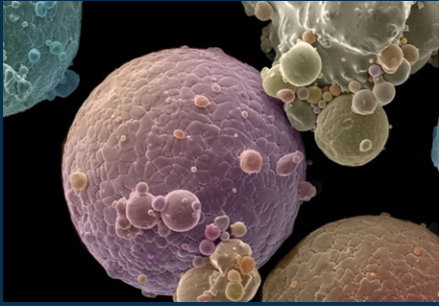


University STEM Summer Program (TSSP)

42

Four-Weeks Stay Program: Tohoku University STEM Summer Program (TSSP): Exploring the Frontier of Science and Technology





Penn State Asia Partnerships

Case Study 1:
Expanding Multidimensional Collaborations with
Tohoku University

Penn State Global Partnerships Development Framework & Methodology

Rationales:

- Broad range of current linkages grows organically
- Penn State receives many requests for partnership development
- A coordinated, intentional approach in identifying partnerships of greatest impact

Goal:

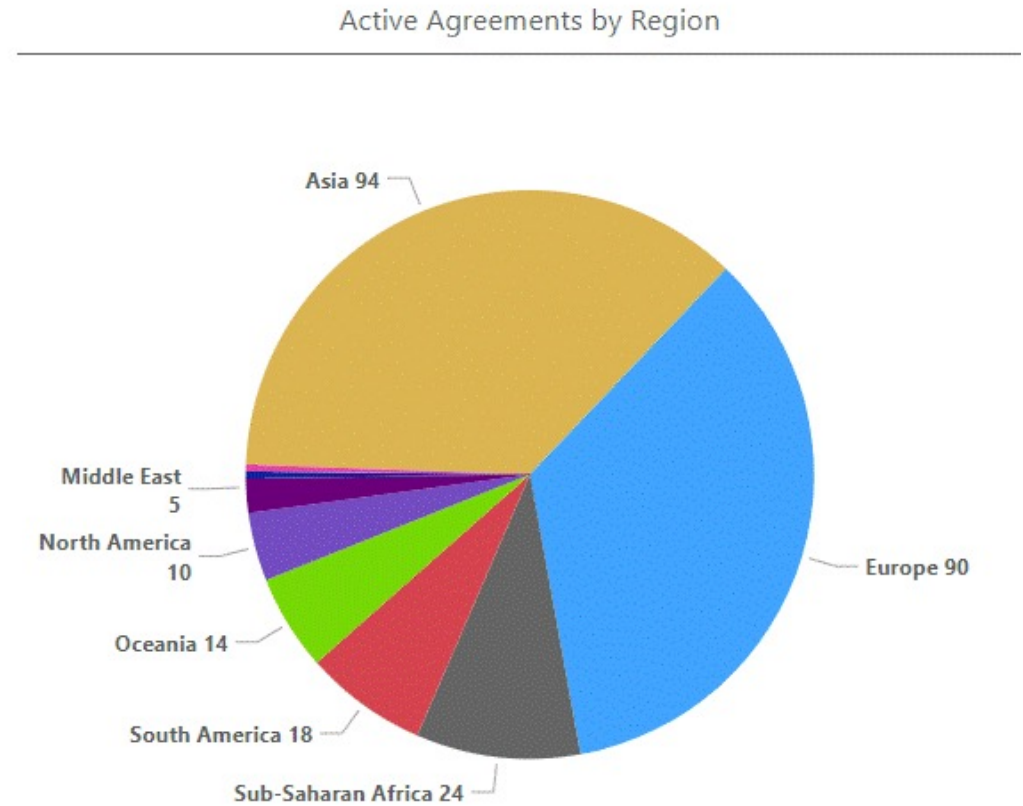
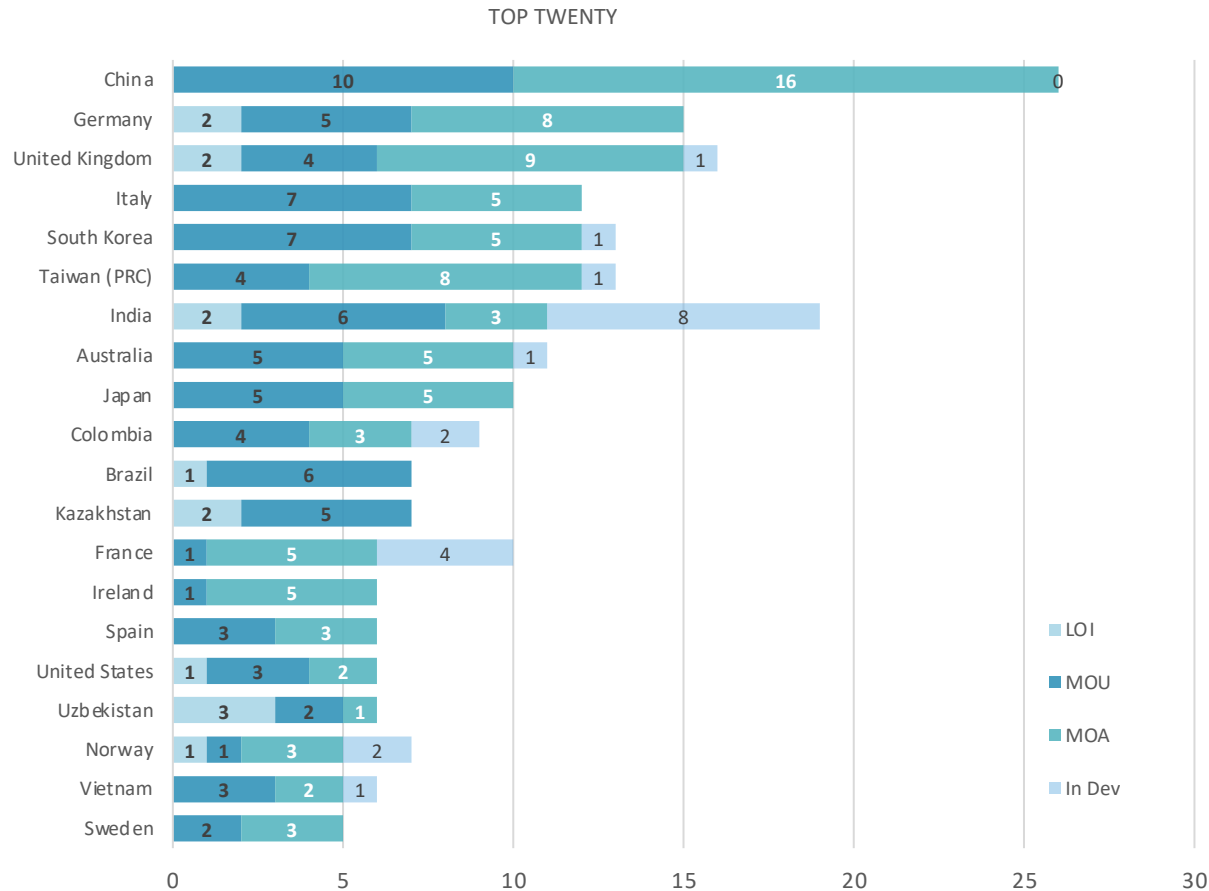
Build a robust, data-informed strategy to develop sustainable partnerships, focusing on university-wide engagement to deliver high-impact outcomes across teaching and learning, research and scholarship, and service/outreach

Methodology:

- Task force with broad representation from the university
- Criteria for strategic partnerships and a gap assessment of current partnerships
- Analysis of current partnership portfolio that could be nurtured to become strategic partnerships

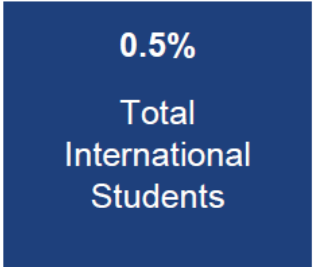
Active Agreements by Country and Region

Penn State Global Footprint



Penn State Global Footprint in Japan

54 Students from Japan¹



34 Undergraduate
19 Graduate
1 Law

Fall 2022

13 Study Abroad Programs²

130 Student Travelers

Fukuoka Mito Nagoya
Hiroshima Sendai Tokyo

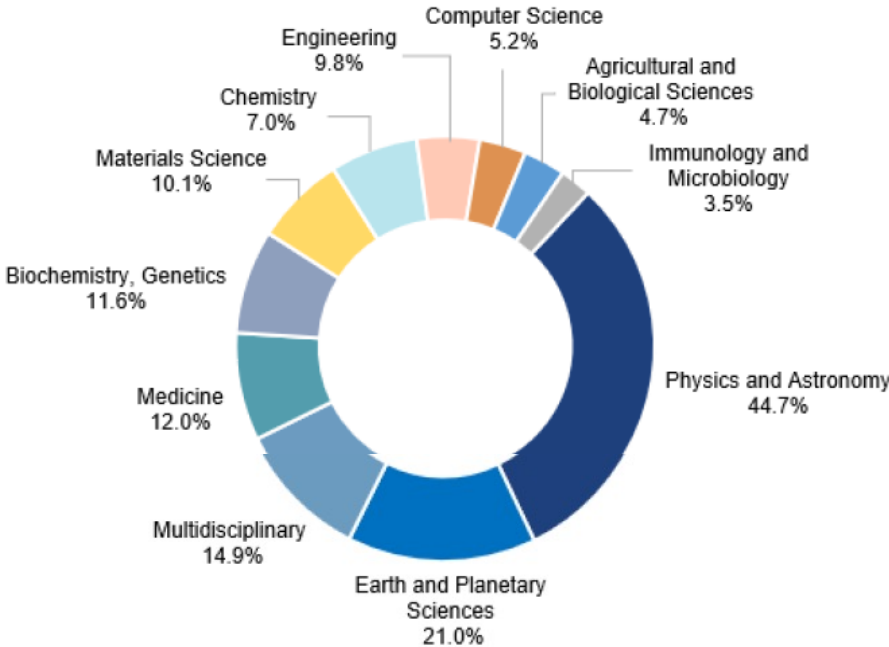
Between 2017-2022

1,506 Scholarly Outputs | 285 Partner Institutions³

Top 10 Partners and Publications

The University of Tokyo	511
Kyoto University	213
Chiba University	203
National Institutes of Natural Sciences	149
RIKEN	125
Nagoya University	115
University of Tsukuba	98
Osaka University	94
Tohoku University	92
Hiroshima University	79

Publications by Topic



Towards a sustainable future for international education in the Asia Pacific

APAIE Perth: 4-8 March 2024

Penn State Global Footprint in Japan (Cont'd)

87 Joint Research Awards⁴

\$52.1M External Funding

Agricultural Sciences (3)
Earth and Mineral Sciences (16)
Eberly College of Science (17)
Engineering (12)
Liberal Arts (2)
Materials Research Institute (25)
Medicine (7)
Social Sciences Research Institute (5)

Between 2017-2022

10 Active Agreements⁵

Chiba Institute of Technology (1)
Ibaraki University (1)
National Institute for Materials Science (1)
Seinan Gakuin University (1)
Tohoku University (4)
Tokyo Institute of Technology (2)

Moving Forward: Penn State – Tohoku Partnership

Building Collaborations in Key Research Areas

- Creating effective, sustainable channels for faculty to collaborate
- Solving global challenges for sustainable impact

Deepening Commitment from upper leadership and faculty champions

- High-level delegation visits between two universities
- Faculty collaboration workshops, both virtual and in-person

Strengthening Student Mobility

- More students to study abroad between two universities
- Promotion through effective marketing channels

Expanding Agreements

- Expanding the current agreements to become University-wide, multidimensional ones



APAIE 2024



Towards a sustainable future for international education in the Asia Pacific

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Section 2

Best Practices at The Hong Kong Polytechnic University (PolyU)

Ms. Rose Tan
Associate Director of Global Engagement



Internationalisation & Engaging the Nation

Embracing new opportunities near and far



International Collaborations and Partnerships



Student exchange partners



Championing an International Learning Environment



- Ranked **6th** in the “World’s Most International Universities 2023” by Times Higher Education



- Partnerships with leading institutions worldwide** to facilitate **international academic exchanges**, and promote **cultural diversity** and an appreciation of global issues among students

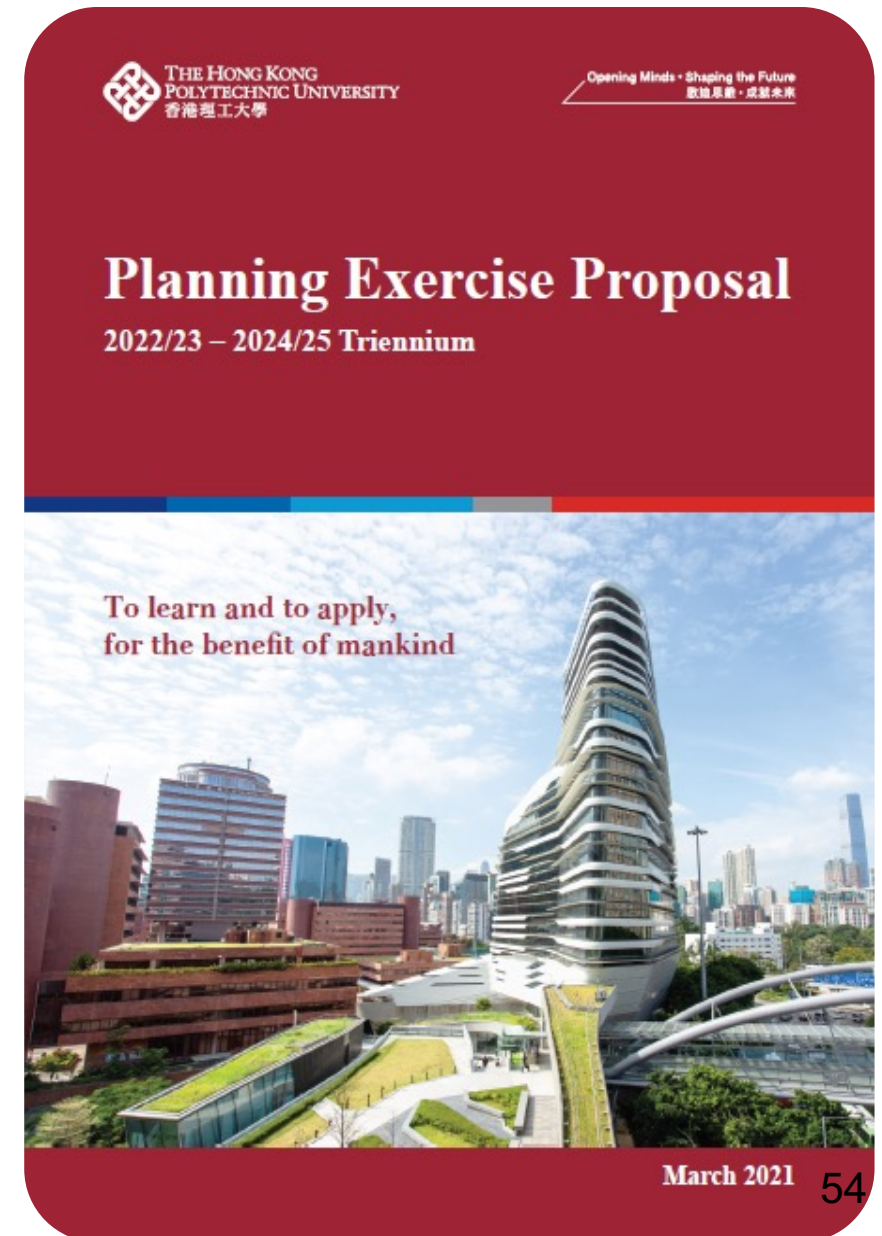
- Aim to provide **every undergraduate student access** to a **non-local study opportunity by 2027/28**



The University's Goal:

*Within the next two triennia, we aim to
raise the participation rate to 100%*

*Namely, all of our undergraduate students will enjoy
at least one non-local learning experience
by 2027/28 upon graduation*



Non-Local Learning Experiences

We aim to **achieve a balance** between activities in **Mainland China** and those **overseas** in our endeavours to **raise the participation rate** in non-local learning experiences to 100%.



7 types of non-local learning experiences



1/ Outgoing exchange experience
e.g. outbound exchange programmes

4/ Study/field trip experience
e.g. study tours, CAR subjects with study/field trips, entrepreneurship tours/visits

2/ Outgoing visiting experience
e.g. study abroad

5/ Experiential learning experience
e.g. Service Learning, volunteer programmes

3/ Internship experience
e.g. training, internships, WIE activities, clinical placements, research attachment

6/ International events
e.g. competitions, conferences, symposiums, summits

7/ Others
e.g. summer schools, summer camps



**Note: The 7 types of non-local learning experiences above are as defined by Hong Kong's University Grants Committee (UGC) in Common Data Collection Format (CDCF).*



- Launching a university-wide funding scheme – the **Non-local Study Fund** is to ensure all undergraduate students will have a non-local study opportunity by graduation in 2027/28
- Leveraging government and non-government funding schemes to offer support to PolyU students in their participation in non-local learning activities



- Engaging additional partners in sought-after destinations
- Pursuing partnerships in Mainland China and Belt & Road regions to provide meaningful service-learning projects
- Developing partnerships with companies/organisations to provide more non-local Work-Integrated-Education (WIE) opportunities
- Joining forces with strategic partner institutions in the Guangdong-Hong Kong-Macao Greater Bay Area to offer students a wide range of learning programmes

Promoting non-local learning opportunities to students



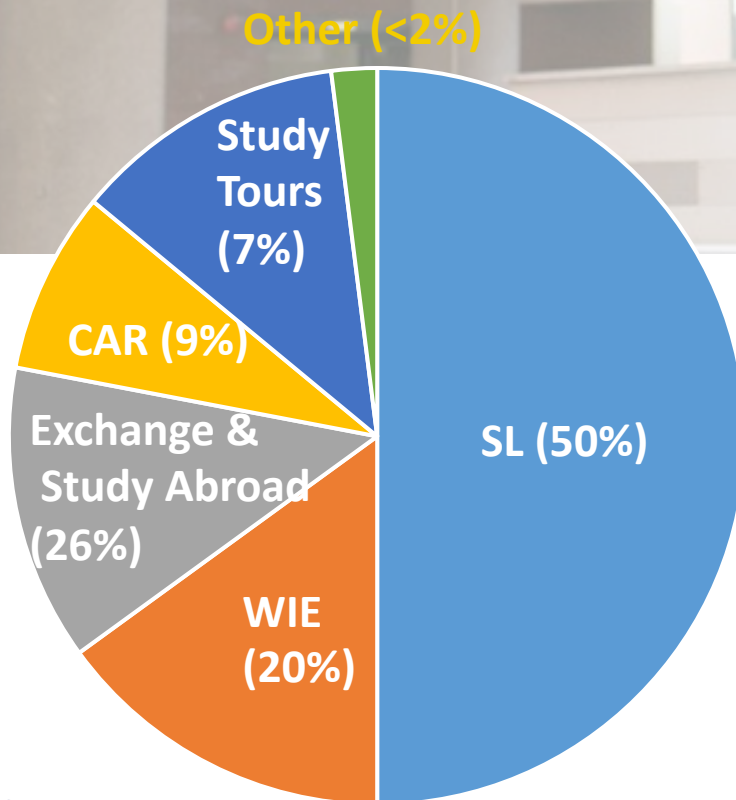
Global Exchange Fair

- The 2-day event (24 & 25 Oct 2023) promoting offshore learning opportunities in the 2024/25 academic year attracted **640+ participants**





Getting to the 100% - Distribution of Activities



- This is our **projection of what the distribution of activities will look like** when we get to 100% non-local learning experience
- Some overshoot (~10%) should be allowed so that **high-performing students have multiple opportunities**

Section Three

Building Collaborative Partnerships across the Asia-Pacific for Sustainable Impact

Section 3

Fostering Collaborative Partnerships across the Asia-Pacific for Sustainable Impact @PolyU

Ms. Rose Tan
Associate Director of Global Engagement



Student Exchange at PolyU



PolyU has a long tradition of partnering with leading universities and institutions for student exchange and other mobility.



316

Student Exchange Agreements

275

Exchange Partners

106

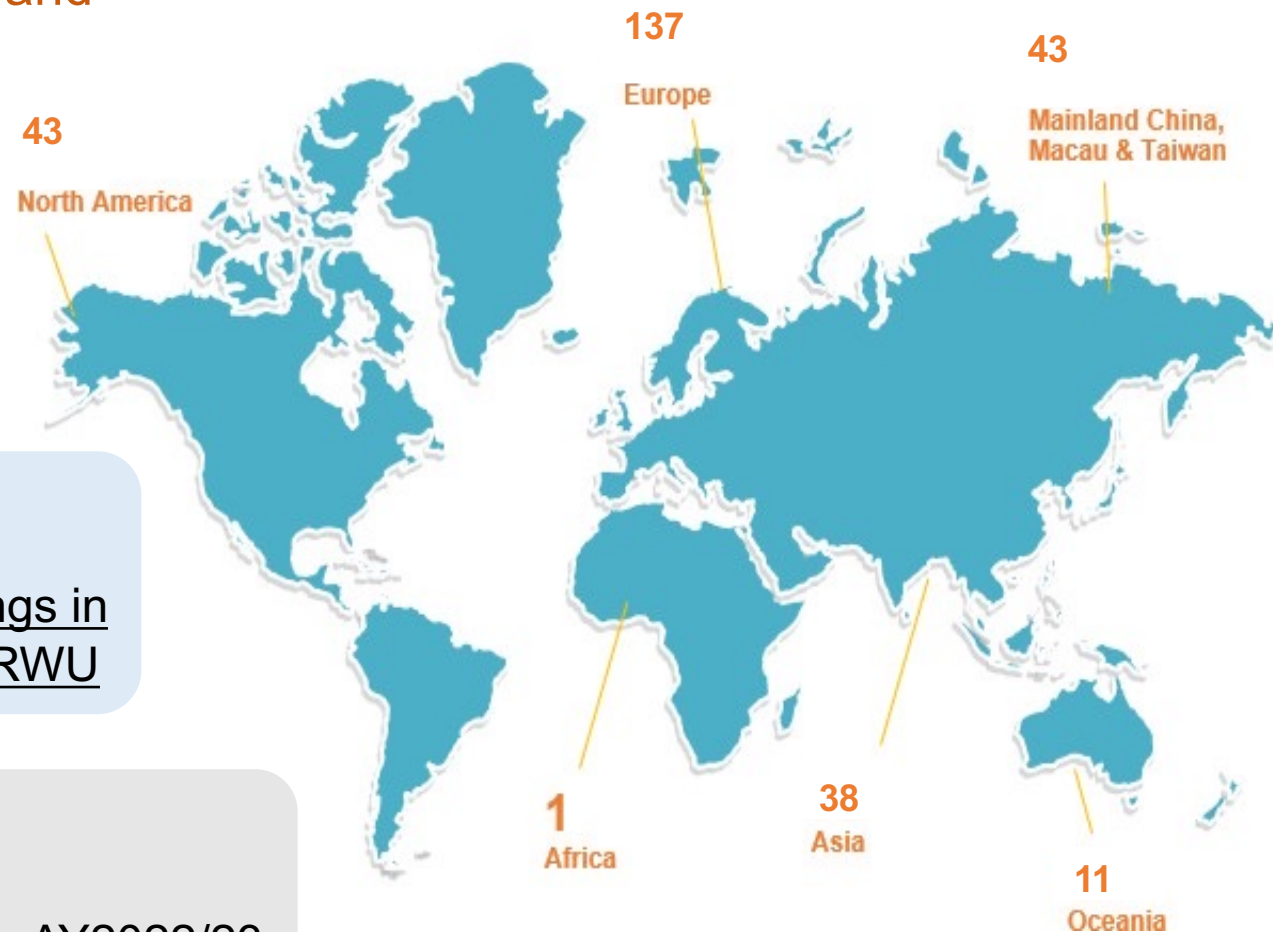
Exchange Partners Rankings in
the Top 200 of QS/THE/ARWU

629

Inbound Students in AY2022/23

515

Outbound Students in AY2022/23

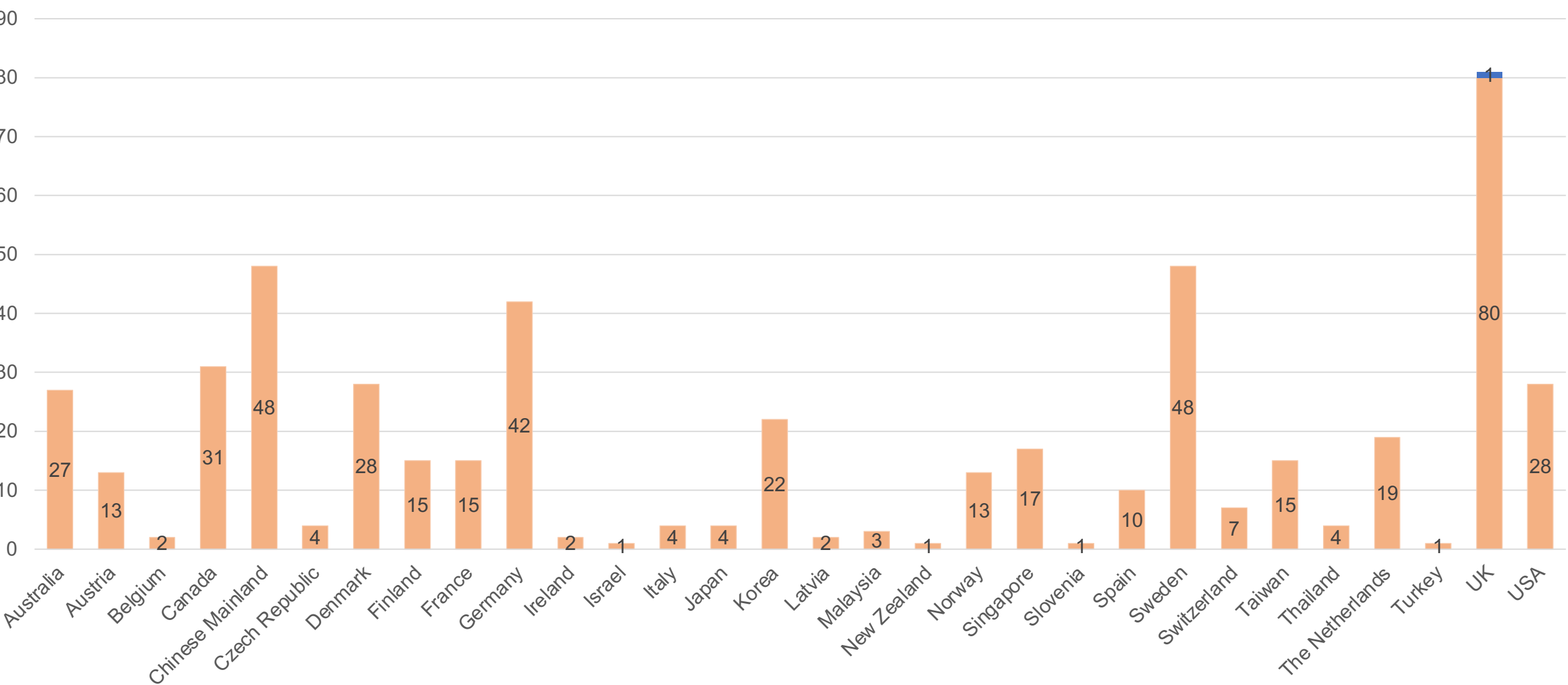


Student Exchange Figures Review



AY2022/23 **Outbound Exchange** Number
(by Destination)

In-person Virtual





11 Partner Institutions & 15 Agreements

MOU

Globalink Research Internship (GRI) Programme

- Mitacs (a Canadian non-profit organisation)

PolyU full-time senior undergraduates of any discipline will have the opportunity to participate in **research internships** at over 70 top universities in Canada.

Student Exchange (7)

- University of Waterloo (1)
- HEC Montreal (1)
- OCAD University (1)
- University of Alberta (2)
- University of Guelph (1)
- University of Calgary (1)

Student Attachment (1)

- The University of British Columbia (1)

Student Placement (4)

- Queen's University (1)
- University of Toronto (3)

Partnership

Strategic University Partnership Institutional Agreement (Signed in November 2018)

- Jointly strengthen collaboration on **education, research, and entrepreneurship**
- Jointly **support the development of the Greater Bay Area (GBA)**
- UW will contribute to the **GBA I³ international network** and benefit from its unique resources
- PolyU provides Waterloo students to enhance entrepreneurial skills through the **Shenzhen-Hong Kong Start-up Immersion Programme (SIP)**
- Jointly invested in **transforming research outcomes into real-world impact**, such as the Startup Postdoc Programme





High-Level Delegation Visit

**13 March 2019
(First time)**

Led by UW President Professor Feridun Hamdullahpurhas

- Discussed the current and potential collaborations between the two universities



10 October 2019

Led by the Nobel laureate Prof. Donna Strickland

- Discussed Vision Science around the common research topics on myopia



24 February 2023

Led by UW President and Vice-Chancellor Prof. Vivek Goel

- Toured the clinical facilities and shared their aspirations regarding research collaboration





Student Exchange Programme

Institutional-Level Student Exchange Agreement

From 5 August 2014 to Open-end

No. of places stipulated on agreement: 8

2022/23

Inbound Students: 9

Outbound Students: 7



Student Sharing

The exchange programme is an inevitable experience for me to grow mature. From adapting to the cultural and language differences, learning to adjust to a new lifestyle, taking care of my daily chores and keeping up with the high-standard clinical training at UW OVS, the exchange programme has brought me away from the comfort zone that I used to be in Hong Kong.

Centre for Eye and Vision Research (CEVR)

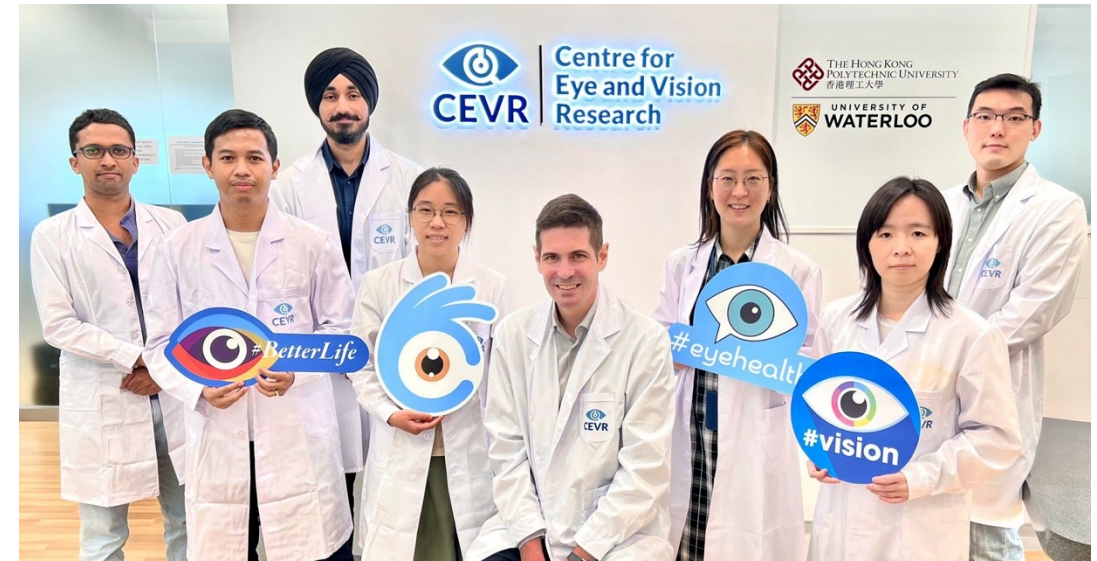
The world's first international hub for vision science

About CEVR:

- Established in 2022
- Joint partnership between PolyU and the University of Waterloo, Canada

CEVR's Mission:

- Facilitating global interdisciplinary collaborations in research
- Promotes eye health with clinical, basic and applied research
- Develop ground-breaking technologies to prevent vision loss and preserve sight among the ageing population



CEVR's Research Programmes:

1. Myopia and Eye Growth
2. Ocular Drug Discovery and Delivery,
3. Vision Enhancement
4. Tear Film and Ocular Surface
5. Advanced Optometric Technology

Future Directions

1. Proactively broaden the network of institutional partners with good international standing

- Expand PolyU's footprint around the globe.

2. Establish collaborative research centres

- Facilitate joint research projects and knowledge sharing between institutions.

3. Develop more joint/dual programmes at all levels

- Promote academic collaboration and enable joint supervision of students.

4. Facilitate knowledge transfer initiatives

- Share expertise, best practices, and technological advancements between institutions.

5. Foster partnerships with top universities and co-organise joint programmes or events

- Provide students with more non-local learning opportunities generated from the joint programmes

6. Promote joint entrepreneurship and innovation initiatives

- Encourage collaborative start-up ventures and foster innovation and entrepreneurship.



Sustainable Industrial and Social Creation

- Innovation in Industry and Society -

Higher Education, University Reform, Internationalization

Penn State

HK PolyU

全交流協定校
ALL Partner Universities

“Inter-University Exchange
Project” (2023-2027)



“Top Global University Project
(TGU)” (2014-2023)

Integrated
Internationalization of
Universities (Reform)

“University for
International Research
Excellence”
(25 years starting in 2024)

- Excellence in education and research needed to drive the global era
- Innovation in industry and society
- **Sustainable** Industrial and Social Creation



- March 11, 2011, a magnitude 9.0 mega-earthquake struck the Tohoku region of Japan
- Earthquake triggered massive tsunami



Resilient society

Contribution to the global agenda

Sendai Framework for Disaster Risk Reduction

(at the World Conference on Disaster Risk Reduction in 2015)



International Research Institute of Disaster Science (IRIDeS)

established in 2012



7 GLOBAL TARGETS

Reduce

Mortality/ global population

2020-2030 Average << 2005-2015 Average

Affected people/ global population

2020-2030 Average << 2005-2015 Average

Economic loss/ global GDP

2030 Ratio << 2015 Ratio

Damage to critical infrastructure & disruption of basic services

2030 Values << 2015 Values

Increase

Countries with national & local DRR strategies 2020

Value >> 2015 Value

International cooperation to developing countries

2030 Value >> 2015 Value

Availability and access to multi-hazard early warning systems & disaster risk information and assessments

2030 Values >> 2015 Values

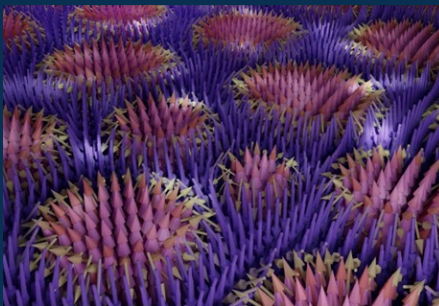
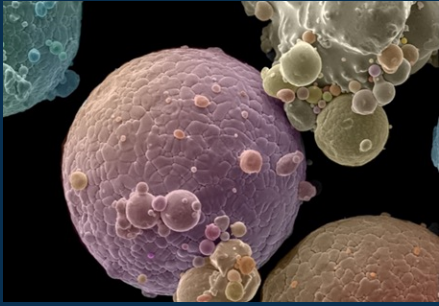


Creating an Innovation Ecosystem

73

The university is an **international hub** for technology, talent, and funding
Diverse actors engaged in problem-solving, driving a circular economy





Penn State Asia Partnerships

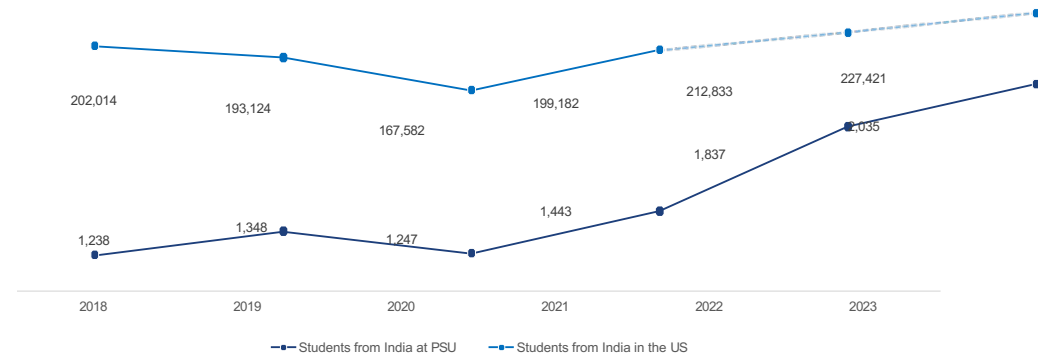
Case Study 2:
Building Sustainable Research Collaborations
with the Indian Institute of Science (IISc)

Penn State Global Footprint in India

Student Enrollment

2,035 students from India are enrolled at Penn State in 2023, significantly exceeding pre-COVID levels.

Due to the increase attractiveness of U.S. institutions for students from India, Indian students enrolled at Penn State grew to 21% of the international student population of the university (compared to 12.1% in 2018).



Academic Level	2018	2019	2020	2021	2022	2023
Undergraduate	632	654	624	723	944	1067
Graduate	585	673	616	692	880	942
Medical	1	1	1	1	0	0
Law	20	20	6	27	13	26
Total	1,238	1,348	1,247	1,443	1,837	2,035
Total PSU	10,218	10,351	9,218	9,304	9,924	9,671

Active Agreements with Indian Institutions

Institution	PSU-Campus	Type	Effect Date	Expire Date
Indian Institute of Science	Penn State Global	MOU	1/8/2019	1/8/2024
Indian Institute of Science	Office of the Senior Vice President for Research	MOU	9/17/2019	1/8/2024
Maharashtra Animal and Fisheries Sciences University (MAFSU)	Agricultural Sciences	MOU	10/9/2020	10/9/2025
O.P. Jindal Global University	Penn State Law	MOU	2/3/2021	2/3/2026
O.P. Jindal Global University	Penn State Law	MOA	5/12/2021	5/12/2026
Gujarat University	Agricultural Sciences	LOI	6/11/2021	6/11/2026
National Institute of Technology, Patna	Engineering	MOU	5/10/2022	5/10/2027
O.P. Jindal Global University	Dickinson Law	MOA	8/9/2022	8/9/2027
Nirma University	Penn State Global	MOU	3/20/2023	3/20/2028
Nitte University	Harrisburg, The Capital College	MOA	6/30/2023	6/30/2028
National Institute of Urban Affairs	Engineering	LOI	10/3/2022	10/3/2025

Publications

2018-2023

Between 2018 and 2023, faculty and researchers at Penn State co-authored **1,248 publications** with partners from institutions in India, representing **5.5% of overall international outputs by authors at Penn State¹**.

Overall Research Performance

1,248

Scholarly Output

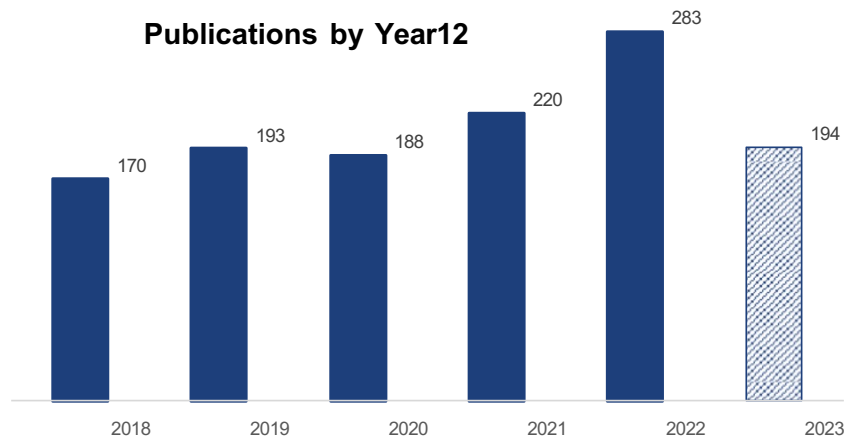
363

Collaborating
Institutions

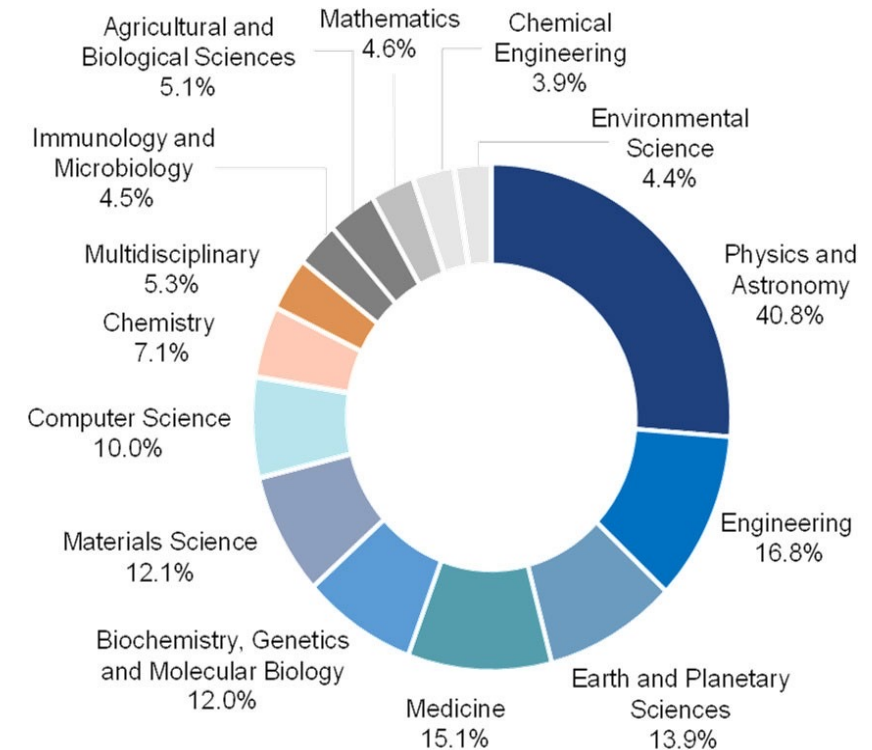
3.42

FWCI²

Publications by Year¹²



Publications by Topic³¹⁴



Overall distribution of interests across divisions from Survey of IISc and Penn State

Summer 2023

No.	Dept/Schools	IISc No. of interests		PSU No. of interest	Total	Ranking of Top 5 total no. of interest
1	Materials Engineering	10		2	12	3
2	Physics	5		6	11	5
3	Biochemistry	3		11	14	2
4	Electrical and Electronic Engg.	4		14	18	1
5	Mechanical/Aerospace Engg.	2		10	12	4
6	Ecology/Earth Sciences	3		1		
7	Chemical Sciences	2		1		
8	Computer Science and Engineering			5		
9	Information Science and Technology			5		
10	Chemical Engineering			3		



PennState Global



Penn State — Indian Institute of Science (IISc)

Joint Virtual Workshops

Monday, July 10 to Friday, July 14, 2023

9:00 AM—11:00 AM (EDT) or 6:30 PM—8:30 PM (IST)

Co-hosted by Asia Partnerships of Penn State Global & International Relations of IISc

Workshops for research collaborations

Monday, July 10

Biochemistry, Biology, and Biochemistry & Molecular Biology

Tuesday, July 11

Electrical and Electronic Engineering

Wednesday, July 12

Materials Engineering and Materials Science

Thursday, July 13

Mechanical, Industrial & Manufacturing Engineering, and Aerospace Engineering

Friday, July 14

Physics, Acoustics, and Nuclear Engineering

Scan the QR code to RSVP by June 25, 2023



PennState Global



Penn State & Indian Institute of Science (IISc)

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Monday, July 10 to Friday, July 14, 2023

9:00 AM - 11:00 AM (EDT) or 6:30 PM - 8:30 PM (IST)

Co-hosted by Asia Partnerships of Penn State Global & International Relations of IISc

Register to observe workshops before

July 10, 2023



Please check out next page for details →

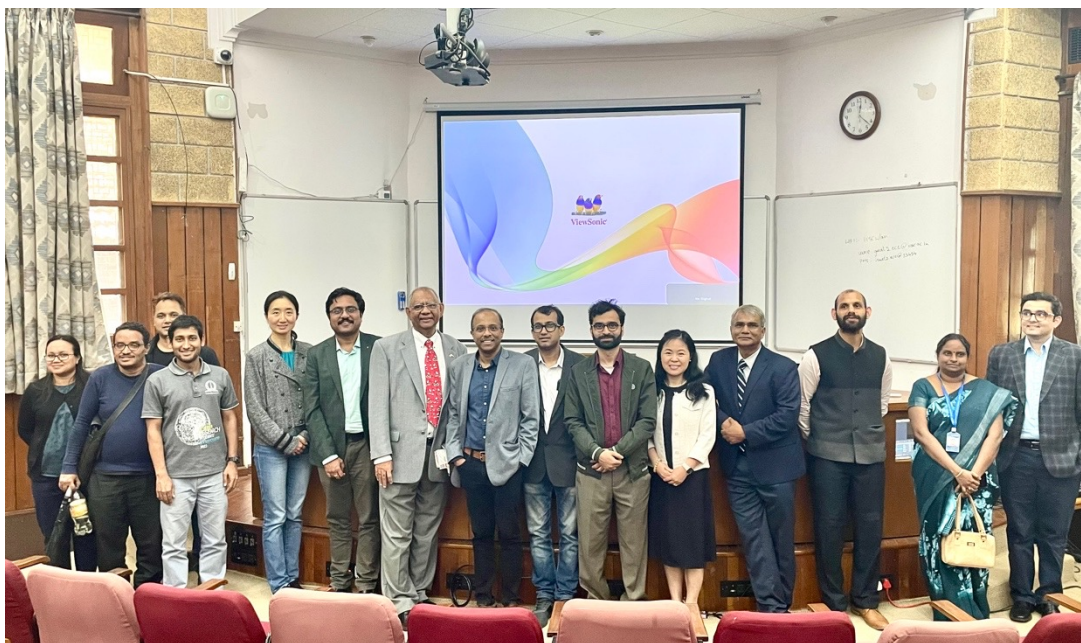
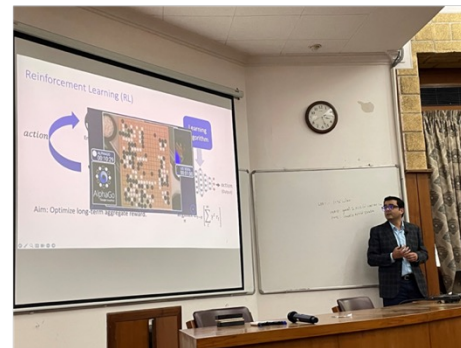
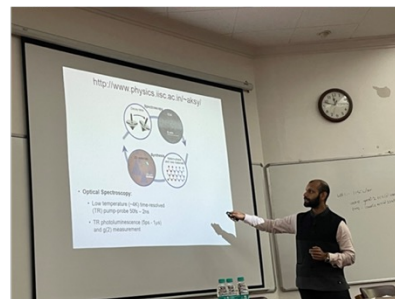
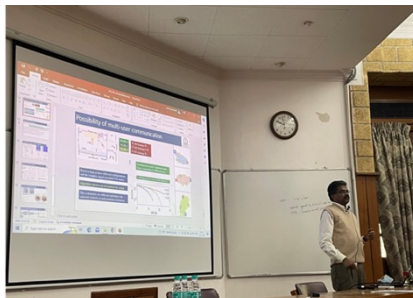
APAIE 2024



Towards a sustainable future for international education in the Asia Pacific

APAIE Perth: 4-8 March 2024





Building Collaborative Partnerships in the Asia Pacific for Sustainable Impact

Penn State's research expenditures reach record
\$1.239 billion

Funding reflects dedication of Penn State faculty, staff and students making vital contributions to world's most urgent challenges



Serving communities and the world through **education, research and engagement**. Not only teaching the next generation of professionals, **but also to responding to current social and economic concerns**. Penn State is the **ONLY** land-grant university in Pennsylvania.



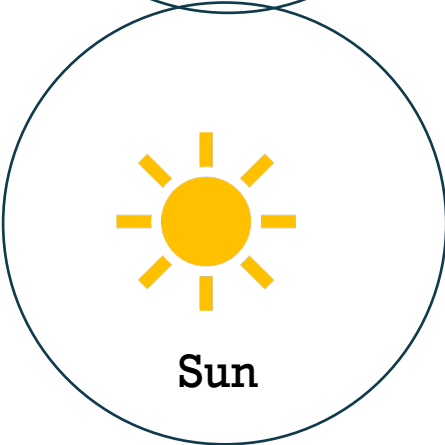
Land



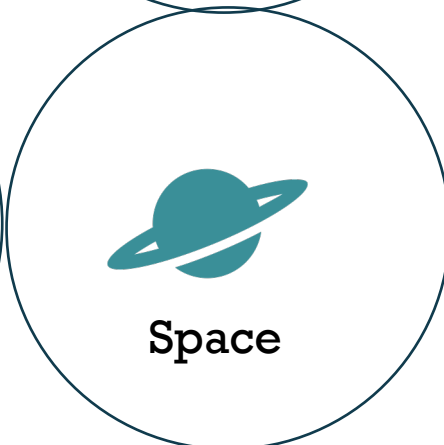
Sea

Sustained commitment to managing **marine and coastal resources** across the Commonwealth, including the Lake Erie, Delaware River and Susquehanna River watersheds.

Commitment to research and innovation involving **bioenergy** and **biofuels** production **toward a renewable, sustainable, domestic energy industry**.



Sun



Space

Encourage **interdisciplinary training, research and public service programs** related to **aerospace**; promote a strong **science, mathematics** and **technology** education base from elementary through secondary levels

APAIE 2024



PERTH, AUSTRALIA 4-8 MARCH 2024

#APAIE24

APAIE 2024



PERTH, AUSTRALIA 4-8 MARCH 2024

Collaborating for sustainable impact: partnerships across the Asia Pacific

APAIE Perth 4 - 8 March 2024