Group 2: Research Collaboration
Collaboration in Research for Sustainable Society

5th November, 2015
The 3rd Japan-Indonesia Rectors’ Conference
Hosted by Hokkaido University

Reiko Aoki, PhD
Executive Vice President
Kyushu University
Fukuoka City: A Gateway to Asia

One of the 5 largest cities in Japan
Largest city in Kyushu island

Population: 1.44 million

- Pusan, Korea: 200 km from Fukuoka
- Tokyo, Japan: 880 km from Fukuoka
- Shanghai, China: 890 km from Fukuoka
- Hong Kong, China: 2,040 km from Fukuoka
1911 Established as the 4\textsuperscript{th} oldest national university

2011 Marked its centennial
## Organization

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Undergraduate Schools (11 + 1)</strong></td>
<td>Letters, Education, Law, Economics, Sciences, Medicine, Dentistry, Pharmaceutical Sciences, Engineering, Design, Agriculture, + <em>21st Century Program</em></td>
</tr>
<tr>
<td><strong>Graduate Schools (18)</strong></td>
<td>Humanities, Integrated Sciences for Global Society, Human-Environment Studies, Law, Law School (Professional), Economics, Sciences, Mathematics, Systems Life Sciences, Medical Sciences, Dental Science, Pharmaceutical Sciences, Engineering, Design, ISEE, Engineering Sciences, Bioresource and Bioenvironmental Sciences, <em>Integrated Frontier Sciences</em></td>
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<tr>
<td><strong>Interdisciplinary (2)</strong></td>
<td>Education: Faculty of Arts and Science</td>
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<td><strong>Research Institutes (5)</strong></td>
<td>Research: Institute for Advanced Study</td>
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<tr>
<td><strong>Research Centers (&lt;60)</strong></td>
<td>Over 60 Centers cover essentially all areas of study and education</td>
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<tr>
<td><strong>Hospital (1)</strong></td>
<td>Kyushu University Hospital with over 1400 beds</td>
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<tr>
<td><strong>Libraries (6)</strong></td>
<td>Over 4 million volumes</td>
</tr>
</tbody>
</table>
18,747 students
【Undergraduate 11,844; Master/Professional course 4,201; PhD course 2,702;】

2,097 international students
【Undergraduate 267; Postgraduate 1418; Others 412;】

2,097 International students from 92 countries

China: 1,059 (50.5%)
South Korea: 259

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<tr>
<th>Law</th>
<th>Economics</th>
<th>Medicine</th>
<th>Dentistry</th>
<th>Engineering</th>
<th>Design</th>
<th>Agriculture</th>
<th>Integrated Sciences for Global Society</th>
<th>Human Environment Studies</th>
<th>Mathematics</th>
<th>Systems Life Sciences</th>
<th>Information Sciences</th>
<th>Engineering Sciences</th>
<th>Center</th>
<th>International</th>
<th>Total</th>
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<td>3</td>
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</tbody>
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As of May 1st, 2015
New challenge for the next centennial

The Mission of Kyushu University

With continual and autonomous reforms, while guaranteeing educational quality at an international level, we will aim to be a top-level education and research hub marked by vitality and a willingness to address future issues.
World Premier International Research Center Initiative

International Institute for Carbon-Neutral Energy Research (I²CNER)

- Designed to contribute to the creation of a sustainable and environmentally-friendly society by conducting fundamental research for:
  - the Advancement of low carbon emission and cost effective energy systems and improvement of energy efficiency
  - the Advancement of CO₂ capture and storage technology or its conversion to a useful product
Hydrogen Research – Top in the World

Hydrogen Technology Research Center

Fuel Cell Lab

Fuel Cell Demonstration

Hydrogen Fatigue & Fracture Lab.

Hydrogen Exposure Lab.

Hydrogen Station
Our hospital accepts 2,900 outpatients per day on average and has a hospital bed capacity that exceeds 1,400.
Telemedicine Development Center of Asia (TEMDEC) aims to establish effective and consistent medical communications among Asian countries using super-fast Internet and advanced technology.

Connecting the World with Telemedicine Technology

Recent live connections: University of Indonesia
2015 Sep The 2nd Live Endoscopy Surgery
2015 Aug The 1st Live Endoscopy Surgery
(The 40th APAN Meeting - Indonesia session)

>> Shared expertise in digestive disease and endoscopic technology
Graduate Education and Research Training Program in Decision Science for a Sustainable Society

The next generation of global leaders will need to possess different kinds of knowledge in tackling the problems of the future world: disciplinary knowledge within particular subject areas; a broad range of interdisciplinary knowledge to help bring about social sustainability; and new forms of trans-disciplinary knowledge for making the decisions that can lead to novel solutions. Those leaders will also require practical skills, which will include the ability to work across national boundaries, carry out research proposals, produce and give presentations, and also provide inspired leadership. The Graduate Education and Research Training Program in Decision Science for a Sustainable Society is a unique five-year integrated program that gives students the opportunity to develop these innovative forms of knowledge and skills.

Program Characteristics

1. Students explore the general scientific field of decision science, which is concerned with methodologies that lead to successful decisions, and students learn trans-disciplinary thinking skills.

2. Students participate in solutions-based joint international research and acquire practical, interdisciplinary knowledge through actual experience in the field.

3. Students acquire leadership skills through experience managing an organization of around 100 people via an organizational training workshop.

Acquire three kinds of knowledge and four types of practical skills required of global leaders

Knowledge

Disciplinary
Interdisciplinary
Trans-disciplinary

Practical skills

Leadership
Research proposals
Presentations
International preparedness

Leadership
Decision Science for a Sustainable Society

5 interdisciplinary modules:

- Environment
- **Disaster**
- Health
- Governance
- Human

Learning in Indonesia: On-site visit and Field trip for Post graduate students

Our Faculty of Engineering conducts R&D on Small-Scale Hydropower Generation in Indonesia

Training and Technology transfer in cooperation with AHB (Asosiasi Hidro Bandung)

http://ketsudan.kyushu-u.ac.jp/
Earth Resources Engineering

- Environmental Geology
- Geothermal Engineering
- Mineral Processing, Resources Recycling

Forest Conservation

- Forest Engineering
- Disaster Prevention
- Erosion Control

MOU between FORDA (Forest Research and Development Agency, the Ministry of Forestry, Indonesia) and the Faculty of Agriculture, Kyushu University was signed in Aug 2013.
Kyushu University’s Institute of Mathematics for Industry leads the Asia-Pacific Consortium of Mathematics for Industry (APCMfI).

Members of APCMfI

The fellows of APCMfI are from Australia, New Zealand, Japan, and other countries across the Asia-Pacific region, forming a strong and extensive network of Mathematics for Industry.

Indonesia:
- Institut Teknologi Bandung
- Institut Teknologi Sepuluh Nopember

Japan:
- Hokkaido
- Kanazawa
- Tokyo
- Kyushu

Source: http://apcmfi.org/about/members.html
New Challenge: Support Center

Developing and Enhancing Systems for Accepting Students and Researchers from Overseas

~ International Student and Researcher Support Center ~

Located on each campus, the center provides support for academic and lifestyle needs of overseas students and researchers in Kyushu Univ. They also build up local alliances with Fukuoka Prefecture and the cities of Fukuoka and Itoshima as well as local community to enhance support system for international students.

Support Offered

- Procedures for applying for the Certificate of Eligibility (CoE) to obtain a visa
- Support for traveling from Fukuoka Airport and other points to the dorms or university when arriving in Japan
- Information on searching for an off-campus apartment and help with moving
- Help with various procedures related to living in Japan
- Help with translating university documents into English
- Interpretation at service windows and counters
- Alliances and cooperation with international student support teams
- Other information for international students and researchers related to living in Japan
New Challenge: New dorm, New campus, Living together

New Dormitories for Future Global Leaders!!

The university has completed a new apartment-style dorm, in which four students live together in each (4 private rooms + common areas) unit, as well as a new dorm that houses approximately 580 students, primarily from overseas. When Japanese and international students interact, cultural exchange takes place, a richer level of personal interactions are developed, and foreign-language communication skills are improved. Kyushu University offers a place for students of diverse nationalities to live together. It provides an environment for constant self-improvement, and it helps promote globally oriented individuals who are capable of performing on the international stage.

Residential Facility for International Researchers

Housed in a wooden building, this residential facility is for international researchers engaged in education and research at Kyushu University. About 60% of the timber used in this three-story building was sourced from within Fukuoka Prefecture, as part of the prefecture’s forestry development and regeneration project. It has a total of 33 residential units, with a multipurpose hall, meeting rooms, and Japanese-style rooms located on the first floor. It received the Forestry Agency Director-General’s Award for excellence in the use of wood in a building in 2012.
Advanced globalization of society demands and accelerates borderless education and research.

Borderless collaborations of institutions from diverse cultures with unique characteristics are abundant, and there is always more to learn from each other.
Thank you

http://www.kyushu-u.ac.jp/english/index.php

http://www.youtube.com/KyushuUniv