

An aerial photograph of the Nagaoka University of Technology campus, showing several large, modern buildings with flat roofs and extensive greenery. The image is overlaid with five vertical, rounded rectangular shapes in yellow, cyan, green, light green, and red from left to right.

Nagaoka University of Technology

Collaboration in Research and Education

Nagaoka University of Technology

The Pioneer of Engineering Education in Japan



17th

Japan University
Rankings 2017,
Times Higher Education

NUT took a **first place**
in the survey of university
ranking by HR staff of
Japanese listed companies

(Survey conducted by Nikkei Inc. /
Nikkei Human Resources, Inc.)

Students from Asia

260

First place in the international
students enrollment rate among
National Engineering Schools

Employment Rate of Recent
Graduates

99%

(2017 Spring)
TOYOKEIZAI ONLINE
First place in the employment rate for
university graduates
(FY2014)



Sharing
a Culture
of Intellectual
Social
Responsibility

Member of
United Nations Academic Impact

 長岡技術科学大学
Nagaoka University of Technology

- Science of Technology Innovation
- Mechanical Engineering
- Electrical, Electronics and Information Engineering
- Materials Science and Technology
- Civil and Environmental Engineering
- Bioengineering
- Information & Management Systems Engineering
- Nuclear System Safety Engineering
- System Safety

1603-1, Kamitomioka Nagaoka, Niigata 940-2188, JAPAN

TEL : +81-258-46-6000

URL : <http://www.nagaokaut.ac.jp/e/>



Niigata
Japan

United Nations SDGs Global Hub University



We are the only one "Global Hub University" for the the SDGs goal of UN Academic Impact 9 "Industry, Innovation and Infrastructure"

The SDGs activities of our university are evaluated by UN and UNESCO.



Our Educational program certified as UNESCO chair



GIGAKU (Technology for Innovation) Institute Program certified as "UNESCO Chair on Engineering Education for Sustainable Development"

Nagaoka, Our hometown

- Nagaoka City, Niigata Prefecture

Population : about 282 thousand
Area : 890 km²

(the second largest city in Niigata Pref.)

- 150km North from Tokyo

(90mins by 'JOETSU SHINKANSEN'
– super bullet train)



**Nagaoka Festival and Grand
Fireworks Festival in August**



□ Campus:

- ✓ Located in the hillside of Nagaoka City, Niigata Pref.
- ✓ 386,000m² with Academic/Research Facilities, Student dormitories, Outdoor Athletic Facilities, Administration bldg., staff house, etc.

□ Students:

School of Engineering 1,259

Graduate School of Engineering

- Master's Program 918

- Doctoral Program 182

Graduate School of Management of Technology

- Professional Degree Course 32

Total : 2,391

□ Faculties: 206



Research/Academic Organization

Department

Mechanical Engineering

Electrical Engineering

Materials Science and Technology

Civil and Environmental Engineering

Bioengineering

Management of Information Systems Science

System Safety

General Education

Undergraduate/Graduate School (Master's Program)

Mechanical Engineering

Electrical, Electronics and Information Engineering

Materials Science and Technology

Civil Engineering

Environmental Systems Engineering

Bioengineering

Management and Information Systems Engineering

Nuclear System Safety Engineering

Professional Degree Course

System Safety

Graduate School (Doctoral Program)

Information Science and Control Engineering

Materials Science

Energy and Environment Science

Integrated Bioscience and Technology

NUT Features

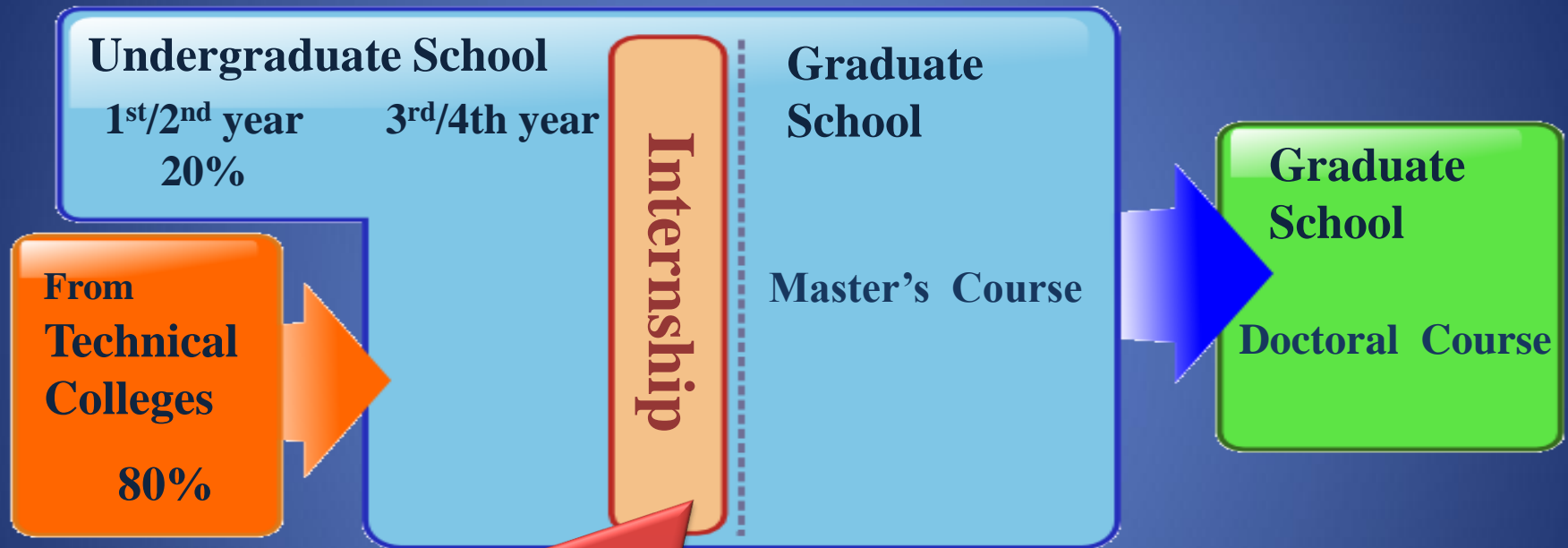
- ✓ A brand-new breed of a technology university (Established in 1976)
- ✓ 80% of students enrolled from technical colleges
- ✓ 30% of faculties have experiences in industrial fields.
- ✓ Integrated curriculum - unified courses from undergraduate to graduate



- ✓ Unique education systems
 - Long-term internship at national/ international research institutes/ industries.
 - Twinning Program/ Double Degree Program with overseas universities
- ✓ International students : over 12%

Unique Education Systems

Unified undergraduate to graduate education system



● Long-term Internship program - 'Jitsumu-Kunren'

- Learning in an actual workplace (over 250 organizations)
- **5 to 6 months** working in business and institutions
- Including overseas internships (**52** students in **13** countries in 2011)

International Collaborations

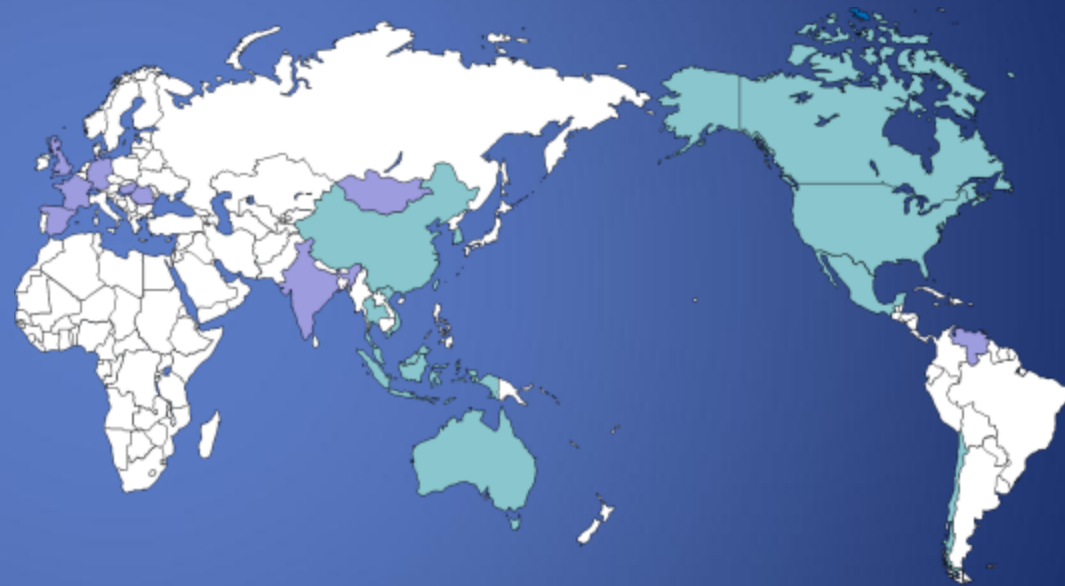
□ International Exchange

Int'l students : 304

from 30 countries/regions

Over 12% of All students

Viet Nam: 77, China: 63
Malaysia: 53, Mexico: 28,
Thailand: 24, Myanmar: 7 , etc.



Partner Institutes:

87 institutes in 24 countries/regions

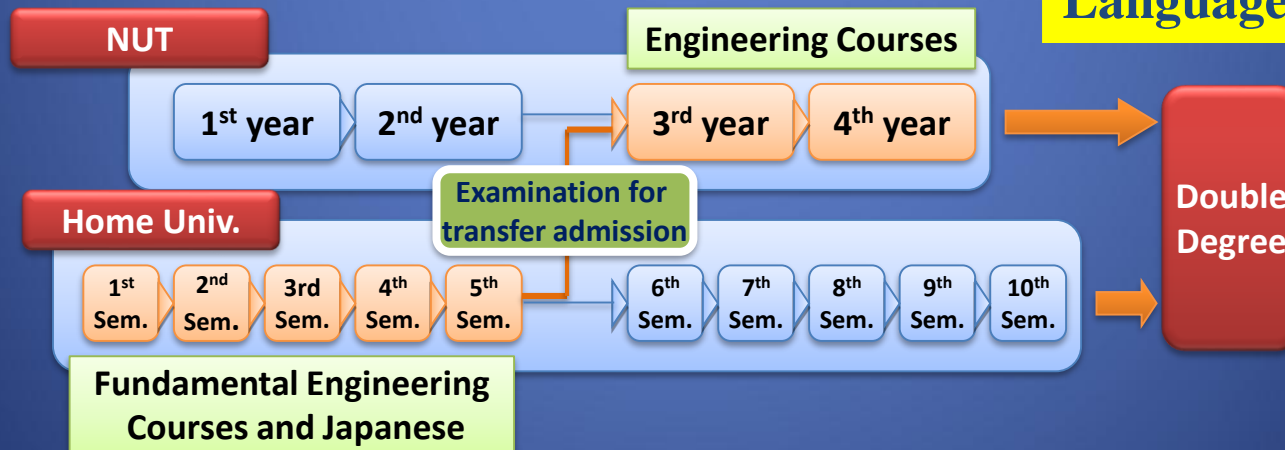
As of May 2012

International Education Programs

□ Twinning Program (2.5 yr + 2 yr bachelor's degree program)

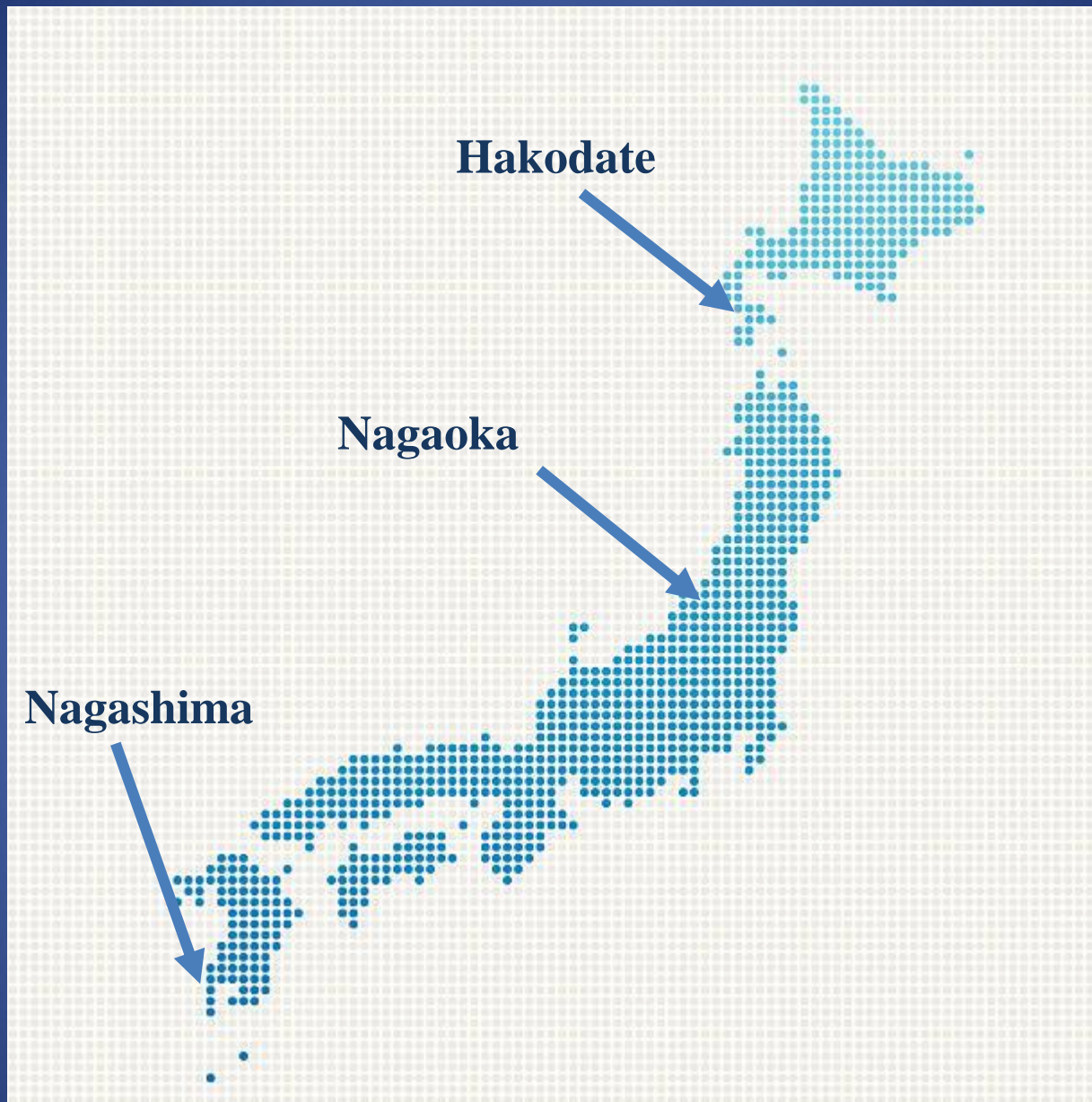
- Hanoi University of Science and Technology (Viet Nam)
- Ho Chi Minh City University of Technology (Viet Nam)
- University of Danang (Viet Nam)
- Universidad Autonoma de Nuevo Leon(UANL) (Mexico)
- Universidad de Monterrey(UDEM) (Mexico)
- Zhengzhou University (China)
- Malaysia Twinning Program (JUCTe Program)

**The leading engineers
proficient in Japanese-
Language**



What's 'GIGAKU'

- **GIGAKU** is a term composed of two Japanese word-roots; **GI** and **GAKU**. The word **GI**[技]literally stands for all kinds of arts and technology, and **GAKU**[学]stands for scientific disciplines in general when used as a suffix. The term was originally coined to describe the fundamental philosophy of education and research of NUT when it was established in 1976.
- **GIGAKU** is a science of technologies, which gives us an angle to analyze and reinterpret diverse technical processes and objects and thus helps us to advance technologies forward. By employing a broad range of knowledge about science and engineering, management, safety, information technology and life sciences, **GIGAKU** provides us with workable solutions and induces future innovations.
- **Nagaoka University of Technology** aims to establish itself as an indispensable member of global society, a university which creates **GIGAKU** with a proactive approach to societal change, produces with practical, creative capabilities and a spirit of service who will lead society into the future, and places emphasis on graduate-level education.



Hakodate

Nagaoka

Nagashima

Nagaoka Campus



Nagashima Campus



Nagashima Campus



Hakodate Campus



Our Technology Sterilization Esterilización por presión ultra alta

高压処理による滅菌



600MPaの高压



高压機



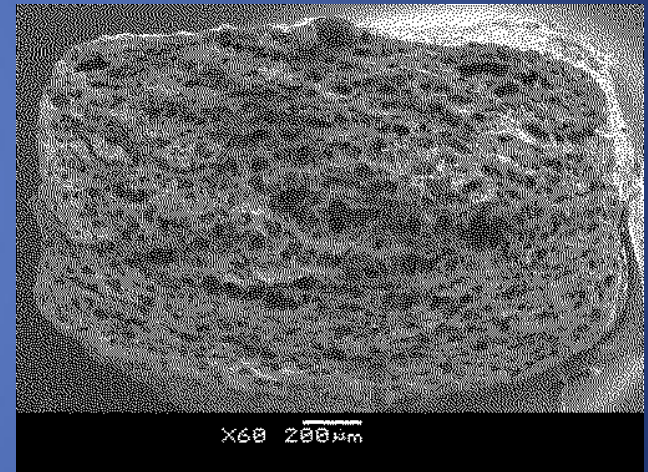
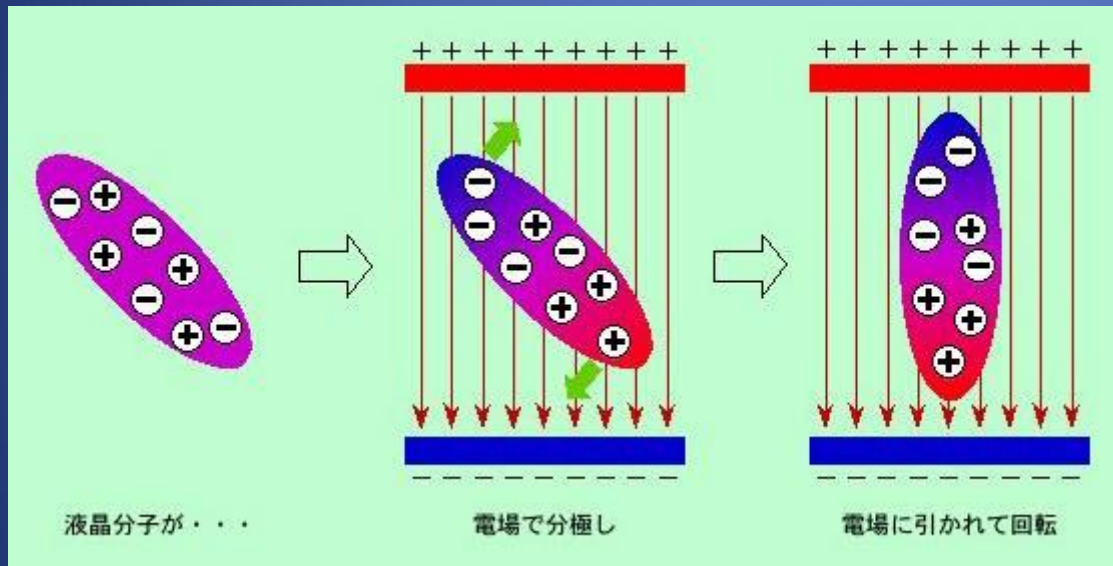
Desarrollo de un nuevo método de cocción

Efecto de permeación al centro de humedad por presión ultra alta



Desarrollo de un nuevo método de cocción

Control de textura por campo eléctrico alto



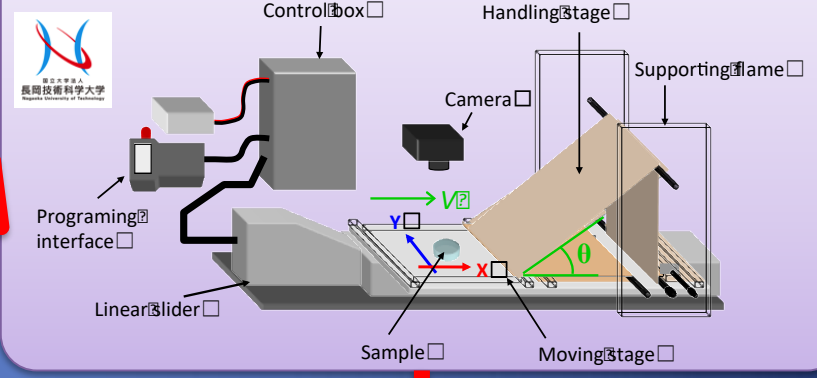
Needs:
 “handing soft and sticky materials
 in food processing”



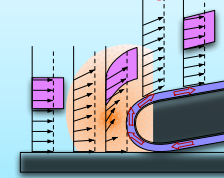
Requirement:
 keep its shape
 and no residue

Like “Cut&Paste”
 on computer

Test bench for experimental analysis



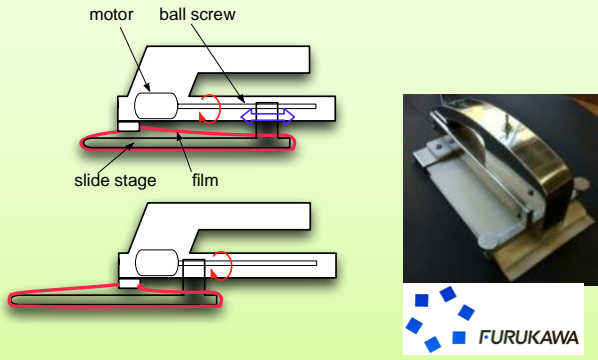
Theory



Consumer product



Basic idea and a trial machine



Soft matter (mayonnaise) on plate



Cut (scoop up) the mayonnaise onto the moving stage of WITL



**We realize
 Cut & Paste
 in real world**

Paste (release) the mayonnaise to the plate at anywhere and any angle





Tecnología de transporte de peces vivos



北海道函館市 活いかの卸

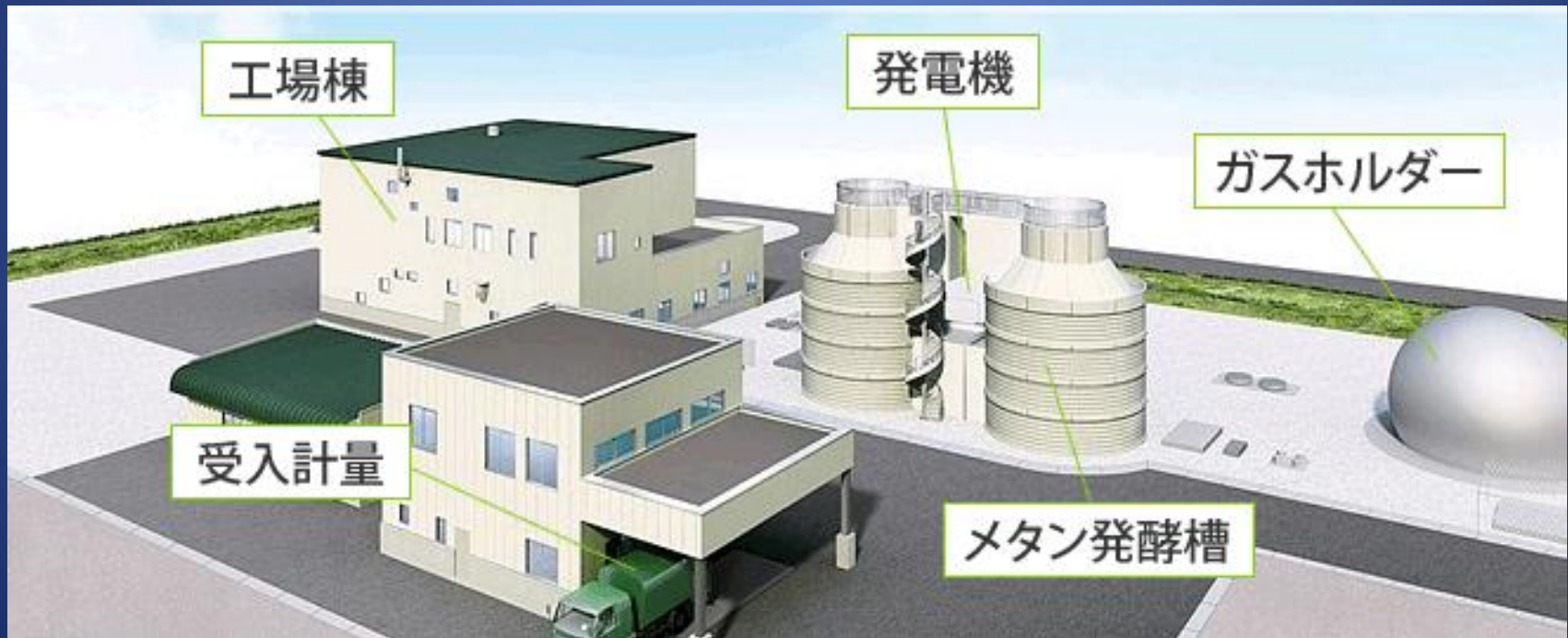


Técnica de guardería



Tecnología de utilización de desechos alimenticios

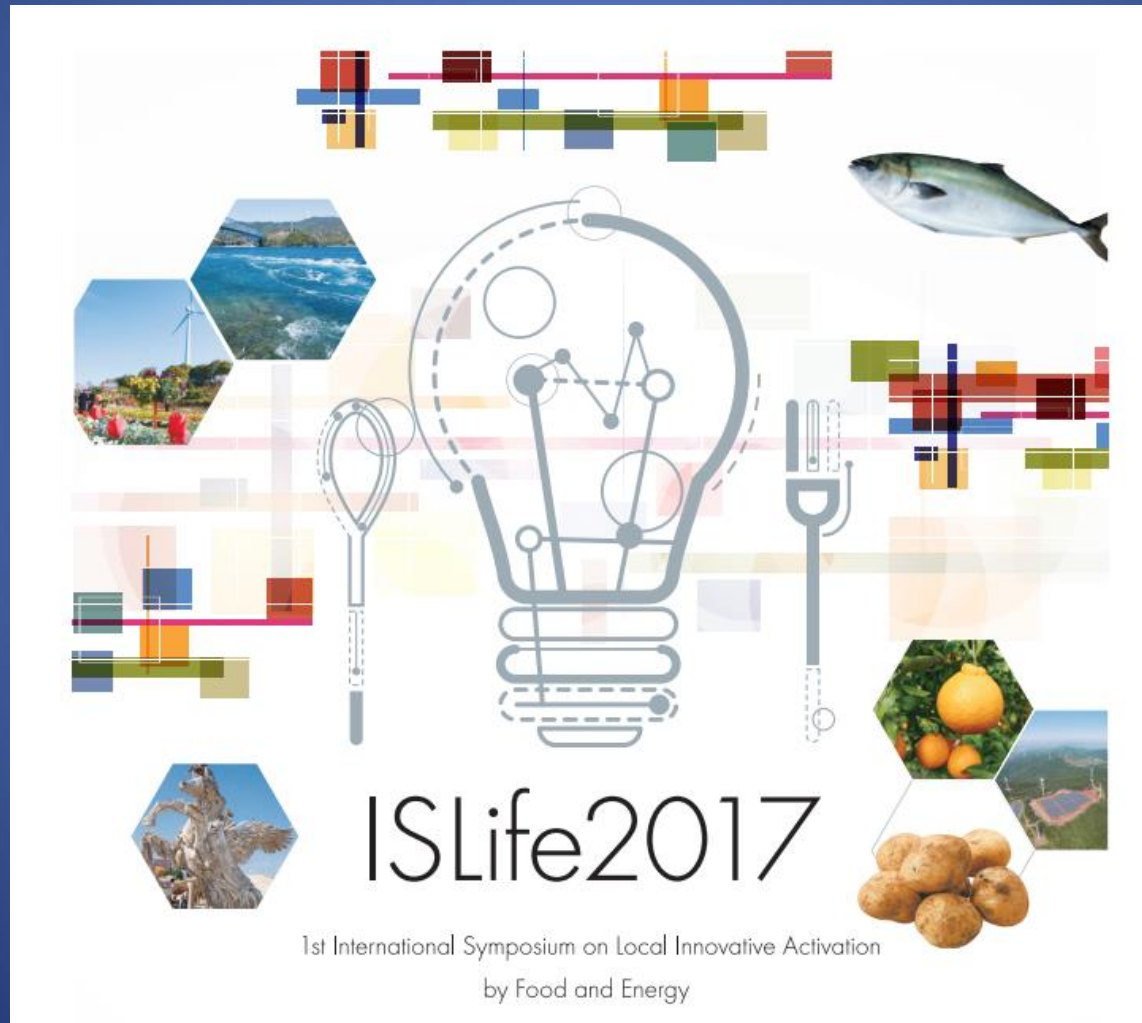
Generación de energía de biomasa a partir de residuos de alimentos



- ☞ **Apoyo para el desarrollo de la empresa de alimentos**
- ☞ **Apoyo a la pequeña y mediana empresa de la industria alimenticia**
- ☞ **Apoyo a la exportación de alimentos**
- ☞ **Investigación colaborativa con el chef del restaurante**
- ☞ **Construcción de sistema de gestión de producción de alimentos**

ISLife 2018

International Symposium on Local Innovative Activation by Food and Energy



国立大学法人
長岡技術科学大学



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