

# 三重大学 国際交流 年報 2022

## Annual Report 2022

International Activities of  
Mie University

第9号(通巻第23号)

Vol. 9

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大学の基本的な目標

# 三重の力を世界へ

地域に根ざし、世界に誇れる独自性豊かな教育・研究成果を生み出す。

～人と自然の調和・共生の中で～

## 基本理念(国際化)

三重大学は、国際交流・国際協力の拡大と活性化を図るとともに  
国際的な課題の解決に貢献できる人材を養成し、大学の国際化を目指す。



## **I. Major International Exchange Activities with Partner Universities**

### **1. Tri-U International Joint Seminar & Symposium**

Tri-U International Joint Seminar & Symposium is an international exchange program focusing on the presentation of research papers, held annually with Mie University (Japan), Chiang Mai University (Thailand), Jiangsu University (China), IPB University (Indonesia), Guangxi University (China) and Maejo University (Thailand) taking turns as host institutions. The 28<sup>th</sup> conference was held in a hybrid format from November 7(Mon) to November 11(Fri), 2022 at IPB University, and a total of over 100 participants, including students, faculties and staffs. (Total 11 participants, including 6 students and 5 faculties from Mie University, participated online.)

Oral presentations and workshops were held on the themes of “Population,” “Food,” “Energy,” “Environment,” and “Technosocialpreneurship (set by host university)” in this symposium.

### **2. Consecutive Degree Programs (Tianjin Normal University • China)**

Mie University and Tianjin Normal University have jointly conducted a Consecutive Degree Program based on the "General Agreement on Academic Cooperation and Exchange between Mie University and Tianjin Normal University" (concluded on November 18, 2014).

The Consecutive Degree Program is a program to support students of Tianjin Normal University who are enrolled in the College of International Educational Exchange of Tianjin Normal University and participating in the Japanese Language Course Joint Education Program with Mie University, when they wish to enter the graduate school of Mie University to advance by providing opportunities to be matched with a student in a specialized field, a faculty advisor, etc. and to be provided with various information. For the 22 students entering the program in the spring of 2022, 8 of them were able to travel to Japan for the first time in three years. For those who were not able to come to Japan, they attended lectures provided by the Center for International Education and Research and Faculty of Education online.

### **3. Double Degree Program (University of Srivijaya, University of Bajajaran • Indonesia)**

Under the Double Degree Program, students attend lectures and conduct research in Indonesia in the first year of their Master's program and in Japan in the second year, and upon successful completion of the master's thesis review and final examination conducted by the respective graduate schools, they are awarded two master's degrees, one from Mie University and the other from a university in Indonesia. In 2008, the Graduate School of Bioresources and Srivijaya University signed an agreement on a double degree program. Subsequently, an agreement was signed with Padjadjaran University in 2012. 3 students of Srivijaya University Double Degree Program are enrolled in academic year of 2022. In September 2022, two faculty members were sent to Srivijaya University to discuss how to

operate the program and to hold a briefing session for students in the target courses, as the entry restriction was lifted and face-to-face research guidance was resumed. Many of the program graduates, including two students who returned to Japan to enroll in the doctoral program of the Graduate School of Bioresources, after obtaining the degree, returned to his home country as a professor at Srivijaya University, gathered to renew old friendships with the faculty members who had sent them to Japan. In December 2022, a delegation from Padjadjaran University visited Japan to discuss the renewal of the exchange agreement and the operation of the double degree program, and agreed to further develop the program in the future.



Participants of Mie University Study Abroad Information Session at Srivijaya University

## II. Major International Exchange Activities of Each Faculty/Graduate School

### 1. Center for General Education

#### (1) Online program at ELTC of University of Sheffield

The Special English Language Program, which began in 2015, offers a short-term overseas training program at the Center for English Language Education, University of Sheffield, as the final part of the year's studies. Due to travel restrictions caused by COVID-19 infection situation, the program provided an opportunity for those who wished to participate in a one-week (five-day) online training program to test the results of the year's work, experience different cultures, and enhance their motivation for future study.

The online training is open to all participants and offers a unique experience with small classes of students from various nationalities, cultures, and backgrounds. Participants had the opportunity to further develop their English skills based on those developed in the “English Special Program,” and were motivated to continue learning English.

#### ELTC Online: Language and Culture Program 2022

- Date and Time:  
March 6(MON) – March 10(Fri) 2023  
18:00-22:00 JST + on-demand learning materials
- Provider:  
University of Sheffield (UK)  
English Language Training Center (ELTC)
- Participants:  
14 students total  
(Faculty of Education 2students; Faculty of Medicine 4 students;  
Faculty of Engineering 2 students; Faculty of Bioresources 6 students)  
\* Originally scheduled for February, it was changed to March to avoid  
coinciding with the strike at the University of England

## Outline of Online Program

Online classes include the following

- English language Train classes are designed to help students acquire all four skills.
- Having opportunities to interact in small groups with people from different countries, cultures, and backgrounds.

The class schedule is as follows

### About online classes

Student Timetable - in Japan Time (JST)					
Day & Time	Monday	Tuesday	Wednesday	Thursday	Friday
<b>18.00-19.00</b> <b>Japan Time (JST)</b>	Technology introduction  <b>Welcome and introduction to the course</b>  Getting to know you	Language development  <b>Food and drink</b> food vocabulary/ adjectives; language for eating out	Language development  <b>Festivals</b> festival vocabulary; question starters, e.g. 'How often...?'	Language development  <b>Shopping</b> shopping vocabulary; complex questions; complaining	Language development  <b>Climate change</b> vocabulary
<b>19.30-20.30</b>	Language development  <b>Britain and British culture</b> listening and reading	Language development  <b>Britain's working coastline</b> asking for & giving opinions; agreeing & disagreeing	Language development  <b>Construction in Britain</b> communication strategies	Language development  <b>The origins of British idioms</b> expressing certainty and possibility	Language development  <b>British wildlife</b> keeping a discussion going
<b>21.00-22.00</b>	Language development  <b>Family</b> vocabulary and idioms	Post-lesson task and discussion	Post-lesson task and discussion	Post-lesson task and discussion	Post-lesson task and discussion
<b>(22.30-23.00)</b> <b>Self-Study</b>	Self-study  <a href="#">Communication skills lesson 1</a>	Self-study  Communication skills lesson 1	Self-study  <a href="#">Pronunciation lesson 1</a>	Self-study  Pronunciation lesson 1	Self-study  <a href="#">Communication skills lesson 2</a>



### Questionnaire of participants

I am satisfied with ...	1 disagree	2 generally opposed	3 neither	4 generally favorable	5 agree	number of the answer	average
A. Overall		1	1	1	10	13	4.54
B. English language Train classes		1	1	1	10	13	4.54
C. Assignments after classes and Lectures		1	1	1	10	13	4.54
D. Additional teaching materials (On-demand / Conducted outside of class)		1	1	4	7	13	4.31

### Comments from participants in online classes

Although it was only a one-week course, especially because it was an online course, students were greatly stimulated by the attitudes of students from other countries in terms of speaking skills, and there was much to learn about the essential element for fruitful conversation, such as active speech and how to choose topics, which some students were able to put into practice themselves. Many students, including those who had a hard time, are happy to have had a meaningful opportunity.

## 2. Faculty of Humanities, Law and Economics and Graduate School of Humanities and Social Sciences

### (1) The report of Thailand Field Study in 2022

Through training at an international NGO in Thailand and exchanges with local students, we aimed to learn about the current situation in Thailand and the developed countries, including Japan, that can be seen from there, and to deepen our understanding of Southeast Asia, including Thailand, which cannot be obtained through various media and literature alone.

The following two points were the goals of this Thailand Field Study.

#### 【Goals of the Thailand Field Study】

1. to gain a better understanding of Thailand and neighboring countries in Southeast Asia based on the issues being addressed by international cooperative and policy advocacy NGOs, as well as the position of developed countries, including Japan.

2. Exchange with students from Thammasat University, our partner university in Thailand.

Participants in the Thailand Field Study were as follows.

【Participants】

Seiki Ayano (Leader, Professor of the Faculty of Humanities, Law and Economics)

Toshiyuki Doi (Guide・Interpreter, Director of NGO Mekong Watch )

5 students of Faculty of Humanities, Law and Economics ( 3 students of Freshman in Humanities, 2 students of second grade in Law and Economics)

Two pre-service training sessions were held prior to the on-site field study. Toshiyuki Doi, director of NGO Mekong Watch, was in charge of the preliminary training. Two meetings were held to facilitate field activities, and a detailed training manual was prepared by the participating students. Mr. Doi joined the second meeting to make final confirmations before the trip.

【Schedule】

a. Pre-training

First Session December 7, 2022 12:10-13:40

“Thailand in Space and Time: Geopolitics and History.”

Second Session February 14, 2023 13:00-14:30

“NGO Activities Against Slum and Industrial Pollution”

b. Meetings

First Session February 13, 2023 14:30-15:30

Second Session February 28, 2023 13:00-14:30

Field study were conducted with the following content and dates.

c. Training Contents and Schedule:

March 5 (Sun) Departure from Chubu Centrair International Airport

Orientation upon arrival in Bangkok

March 6 (Mon) Bangkok city tour (Thai history)

March 7 (Tue) Training at International NGO Sika Foundation

(Poverty issues: Khlong Toey, Bangkok)

March 8 (Wed) Training at partner university (Thammasat University, Rangsit Campus)

March 9 (Thu) Training at International NGO EARTH (environmental issues: Win Process・

Areas damaged by recycling operations (Nong Pau village, Rayong Province)

March 10 (Fri) Training at International NGO EARTH



(Environmental issues: efforts by Sanam Chai Khet Organic Agriculture Cooperative)

March 11 (Sat) Training at Kret Island

March 12 (Sun) Review of Thailand Field Study

March 13 (Mon) Arrival at Chubu Centrair International Airport

The training was effective because each participating student had set goals and studied beforehand.

In the final day's review, the following reports were made.

#### 【Participant Comments】

- Seeing people living positively helping each other in the midst of severe conditions, such as slums and environmental pollution, made me think about the state of Japanese society today.
- I learned the importance of taking action to improve our environment while valuing the connections between people.
- I learned the importance of not being overly pessimistic.
- I gained a new perspective. My values have broadened.
- I recognized the importance of verbalizing one's thoughts, including improving one's English language skills.
- I was able to learn about Thailand's unique culture and history.

#### 【Thailand Field Study Photo Collection】

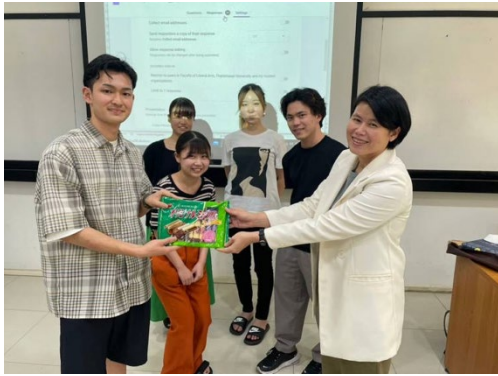


Bangkok Khlong Toi Area (slum)



Bangkok Khlong Toey Area

(Sika Foundation Picture Book Library)



Associate Professor Piyawan in charge of  
lectures on Thai history (Thammasat University)



Exchange with students  
from Thammasat University



Report on Pollution by Residents (Nong Pau Village)



Explanation of contamination situation  
(Nong Pau village)



Explanation on organic farming (Sanam Chai Ket)



Organic farm tour (Sanam Chai Khet)

### 3. Faculty of Education • Graduate School of Education

#### (1) Overseas educational training in collaboration with Faculty of Education and Social Work at University of Auckland, New Zealand

The Faculty of Education has been conducting short-term training program in cooperation with the Faculty of Education and Social Work at University of Auckland since 2011. This educational training program includes visits to local schools, participation in classes at the University of Auckland's School of Education, and cross-cultural experiences. Due to the impact of COVID-19, online exchanges and educational training were conducted in academic year of 2020 and academic year of 2021; however, this year, on-site implementation became possible in the middle of the academic year, so on-site educational training was conducted from March 7 to March 16, albeit for a shorter period than in previous years. Four students participated in this 10<sup>th</sup> training program, led by two faculty members.

Through the program, the participating students witnessed many cultural differences, social diversity and the way school education reflects this diversity, classes that respect the individual and develop abilities, and educational activities that integrate ICT and analog, and they did not only learn through experience, but also gained much knowledge from the local teachers' explanations, broadening their educational horizons. Exposure to different cultures, educational philosophies, and educational systems helped me to develop flexible ideas and attitudes, and enriched my qualifications as a teacher. Participating students were able to have active exchanges with host families, teachers and students of Auckland University, and children and students from the schools they visited, which contributed to international exchange among students.



Secondary school (left) and primary school (right) in NZ



## **(2) Scientific Education Training for Ho Chi Minh City Normal University**

With the support of the Sakura Science Plan by the Japan Science and Technology Agency (JST), Mie University invited ten undergraduate students and two accompanying teachers who aim to become science teachers at Ho Chi Minh City Normal University (HCMUE), a partner university of Mie University, and conducted a “Training Program for Elementary and Junior High School Students for Human Resources Development in Science” from November 17 to 24. The invitation program began in academic year of 2015 and is now in its seventh iteration.

Mie University has been making efforts to enhance science education through such programs as the Junior Doctor Training School (JST), which targets fifth-grade to junior high school students who are highly motivated and have excellent abilities in science-related fields. The purpose of this program was for the invitees to visit science education sites in Mie Prefecture and the purpose was to deepen their thoughts on how to teach children to maximize their abilities.

Science education in Japan is conducted not only at school but also through hands-on experiences in the community and at science museums, and science experience activities at junior doctors and science museums at an early age are important for exploring issues in high school. This was an opportunity to learn extensively about science education in Japan.



Visits at SSH Schools



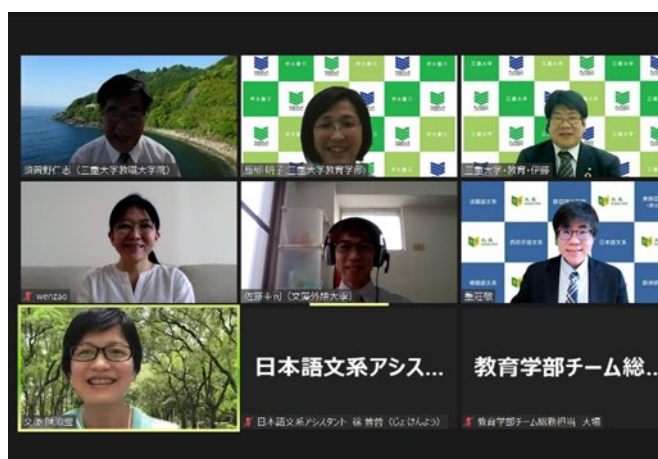
Commemorative photo  
at the completion ceremony

## **(3) Conclusion of “Agreement on Academic Cooperation and Exchange” (faculty level agreement) with Wenzao Ursuline University of Languages**

In academic year of 2022, we concluded an inter-faculty “Agreement on Academic Cooperation and Exchange” with Wenzao Ursuline University of Languages (Taiwan). This agreement with them, which have produced a large number of foreign language professionals, is expected to promote joint research and educational practices among faculty members. As for the latter educational practice

among teachers, part of this plan is to promote interaction among students. Students in Faculty of Education are often involved in activities to obtain teaching licenses, and it is difficult for them to have opportunities for the experience of international exchange due to time constraints. On the other hand, since the percentage of foreign students in Mie who need Japanese language instruction is the second highest in Japan as of June 2022, it is essential to deepen their attitude and understanding of different cultures during their school years. Through this agreement, we plan to promote the planning and implementation of activities that allow students of the Faculty of Education to experience international exchange in a short period.

On June 27, 2022, an online meeting was held to conclude the agreement. From Mie University, Prof. Nobunari Ito, Dean, Faculty of Education, Prof. Hitoshi Susono, former head of the Interference Committee, and Associate Prof. Akiko Hattori, current deputy head of the Interference Committee were attended and from Wenzao Ursuline University of Languages, Associate Prof. Jang-Kyung Tung, Dean of the Faculty of Eurasian Languages and Letters, Associate Prof. Suk-Yin Chen, head of the Department of Japanese, Assistant Prof of mathematics, Sawako Kubota, Chief of Japanese Language Department for International Exchange, and Assistant Prof. Keiji Sato, representative of Japanese Language Department for International Exchange were attended.



Online meeting on signing the agreement (June 27, 2022)

On February 6, 2023, Associate Prof. Akiko Hattori, Faculty of Education, and Specially Appointed Prof. Hirohiko Mizoguchi, Faculty of Education visited Wenzao Ursuline University of Languages. Associate Prof. Suk-Yin Chen, head of the Department of Japanese and Literature at Wenzao Ursuline University of Languages, and Assistant Prof of mathematics, Sawako Kubota, and Assistant Prof. Keiji Sato introduced the educational efforts of the two universities and exchanged opinions on future international exchange.

They also visited the elementary school English education activities using ICT promoted by Wenzao

Ursuline University of Languages and the facilities of the Chinese Language Education Center for international students, and the exchange was very meaningful, as we exchanged opinions on school education in Japan and Taiwan.



Visit to Wenzao Ursuline University of Languages (February 6, 2023)

#### **(4) International Exchange Activities at Higashi-Kishu Regional Satellite Campus**

In response to requests from local school boards and schools, the Higashi-Kishu Regional Satellite Campus conducted two international exchanges.

##### **① Supporting International Exchange Classes between Owase Municipal Wanai Junior High School in Owase and Kaohsiung City (Taiwan) Xingda Kumin Elementary School**

In response to a request from teachers and the Board of Education, “We want our students to have the experience of 'I can communicate in English!'” Since 2021, we have been supporting international exchange classes between Owase Municipal Elementary and Junior High Schools and Kaohsiung City Elementary Schools. This year, we conducted international exchange class support using Google Meet in October and January. Prior to the exchange in October, Associate Prof. Akiko Hattori of the School of Education gave a preliminary lesson on Taiwan. Students commented, “In the game, I could understand what was being said in English, and I thought that speaking English, the universal language, was the easiest way to communicate with people from other countries. Someday I'd like to go to Taiwan or some other country and talk to them.”. Now, “We want students to experience the ability to communicate in English and to acquire the skills to play an active role in globalization.”, and all the teachers at the Higashi-Kishu Education Center provided support for the program.



Lecture by Associate Prof. Akiko Hattori



Students from Wanai Junior High School giving a presentation on Japanese breakfast

## ②Conducting of ALT (assistant language teacher) training

ALT training was conducted at the request of the Kihokucho, Owase, and Kumano City Boards of Education. A total of four training sessions were held this year. The training focused on “second language acquisition theory” and effective teaching methods for Japanese students whose native language is not English. ALTs learned various teaching methods (e.g., TPR Total Physical Response method) through experience. It has been four years since we started ALT training at Higashi-Kishu Education Center, and we have trained a total of about 15 ALTs. The ALT training, which enables ALTs to acquire specialized teaching skills in English, has been very well received not only by ALTs but also by school boards.

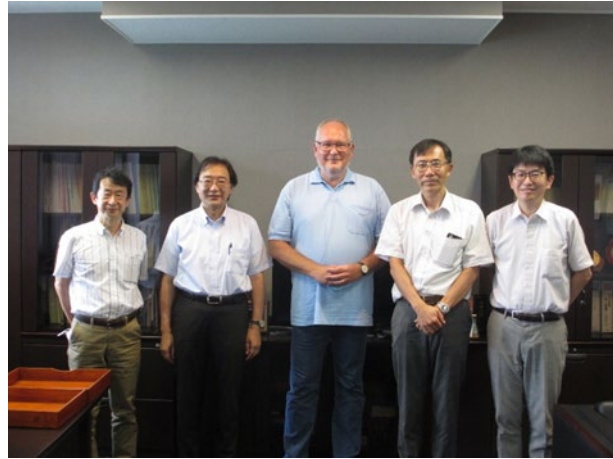


ALTs practicing Total Physical Response method



#### 4. Faculty of Engineering • Graduate School of Engineering

Prof. Thorsten Zenner of Reutlingen University stayed at Mie University from September 12 to October 13 under the Short-term Invitation Program for Foreign teachers. He visited the Office of the Dean of Graduate School of Engineering and met with Dean Ikeura, Chairperson of Academic Affairs Kubo, and representative of



International Affairs Kaneco. The Dean of the Graduate School of Engineering explained about the Graduate School of Engineering, and a discussion was held. He lectured on “Communication and Security” in the International Special Lecture I at the Graduate School of Engineering for four days in a row, two lectures a day, from September 13. In addition, a lecture on “System Engineering” was given at the International Special Lecture II of the Graduate School of Engineering for four days in a row, two lectures a day, from October 4. Four exchange students from Reutlingen University in Germany and three exchange students from Paris Polytechnic University in France who came to Japan in October, as well as three students from Mie University participated in those lectures as the international co-curricular program. Lectures included practical activities using computers.



On September 27, a lecture titled “Decentralized Hydrogen infrastructure” was held in the small hall of the auditorium, organized by Graduate School of Engineering and co-organized by Mie Global Environment Center for Education & Research. This lecture was related to the 7th “Affordable and Clean Energy” and 13th “Climate Action” of the

17 SDGs goal, and included an introduction of a project at Reutlingen University to economically realize energy supply using hydrogen. After the lecture, many questions were asked by people who participated at the venue. The number of participants is summarized in the table: 32 faculty members and staff, 133 students, a total of 165 participants. The presentation was also delivered by Zoom.

講演参加者			
	講演会場	zoom	合計
教職員	13	19	32
(工)博士後期課程	5	5	10
(工)博士前期課程	38	53	91
工学部学部生	16	15	31
他学部学生		1	1
合計	72	93	165

On September 28, he participated in an international symposium of the Graduate School of Engineering's Information Processing/Information and Communication Sciences (Research Area C) and listened to student poster presentations. At the international symposium, 52 presentations were made mainly by master's course students, and he visited each student's poster and had discussions with them about their research. In addition, he exchanged opinions with international students in the Department of Mechanical and Electronic Engineering and Department of Information Engineering who participated in the symposium about research, life in Japan, career paths after graduation, and other topics.

During his stay, he visited laboratories, mainly in the Department of Mechanical and Electronic Engineering, and interacted with faculty members and students.

Program for Developing



### ③Highly Skilled Industrial Human Resources Utilizing Japanese-Style Engineering Education

Graduate School of Engineering held JICA training program “Development of Highly Skilled Industrial Human Resources Utilizing Japanese-Style Engineering Education” in Academic Year of 2022.

It was held in face-to-face for 10 trainees from Kazakhstan (3 people), Kyrgyzstan (2 people), Turkmenistan (1 person), Uzbekistan (3 people), and Moldova (1 person) from December 2 (Fri.) to December 16 (Fri.) in a conference room at the Faculty of Engineering, Mie University. It opened with a speech by Dean Ikeura, followed by various lectures and field trips over the two weeks.

This training program provides training for faculty members of engineering universities in Central Asia on an overview of practical engineering education in Japan, teaching methods, curricula, and syllabi at technical colleges and engineering universities, and the current state of collaboration among industry, government, and academia, thereby contributing to strengthening the development of advanced industrial human resources in Central Asian countries.



The program orientation and inception report (by Prof. Kaneko) were held on December 2 (Fri). Prof. Tsuruoka of Suzuka University of Medical Science gave a lecture on “Characteristics of Japan and Japanese Companies, Human Resource Development of Japanese Companies” on the morning of Monday, December 5. Prof. Kubo gave a lecture on “Characteristics and Curriculum of Engineering Faculties of General Universities (using Mie University as an example)” on the morning of Tuesday, December 6. In the afternoon, Professor Wang of the Graduate School of Bioresources explained “Characteristics and Curriculum of Education in Agricultural and Biological Sciences (using Faculty of Bioresources as an example)”. A visiting professor Sato at Mie Global Environment Center for Education & Research, gave a lecture on “About Recurrent Education and SciLets for Working Adults Using On-Demand” on the morning of Wednesday, December 7. In the afternoon, Associate Prof. Kai of Suzuka National College of Technology gave a lecture on “Characteristics and Curriculum of Technical College (using Suzuka National College of Technology as an example). Associate Prof. Kano of the Mie Regional Plan Co-creation Organization gave an overview “the importance of intellectual property in engineering education” on the morning of

Thursday, December 8. In the afternoon, coordinator Tanaka led a tour of Fujifilm Manufacturing Corporation. Lecture Maekawa from Kyoai Gakuen University, gave a lecture on "Education in School of Engineering integrating the humanities and sciences (using Tokyo Institute of Technology as an example)" on the morning of Friday, December 9. In the afternoon, the students toured laboratories of the Faculty of Engineering and the Graduate School of Engineering. They visited Mie Prefectural Environmental Conservation Agency under the guidance of Professor Kaneko, on the morning of Monday, December 12. In the afternoon, Dr. Masuyama, Senior Researcher at the Mie Prefectural Industrial Research Institute, delivered a lecture on "Engineering Education through Collaboration between Governmental (Public Research Institutions) and Universities". On the morning of the 13th (Tuesday), Assistant Professor Hirugawa provided an overview of "Medical Engineering Collaboration in Engineering Education". In the afternoon, Director Tamura lectured on "The Role of Technical Staff in Engineering Education". On the morning of the 14th (Wednesday), President Iida of Mie TLO explained "The Role of Mie TLO in Engineering Education". In the afternoon, a visit to Unokogyo Co., Ltd. was organized under the guidance of Associate Professor Kawanaka. On the afternoon of the 15th (Thursday), Professor Inomata of Nagoya Institute of Technology delivered a lecture on "Characteristics and Curriculum of Technical Universities (Using Nagoya Institute of Technology as an Example)". On the 16th (Friday), country-specific discussions and a results presentation were held.

Feedback from the participants who attended the training included remarks such as "I gained insights into engineering education in Japan," "I found the industry-academia collaboration and job placement system intriguing," and "The company visits were particularly informative and valuable." Overall, the training seminar proved to be highly meaningful and beneficial.

## (2) Grant-in-Aid for Scientific Research, International Collaborative Research Acceleration Fund (International Collaboration Enhancement (A))

The International A program aims to advance research in young researchers and foundational research funded by Grants-in-Aid for Scientific Research. It generally involves faculty members or researchers under the age of 45 conducting international collaborative research abroad for a period ranging from six months to one year. Applications are submitted with the approval of the affiliated institution, and arrangements such as employing substitute personnel during the dispatch period are possible. The theoretical research on "Fluctuation Measurement of Heat Flow in Nano-Scale Quantum Conductors" based on the main topic "Fluctuations of Information Flow, Heat Flow, and Electric Current in

Mesoscopic Quantum Conductors (C)" applied under the approval of the Department of Physics and Engineering was adopted. Following the first half of the dispatch (September 2019 - February 2020), which was postponed and modified for two years due to the COVID-19 pandemic, the second half of the dispatch (July - October 2022) was conducted.

The PICO group led by Professor Jukka Pekola in the Department of Applied Physics at Aalto University (formerly Helsinki University of Technology) in Finland, the dispatch destination, has a tradition of experimental research on the creation and control of superconducting quantum devices, ranging from fundamental academic research in quantum thermodynamics to research and development of on-chip ultra-low-temperature thermometers. In recent years, they have been involved in foundational technologies for constructing superconducting quantum computers, with alumni founding the quantum startup IQM Quantum Computers. In Professor Uchiumi's dispatch, collaborative theoretical research on quantum peripheral technologies was conducted, focusing on the construction of performance evaluation theories for superconducting single-electron transistor current standard elements with overseas collaborators, particularly Dr. Dmitry S. Golubev. In addition to academic research activities, exchange activities among members, including discussions and seminars between Japan and Finland via Zoom, were conducted, following up on short-term study abroad programs for graduate students supported by the Mie University Faculty of Engineering Alumni Association conducted during the previous dispatch.

## 5. Faculty of Bioresources ・ Graduate School of Bioresources

### (1) Implementation of Various JICA Educational Programs

Graduate School of Bioresources actively participates in many projects implemented by JICA for the development of countries in the process of development. This year, despite the challenges posed by the COVID-19 pandemic, regular program students under the ABE Initiative (Master's Degree and Internship Program of African Business Education Initiative for Youth) targeting the African region and SDGs Global Leader have managed to come to Japan. They engage in research activities in laboratories and participate in common subjects with universities nationwide. Some students also have internships scheduled before returning to their home countries, which they eagerly anticipate. Additionally, the Graduate School accepts research students aiming for regular enrollment through the Agri-Net: Agriculture Studies Networks for Food Security program and conducts preliminary research in laboratories until their enrollment in the doctoral program. These activities were made possible to continue

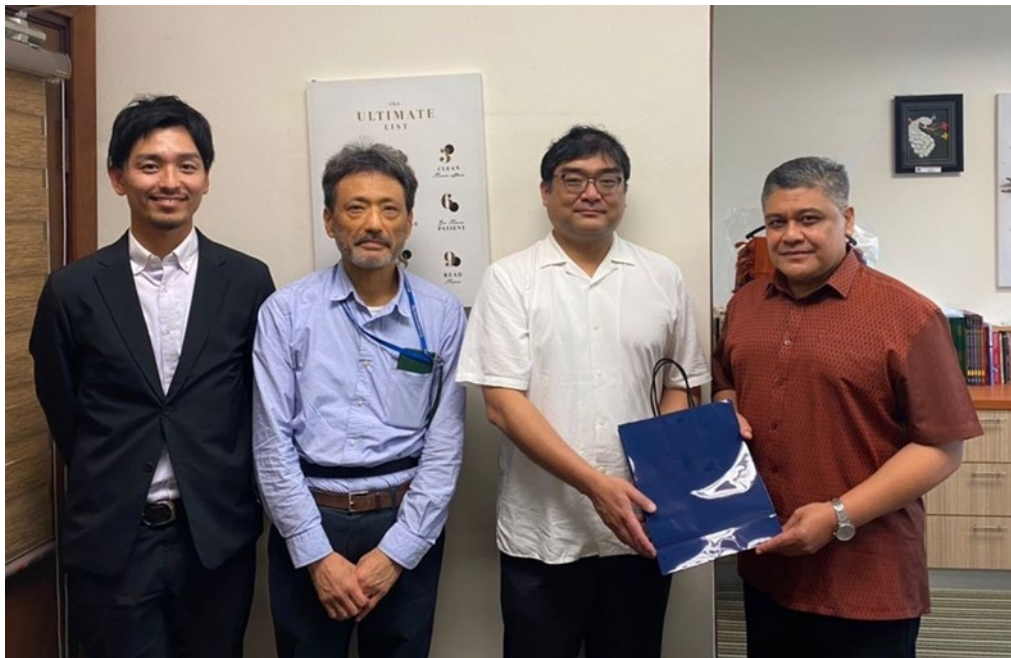
during this academic year amidst the ongoing pandemic due to the online conference facilities and online entrance examination system established by the Graduate School. Building on these achievements, the Graduate School aims to attract more students from developing countries through educational programs in collaboration with JICA Development Universities.

- (3) Resumption of Face-to-Face Exchange Activities with Universiti Malaysia Terengganu (UMT) Universiti Malaysia Terengganu (UMT) has transitioned from interdepartmental agreements to interuniversity agreements, becoming an important partner school for exchange activities. Although the planned summer school at UMT was canceled, in January 2023, two faculty members and one administrative staff member were dispatched to organize exchange events. These events included mini-lectures for students, study abroad information sessions, research matching meetings for faculty members, and field trips to potential collaborative research sites. Despite the exam period, approximately 45 students from undergraduate to graduate levels attended the mini-lectures and study abroad information sessions. Students actively participated in the lectures, and there were lively question-and-answer sessions. During the research matching meetings for faculty members and the field trips, meetings were held with faculty members from the Faculty of Food Science and Fisheries. After an overview of the Graduate School of Bioresources, reports were given on existing collaborative research projects and examples of progression from graduate students to faculty members. Participants from industry, government, and academia joined the field trip, and specific discussions were held on topics such as material transfer agreements based on the Convention on Biological Diversity for future collaborative research. On February 2nd, President Ito and a delegation from Mie University, who were visiting TATI University, joined the meeting. After presentations on environmental activities at both Mie University and UMT by administrative staff members, lively discussions were held between representatives of UMT and Mie University regarding future exchanges between faculty members and students.
- (4) Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration
- (5) Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration





Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration



Courtesy Visit to the Faculty of Food Science and Fisheries, Universiti Malaysia Terengganu

### (3) Special Program for Prioritizing Government-Funded International Students in the 2022 Academic Year

In the 2022 academic year, a special program was adopted, jointly proposed by the Graduate School of Engineering and the Graduate School of Biological Resources, titled "Deployment of Research Talent Leading Sustainable Regional and Global Development through Approaches from Biological Resources and Engineering." Over the next three



years, the program will facilitate the enrollment of eight students from partner institutions in key regions, primarily Southeast Asian countries, into the doctoral programs of the Graduate School of Biological Resources and the Graduate School of Engineering.

Similar to the preceding special program, the initiative will focus on practical environmental education and internships in domestic companies, leveraging Mie University's strengths alongside each student's respective expertise. This approach aims to foster a comprehensive understanding of various perspectives and strategies for regional contributions.

#### (4) Exchange with a Delegation from the Republic of Palau

A delegation of 15 members from Palau, comprising agricultural training visitors, was invited to Mie Prefecture and visited from September 12th (Monday) to September 18th (Sunday). On September 16th (Friday), they visited the Graduate School of Biological Resources at Mie University, where they interacted with faculty members and students. The delegation from the Republic of Palau consisted of teachers and students from Palau Community College and Palau High School, with a focus on agriculture, including students aspiring to pursue agricultural studies.

The visit commenced at the affiliated farm of the Graduate School of Bioresources, where Associate Professor Takashi Mishima delivered a lecture on food security, the agricultural situation in Palau, and the utilization of underutilized resources such as sago palm. A lively exchange of questions and answers followed the lecture. Following the lecture, the delegation toured various crops on the farm, showing particular interest in eggplants and bell peppers grown by the students. Subsequently, in the main conference room of the Faculty of Biological Resources building, Professor Moriou Tsukada gave a lecture on flies (fruit flies), followed by an exchange session. Additionally, Professor Hidehayashi Oka delivered a lecture on food production mechanization and automation. Given the scarcity of vegetables in Palau, the delegation showed keen interest and attentively listened to the lecture on agricultural machinery used for vegetable cultivation.

Following the lectures, the delegation interacted with graduate students, fourth-year undergraduate students, and exchange students from the Environmental Information

Systems Engineering Course of the Graduate School of Biological Resources. The exchange fostered deeper friendship and understanding between Mie Prefecture and Palau through interactions among students, researchers, and practitioners in the field of agriculture.

#### Visit Schedule for Mie University

September 16, 2022 (Fri)

Morning: Discussion session with researchers (Mie University Farm)

- ◎ Graduate School of Bioresources, Professor Takashi Mishima - Discussion on Food Processing 13:00-14:30: Discussion session with researchers (Faculty Meeting Room, Faculty of Bioresources)
- ◎ Graduate School of Bioresources, Professor Mori Tsukada - Discussion on Insect Ecology 14:40-16:10: Discussion session with researchers and student roundtable discussion (Faculty Meeting Room, Faculty of Bioresources)
- ◎ Graduate School of Bioresources, Professor Xiu-lun Wang - Discussion on Food Production Machinery
- ◎ Interaction with graduate students, fourth-year students, and international students from the Faculty of Bioresources  
16:30-18:30: Cooking practical training (Kyohoku Community Center - Food Workshop)
- ◎ Practical cooking session using vegetables from Mie Prefecture
- ◎ Interaction with graduate students, undergraduate students, and international students from the Faculty of Bioresources





## 6. Graduate School of Regional Innovation Studies

### (1) The 14th International Workshop on Regional Innovation Studies (IWRIS2022)

Since its establishment in 2009, the Graduate School of Regional Innovation Studies has been organizing an annual international workshop for researchers and students interested in regional innovation studies. This year, the Graduate School hosted "The 14th International Workshop on Regional Innovation Studies (IWRIS2022)" on October 13, 2022, at the Regional Innovation Hall. Due to the ongoing impact of the COVID-19 pandemic, which restricted the invitation of researchers and students from overseas, the workshop was organized both in-person and online simultaneously and

condensed into a single-day event. On the day of the workshop, strict measures were implemented to prevent infection, including maintaining social distancing, conducting temperature checks using thermal cameras, and ensuring alcohol disinfection. Additionally, the banquet was canceled in response to these constraints. Despite these constraints, the event was attended by 86 participants in person and 13 online, totaling 99



attendees. Despite the international travel restrictions, we were fortunate to have 10 faculty members and students from Chiang Mai University in Thailand, Aletheia University and National Taiwan Normal University in Taiwan, and Ho Chi Minh City Open University in Vietnam join us online. Additionally, 14 foreign nationals residing in Japan attended the event in person, contributing to the diverse and international atmosphere of the workshop.

In this 14th edition of the international workshop, two keynote speeches were delivered: "Energy Saving by PV-Heatpump for Cooling and Heating in Smart Building and Agriculture" by Professor Tanongkiat Kiatsiriroat from Chiang Mai University in Thailand, and "Popular Culture and Country Image: Japan, South Korea, and Taiwan" by Professor C-P Lin from Aletheia University in Taiwan. Additionally, a total of 17 presentations were given by students from our graduate school and international participants in five sessions: Engineering for Regional Innovation, Bio-Science for Regional Innovation, and Social Engineering I, II, III for Regional Innovation.

Students of the Graduate School of Regional Innovation Studies not only engage in the writing of research papers, research presentations, and question-and-answer sessions in English, but also take on the organization of workshops on the day of the event, providing them with a valuable opportunity to experience communication in English, the global lingua franca. Furthermore, Mr. Ryo Konishi, a doctoral student in the latter term of the graduate school program, received the Best Outstanding Paper Award, Mr. Hideki Ogasawara, Mr. Dafi Dinansyah Wiradimadja, also doctoral students in the latter term of the graduate school program, received the Outstanding Paper Award, Mr. Jian-Fu Chen from Aletheia University in Taiwan received the Encouragement Paper Award, Mr. Rakusora Namikawa from our university's Graduate School of Engineering, and Mr. Takumi Hashimoto from the graduate school's master's program were selected and honored by Dean Kazunari Kobayashi.



### **Best Outstanding Paper Award**

“Change of "parent-child relationship" and discourse in Japanese magazines: Preliminary discussion by historical sociological approach”

Ryo Konishi

Graduate School of Regional Innovation Studies, Mie University

### **Outstanding Paper Award**

“Development of a sample preparation method for apramycin residue analysis in livestock products by LC–MS/MS”

Hideki Ogasawara<sup>1, 2</sup>, Mari Seko<sup>2</sup>, Hiroshi Akiyama<sup>3, \*</sup>, Takeo Yano<sup>1</sup>

<sup>1</sup>Graduate School of Regional Innovation Studies, Mie University

<sup>2</sup>Tokai-techno co., ltd, Yokkaichi, Japan;

<sup>3</sup>National Institute of Health Science, Kawasaki, Japan.

\*Present position: Hoshi University, Tokyo, Japan.

“Ethical Dilemmas on Tofu Industry Environmental Management in Cibuntu Tofu Industry Center in Bandung City, West Java, Indonesia”

Dafi Dinansyah Wiradimadja and Hisatsuna Mori

Graduate School of Regional Innovation Studies, Mie University

### **Encouragement Paper Award**

“Does Innovation Stimulate Sales Performance? Evidence from Taiwan”

Chia-Hui Huang, Hsing-Wei Tseng and \*Jian-Fu Chen

Department of Economics, Aletheia University, Taiwan

“Dependence of Substrate Off-cut Angle on N-polar Annealed Sputtered AlN and MOVPE grown AlN”

Gaku Namikawa<sup>1</sup>, Kanako Shojiki<sup>1, 4</sup>, Riku Yoshida<sup>2</sup>, Kenjiro Uesugi<sup>2, 3</sup> and Hideto Miyake<sup>1</sup>

<sup>1</sup>Graduate School of Engineering, Mie University

<sup>2</sup>Graduate School of Regional Innovation Studies, Mie University

<sup>3</sup>Mie Regional Plan Co-creation Organization, Mie University

<sup>4</sup>Graduate School of Engineering, Osaka University

“Realization of Al-Polar Annealed Sputtered AlN Using an Al Metal Target”

Takumi Hashimoto<sup>1</sup>, Kanako Shojiki<sup>2, 4</sup>, Kenjiro Uesugi<sup>1, 3</sup>, Shiyu Xiao<sup>2</sup> and Hideto Miyake<sup>2</sup>

<sup>1</sup>Graduate School of Regional Innovation Studies, Mie University

<sup>2</sup>Graduate School of Engineering, Mie University

<sup>3</sup>Mie Regional Plan Co-creation Organization, Mie University

<sup>4</sup>Graduate School of Engineering, Osaka University



## II. Major International Exchange Activities of Each Faculty/Graduate School

### 1. Center for General Education

#### (1) Online program at ELTC of University of Sheffield

The Special English Language Program, which began in 2015, offers a short-term overseas training program at the Center for English Language Education, University of Sheffield, as the final part of the year's studies. Due to travel restrictions caused by COVID-19 infection situation, the program provided an opportunity for those who wished to participate in a one-week (five-day) online training program to test the results of the year's work, experience different cultures, and enhance their motivation for future study.

The online training is open to all participants and offers a unique experience with small classes of students from various nationalities, cultures, and backgrounds. Participants had the opportunity to further develop their English skills based on those developed in the “English Special Program,” and were motivated to continue learning English.

#### ELTC Online: Language and Culture Program 2022

- Date and Time:  
March 6(MON) – March 10(Fri) 2023  
18:00-22:00 JST + on-demand learning materials
- Provider:  
University of Sheffield (UK)  
English Language Training Center (ELTC)
- Participants:  
14 students total  
(Faculty of Education 2students; Faculty of Medicine 4 students;  
Faculty of Engineering 2 students; Faculty of Bioresources 6 students)  
\* Originally scheduled for February, it was changed to March to avoid  
coinciding with the strike at the University of England



## Outline of Online Program

Online classes include the following

- English language Train classes are designed to help students acquire all four skills.
- Having opportunities to interact in small groups with people from different countries, cultures, and backgrounds.

The class schedule is as follows

### About online classes

Student Timetable - in Japan Time (JST)					
Day & Time	Monday	Tuesday	Wednesday	Thursday	Friday
<b>18.00-19.00</b> <b>Japan Time (JST)</b>	Technology introduction  <b>Welcome and introduction to the course</b>  Getting to know you	Language development  <b>Food and drink</b> food vocabulary/ adjectives; language for eating out	Language development  <b>Festivals</b> festival vocabulary; question starters, e.g. 'How often...?'	Language development  <b>Shopping</b> shopping vocabulary; complex questions; complaining	Language development  <b>Climate change</b> vocabulary
<b>19.30-20.30</b>	Language development  <b>Britain and British culture</b> listening and reading	Language development  <b>Britain's working coastline</b> asking for & giving opinions; agreeing & disagreeing	Language development  <b>Construction in Britain</b> communication strategies	Language development  <b>The origins of British idioms</b> expressing certainty and possibility	Language development  <b>British wildlife</b> keeping a discussion going
<b>21.00-22.00</b>	Language development  <b>Family</b> vocabulary and idioms	Post-lesson task and discussion	Post-lesson task and discussion	Post-lesson task and discussion	Post-lesson task and discussion
<b>(22.30-23.00)</b> <b>Self-Study</b>	Self-study  <a href="#">Communication skills lesson 1</a>	Self-study  Communication skills lesson 1	Self-study  <a href="#">Pronunciation lesson 1</a>	Self-study  Pronunciation lesson 1	Self-study  <a href="#">Communication skills lesson 2</a>

### Questionnaire of participants

I am satisfied with ...	1 disagree	2 generally opposed	3 neither	4 generally favorable	5 agree	number of the answer	average
A. Overall		1	1	1	10	13	4.54
B. English language Train classes		1	1	1	10	13	4.54
C. Assignments after classes and Lectures		1	1	1	10	13	4.54
D. Additional teaching materials (On-demand / Conducted outside of class)		1	1	4	7	13	4.31

### Comments from participants in online classes

Although it was only a one-week course, especially because it was an online course, students were greatly stimulated by the attitudes of students from other countries in terms of speaking skills, and there was much to learn about the essential element for fruitful conversation, such as active speech and how to choose topics, which some students were able to put into practice themselves. Many students, including those who had a hard time, are happy to have had a meaningful opportunity.

## 2. Faculty of Humanities, Law and Economics and Graduate School of Humanities and Social Sciences

### (1) The report of Thailand Field Study in 2022

Through training at an international NGO in Thailand and exchanges with local students, we aimed to learn about the current situation in Thailand and the developed countries, including Japan, that can be seen from there, and to deepen our understanding of Southeast Asia, including Thailand, which cannot be obtained through various media and literature alone.

The following two points were the goals of this Thailand Field Study.

#### 【Goals of the Thailand Field Study】

1. to gain a better understanding of Thailand and neighboring countries in Southeast Asia based on the issues being addressed by international cooperative and policy advocacy NGOs, as well as the position of developed countries, including Japan.

2. Exchange with students from Thammasat University, our partner university in Thailand.

Participants in the Thailand Field Study were as follows.

【Participants】

Seiki Ayano (Leader, Professor of the Faculty of Humanities, Law and Economics)

Toshiyuki Doi (Guide・Interpreter, Director of NGO Mekong Watch )

5 students of Faculty of Humanities, Law and Economics ( 3 students of Freshman in Humanities, 2 students of second grade in Law and Economics)

Two pre-service training sessions were held prior to the on-site field study. Toshiyuki Doi, director of NGO Mekong Watch, was in charge of the preliminary training. Two meetings were held to facilitate field activities, and a detailed training manual was prepared by the participating students. Mr. Doi joined the second meeting to make final confirmations before the trip.

【Schedule】

a. Pre-training

First Session December 7, 2022 12:10-13:40

“Thailand in Space and Time: Geopolitics and History.”

Second Session February 14, 2023 13:00-14:30

“NGO Activities Against Slum and Industrial Pollution”

b. Meetings

First Session February 13, 2023 14:30-15:30

Second Session February 28, 2023 13:00-14:30

Field study were conducted with the following content and dates.

c. Training Contents and Schedule:

March 5 (Sun) Departure from Chubu Centrair International Airport

Orientation upon arrival in Bangkok

March 6 (Mon) Bangkok city tour (Thai history)

March 7 (Tue) Training at International NGO Sika Foundation

(Poverty issues: Khlong Toey, Bangkok)

March 8 (Wed) Training at partner university (Thammasat University, Rangsit Campus)

March 9 (Thu) Training at International NGO EARTH (environmental issues: Win Process・

Areas damaged by recycling operations (Nong Pau village, Rayong Province)

March 10 (Fri) Training at International NGO EARTH

(Environmental issues: efforts by Sanam Chai Khet Organic Agriculture Cooperative)

March 11 (Sat) Training at Kret Island

March 12 (Sun) Review of Thailand Field Study

March 13 (Mon) Arrival at Chubu Centrair International Airport

The training was effective because each participating student had set goals and studied beforehand.

In the final day's review, the following reports were made.

#### 【Participant Comments】

- Seeing people living positively helping each other in the midst of severe conditions, such as slums and environmental pollution, made me think about the state of Japanese society today.
- I learned the importance of taking action to improve our environment while valuing the connections between people.
- I learned the importance of not being overly pessimistic.
- I gained a new perspective. My values have broadened.
- I recognized the importance of verbalizing one's thoughts, including improving one's English language skills.
- I was able to learn about Thailand's unique culture and history.

#### 【Thailand Field Study Photo Collection】

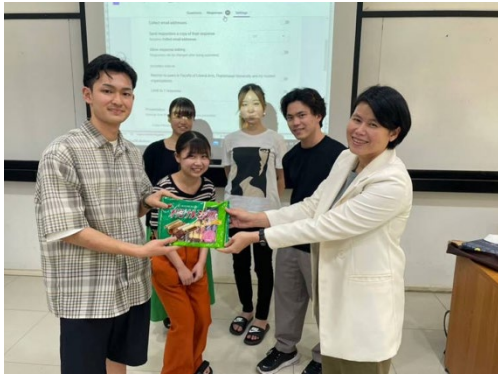


Bangkok Khlong Toi Area (slum)



Bangkok Khlong Toey Area

(Sika Foundation Picture Book Library)



Associate Professor Piyawan in charge of  
lectures on Thai history (Thammasat University)



Exchange with students  
from Thammasat University



Report on Pollution by Residents (Nong Pau Village)



Explanation of contamination situation  
(Nong Pau village)



Explanation on organic farming (Sanam Chai Ket)



Organic farm tour (Sanam Chai Khet)



### **3. Faculty of Education • Graduate School of Education**

#### **(1) Overseas educational training in collaboration with Faculty of Education and Social Work at University of Auckland, New Zealand**

The Faculty of Education has been conducting short-term training program in cooperation with the Faculty of Education and Social Work at University of Auckland since 2011. This educational training program includes visits to local schools, participation in classes at the University of Auckland's School of Education, and cross-cultural experiences. Due to the impact of COVID-19, online exchanges and educational training were conducted in academic year of 2020 and academic year of 2021; however, this year, on-site implementation became possible in the middle of the academic year, so on-site educational training was conducted from March 7 to March 16, albeit for a shorter period than in previous years. Four students participated in this 10<sup>th</sup> training program, led by two faculty members.

Through the program, the participating students witnessed many cultural differences, social diversity and the way school education reflects this diversity, classes that respect the individual and develop abilities, and educational activities that integrate ICT and analog, and they did not only learn through experience, but also gained much knowledge from the local teachers' explanations, broadening their educational horizons. Exposure to different cultures, educational philosophies, and educational systems helped me to develop flexible ideas and attitudes, and enriched my qualifications as a teacher. Participating students were able to have active exchanges with host families, teachers and students of Auckland University, and children and students from the schools they visited, which contributed to international exchange among students.



Secondary school (left) and primary school (right) in NZ

## **(2) Scientific Education Training for Ho Chi Minh City Normal University**

With the support of the Sakura Science Plan by the Japan Science and Technology Agency (JST), Mie University invited ten undergraduate students and two accompanying teachers who aim to become science teachers at Ho Chi Minh City Normal University (HCMUE), a partner university of Mie University, and conducted a “Training Program for Elementary and Junior High School Students for Human Resources Development in Science” from November 17 to 24. The invitation program began in academic year of 2015 and is now in its seventh iteration.

Mie University has been making efforts to enhance science education through such programs as the Junior Doctor Training School (JST), which targets fifth-grade to junior high school students who are highly motivated and have excellent abilities in science-related fields. The purpose of this program was for the invitees to visit science education sites in Mie Prefecture and the purpose was to deepen their thoughts on how to teach children to maximize their abilities.

Science education in Japan is conducted not only at school but also through hands-on experiences in the community and at science museums, and science experience activities at junior doctors and science museums at an early age are important for exploring issues in high school. This was an opportunity to learn extensively about science education in Japan.



Visits at SSH Schools



Commemorative photo  
at the completion ceremony

## **(3) Conclusion of “Agreement on Academic Cooperation and Exchange” (faculty level agreement) with Wenzao Ursuline University of Languages**

In academic year of 2022, we concluded an inter-faculty “Agreement on Academic Cooperation and Exchange” with Wenzao Ursuline University of Languages (Taiwan). This agreement with them, which have produced a large number of foreign language professionals, is expected to promote joint research and educational practices among faculty members. As for the latter educational practice



among teachers, part of this plan is to promote interaction among students. Students in Faculty of Education are often involved in activities to obtain teaching licenses, and it is difficult for them to have opportunities for the experience of international exchange due to time constraints. On the other hand, since the percentage of foreign students in Mie who need Japanese language instruction is the second highest in Japan as of June 2022, it is essential to deepen their attitude and understanding of different cultures during their school years. Through this agreement, we plan to promote the planning and implementation of activities that allow students of the Faculty of Education to experience international exchange in a short period.

On June 27, 2022, an online meeting was held to conclude the agreement. From Mie University, Prof. Nobunari Ito, Dean, Faculty of Education, Prof. Hitoshi Susono, former head of the Interference Committee, and Associate Prof. Akiko Hattori, current deputy head of the Interference Committee were attended and from Wenzao Ursuline University of Languages, Associate Prof. Jang-Kyung Tung, Dean of the Faculty of Eurasian Languages and Letters, Associate Prof. Suk-Yin Chen, head of the Department of Japanese, Assistant Prof of mathematics, Sawako Kubota, Chief of Japanese Language Department for International Exchange, and Assistant Prof. Keiji Sato, representative of Japanese Language Department for International Exchange were attended.



Online meeting on signing the agreement (June 27, 2022)

On February 6, 2023, Associate Prof. Akiko Hattori, Faculty of Education, and Specially Appointed Prof. Hirohiko Mizoguchi, Faculty of Education visited Wenzao Ursuline University of Languages. Associate Prof. Suk-Yin Chen, head of the Department of Japanese and Literature at Wenzao Ursuline University of Languages, and Assistant Prof of mathematics, Sawako Kubota, and Assistant Prof. Keiji Sato introduced the educational efforts of the two universities and exchanged opinions on future international exchange.

They also visited the elementary school English education activities using ICT promoted by Wenzao

Ursuline University of Languages and the facilities of the Chinese Language Education Center for international students, and the exchange was very meaningful, as we exchanged opinions on school education in Japan and Taiwan.



Visit to Wenzao Ursuline University of Languages (February 6, 2023)

#### **(4) International Exchange Activities at Higashi-Kishu Regional Satellite Campus**

In response to requests from local school boards and schools, the Higashi-Kishu Regional Satellite Campus conducted two international exchanges.

##### **① Supporting International Exchange Classes between Owase Municipal Wanai Junior High School in Owase and Kaohsiung City (Taiwan) Xingda Kumin Elementary School**

In response to a request from teachers and the Board of Education, “We want our students to have the experience of 'I can communicate in English!'” Since 2021, we have been supporting international exchange classes between Owase Municipal Elementary and Junior High Schools and Kaohsiung City Elementary Schools. This year, we conducted international exchange class support using Google Meet in October and January. Prior to the exchange in October, Associate Prof. Akiko Hattori of the School of Education gave a preliminary lesson on Taiwan. Students commented, “In the game, I could understand what was being said in English, and I thought that speaking English, the universal language, was the easiest way to communicate with people from other countries. Someday I'd like to go to Taiwan or some other country and talk to them.”. Now, “We want students to experience the ability to communicate in English and to acquire the skills to play an active role in globalization.”, and all the teachers at the Higashi-Kishu Education Center provided support for the program.



Lecture by Associate Prof. Akiko Hattori



Students from Wanai Junior High School giving a presentation on Japanese breakfast

## ②Conducting of ALT (assistant language teacher) training

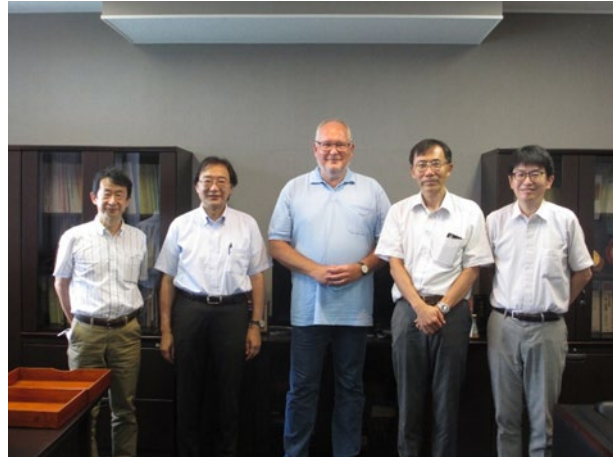
ALT training was conducted at the request of the Kihokucho, Owase, and Kumano City Boards of Education. A total of four training sessions were held this year. The training focused on “second language acquisition theory” and effective teaching methods for Japanese students whose native language is not English. ALTs learned various teaching methods (e.g., TPR Total Physical Response method) through experience. It has been four years since we started ALT training at Higashi-Kishu Education Center, and we have trained a total of about 15 ALTs. The ALT training, which enables ALTs to acquire specialized teaching skills in English, has been very well received not only by ALTs but also by school boards.



ALTs practicing Total Physical Response method

#### 4. Faculty of Engineering • Graduate School of Engineering

Prof. Thorsten Zenner of Reutlingen University stayed at Mie University from September 12 to October 13 under the Short-term Invitation Program for Foreign teachers. He visited the Office of the Dean of Graduate School of Engineering and met with Dean Ikeura, Chairperson of Academic Affairs Kubo, and representative of



International Affairs Kaneco. The Dean of the Graduate School of Engineering explained about the Graduate School of Engineering, and a discussion was held. He lectured on “Communication and Security” in the International Special Lecture I at the Graduate School of Engineering for four days in a row, two lectures a day, from September 13. In addition, a lecture on “System Engineering” was given at the International Special Lecture II of the Graduate School of Engineering for four days in a row, two lectures a day, from October 4. Four exchange students from Reutlingen University in Germany and three exchange students from Paris Polytechnic University in France who came to Japan in October, as well as three students from Mie University participated in those lectures as the international co-curricular program. Lectures included practical activities using computers.



On September 27, a lecture titled “Decentralized Hydrogen infrastructure” was held in the small hall of the auditorium, organized by Graduate School of Engineering and co-organized by Mie Global Environment Center for Education & Research. This lecture was related to the 7th “Affordable and Clean Energy” and 13th “Climate Action” of the



17 SDGs goal, and included an introduction of a project at Reutlingen University to economically realize energy supply using hydrogen. After the lecture, many questions were asked by people who participated at the venue. The number of participants is summarized in the table: 32 faculty members and staff, 133 students, a total of 165 participants. The presentation was also delivered by Zoom.

講演参加者			
	講演会場	zoom	合計
教職員	13	19	32
(工)博士後期課程	5	5	10
(工)博士前期課程	38	53	91
工学部学部生	16	15	31
他学部学生		1	1
合計	72	93	165

On September 28, he participated in an international symposium of the Graduate School of Engineering's Information Processing/Information and Communication Sciences (Research Area C) and listened to student poster presentations. At the international symposium, 52 presentations were made mainly by master's course students, and he visited each student's poster and had discussions with them about their research. In addition, he exchanged opinions with international students in the Department of Mechanical and Electronic Engineering and Department of Information Engineering who participated in the symposium about research, life in Japan, career paths after graduation, and other topics.

During his stay, he visited laboratories, mainly in the Department of Mechanical and Electronic Engineering, and interacted with faculty members and students.

Program for Developing



### ③Highly Skilled Industrial Human Resources Utilizing Japanese-Style Engineering Education

Graduate School of Engineering held JICA training program “Development of Highly Skilled Industrial Human Resources Utilizing Japanese-Style Engineering Education” in Academic Year of 2022.



It was held in face-to-face for 10 trainees from Kazakhstan (3 people), Kyrgyzstan (2 people), Turkmenistan (1 person), Uzbekistan (3 people), and Moldova (1 person) from December 2 (Fri.) to December 16 (Fri.) in a conference room at the Faculty of Engineering, Mie University. It opened with a speech by Dean Ikeura, followed by various lectures and field trips over the two weeks.

This training program provides training for faculty members of engineering universities in Central Asia on an overview of practical engineering education in Japan, teaching methods, curricula, and syllabi at technical colleges and engineering universities, and the current state of collaboration among industry, government, and academia, thereby contributing to strengthening the development of advanced industrial human resources in Central Asian countries.



The program orientation and inception report (by Prof. Kaneko) were held on December 2 (Fri). Prof. Tsuruoka of Suzuka University of Medical Science gave a lecture on “Characteristics of Japan and Japanese Companies, Human Resource Development of Japanese Companies” on the morning of Monday, December 5. Prof. Kubo gave a lecture on “Characteristics and Curriculum of Engineering Faculties of General Universities (using Mie University as an example)” on the morning of Tuesday, December 6. In the afternoon, Professor Wang of the Graduate School of Bioresources explained “Characteristics and Curriculum of Education in Agricultural and Biological Sciences (using Faculty of Bioresources as an example)”. A visiting professor Sato at Mie Global Environment Center for Education & Research, gave a lecture on “About Recurrent Education and SciLets for Working Adults Using On-Demand” on the morning of Wednesday, December 7. In the afternoon, Associate Prof. Kai of Suzuka National College of Technology gave a lecture on “Characteristics and Curriculum of Technical College (using Suzuka National College of Technology as an example). Associate Prof. Kano of the Mie Regional Plan Co-creation Organization gave an overview “the importance of intellectual property in engineering education” on the morning of

Thursday, December 8. In the afternoon, coordinator Tanaka led a tour of Fujifilm Manufacturing Corporation. Lecture Maekawa from Kyoai Gakuen University, gave a lecture on "Education in School of Engineering integrating the humanities and sciences (using Tokyo Institute of Technology as an example)" on the morning of Friday, December 9. In the afternoon, the students toured laboratories of the Faculty of Engineering and the Graduate School of Engineering. They visited Mie Prefectural Environmental Conservation Agency under the guidance of Professor Kaneko, on the morning of Monday, December 12. In the afternoon, Dr. Masuyama, Senior Researcher at the Mie Prefectural Industrial Research Institute, delivered a lecture on "Engineering Education through Collaboration between Governmental (Public Research Institutions) and Universities". On the morning of the 13th (Tuesday), Assistant Professor Hirugawa provided an overview of "Medical Engineering Collaboration in Engineering Education". In the afternoon, Director Tamura lectured on "The Role of Technical Staff in Engineering Education". On the morning of the 14th (Wednesday), President Iida of Mie TLO explained "The Role of Mie TLO in Engineering Education". In the afternoon, a visit to Unokogyo Co., Ltd. was organized under the guidance of Associate Professor Kawanaka. On the afternoon of the 15th (Thursday), Professor Inomata of Nagoya Institute of Technology delivered a lecture on "Characteristics and Curriculum of Technical Universities (Using Nagoya Institute of Technology as an Example)". On the 16th (Friday), country-specific discussions and a results presentation were held.

Feedback from the participants who attended the training included remarks such as "I gained insights into engineering education in Japan," "I found the industry-academia collaboration and job placement system intriguing," and "The company visits were particularly informative and valuable." Overall, the training seminar proved to be highly meaningful and beneficial.

## (2) Grant-in-Aid for Scientific Research, International Collaborative Research Acceleration Fund (International Collaboration Enhancement (A))

The International A program aims to advance research in young researchers and foundational research funded by Grants-in-Aid for Scientific Research. It generally involves faculty members or researchers under the age of 45 conducting international collaborative research abroad for a period ranging from six months to one year. Applications are submitted with the approval of the affiliated institution, and arrangements such as employing substitute personnel during the dispatch period are possible. The theoretical research on "Fluctuation Measurement of Heat Flow in Nano-Scale Quantum Conductors" based on the main topic "Fluctuations of Information Flow, Heat Flow, and Electric Current in

Mesoscopic Quantum Conductors (C)" applied under the approval of the Department of Physics and Engineering was adopted. Following the first half of the dispatch (September 2019 - February 2020), which was postponed and modified for two years due to the COVID-19 pandemic, the second half of the dispatch (July - October 2022) was conducted.

The PICO group led by Professor Jukka Pekola in the Department of Applied Physics at Aalto University (formerly Helsinki University of Technology) in Finland, the dispatch destination, has a tradition of experimental research on the creation and control of superconducting quantum devices, ranging from fundamental academic research in quantum thermodynamics to research and development of on-chip ultra-low-temperature thermometers. In recent years, they have been involved in foundational technologies for constructing superconducting quantum computers, with alumni founding the quantum startup IQM Quantum Computers. In Professor Uchiumi's dispatch, collaborative theoretical research on quantum peripheral technologies was conducted, focusing on the construction of performance evaluation theories for superconducting single-electron transistor current standard elements with overseas collaborators, particularly Dr. Dmitry S. Golubev. In addition to academic research activities, exchange activities among members, including discussions and seminars between Japan and Finland via Zoom, were conducted, following up on short-term study abroad programs for graduate students supported by the Mie University Faculty of Engineering Alumni Association conducted during the previous dispatch.

## 5. Faculty of Bioresources ・ Graduate School of Bioresources

### (1) Implementation of Various JICA Educational Programs

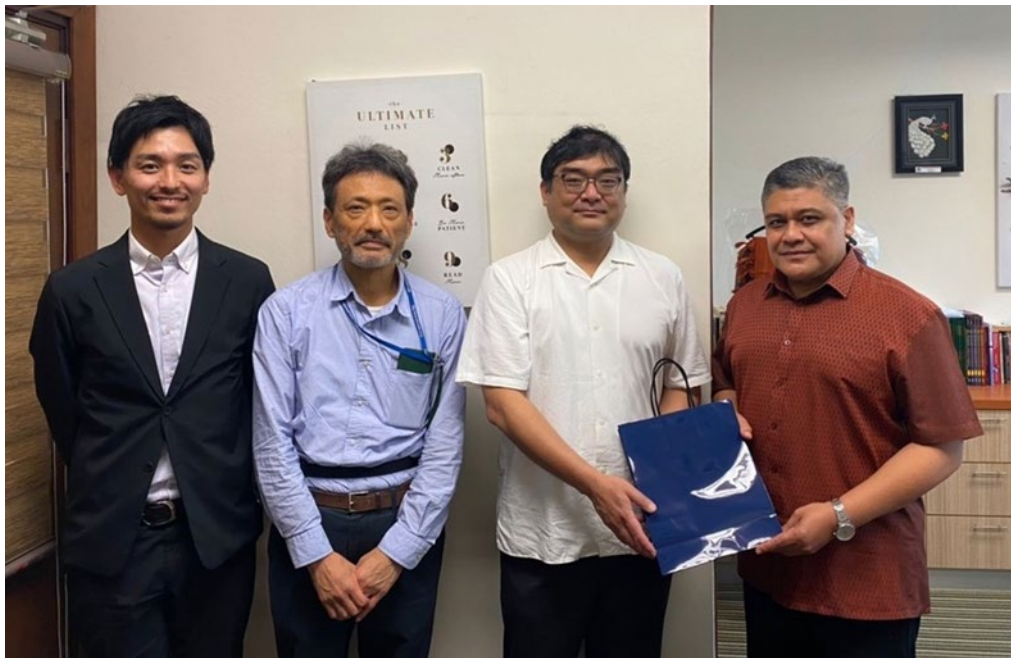
Graduate School of Bioresources actively participates in many projects implemented by JICA for the development of countries in the process of development. This year, despite the challenges posed by the COVID-19 pandemic, regular program students under the ABE Initiative (Master's Degree and Internship Program of African Business Education Initiative for Youth) targeting the African region and SDGs Global Leader have managed to come to Japan. They engage in research activities in laboratories and participate in common subjects with universities nationwide. Some students also have internships scheduled before returning to their home countries, which they eagerly anticipate. Additionally, the Graduate School accepts research students aiming for regular enrollment through the Agri-Net: Agriculture Studies Networks for Food Security program and conducts preliminary research in laboratories until their enrollment in the doctoral program. These activities were made possible to continue

during this academic year amidst the ongoing pandemic due to the online conference facilities and online entrance examination system established by the Graduate School. Building on these achievements, the Graduate School aims to attract more students from developing countries through educational programs in collaboration with JICA Development Universities.

- (3) Resumption of Face-to-Face Exchange Activities with Universiti Malaysia Terengganu (UMT) Universiti Malaysia Terengganu (UMT) has transitioned from interdepartmental agreements to interuniversity agreements, becoming an important partner school for exchange activities. Although the planned summer school at UMT was canceled, in January 2023, two faculty members and one administrative staff member were dispatched to organize exchange events. These events included mini-lectures for students, study abroad information sessions, research matching meetings for faculty members, and field trips to potential collaborative research sites. Despite the exam period, approximately 45 students from undergraduate to graduate levels attended the mini-lectures and study abroad information sessions. Students actively participated in the lectures, and there were lively question-and-answer sessions. During the research matching meetings for faculty members and the field trips, meetings were held with faculty members from the Faculty of Food Science and Fisheries. After an overview of the Graduate School of Bioresources, reports were given on existing collaborative research projects and examples of progression from graduate students to faculty members. Participants from industry, government, and academia joined the field trip, and specific discussions were held on topics such as material transfer agreements based on the Convention on Biological Diversity for future collaborative research. On February 2nd, President Ito and a delegation from Mie University, who were visiting TATI University, joined the meeting. After presentations on environmental activities at both Mie University and UMT by administrative staff members, lively discussions were held between representatives of UMT and Mie University regarding future exchanges between faculty members and students.
- (4) Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration
- (5) Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration



Field Trip with Members of Universiti Malaysia Terengganu (UMT) Industry–Academia Collaboration



Courtesy Visit to the Faculty of Food Science and Fisheries, Universiti Malaysia Terengganu

### (3) Special Program for Prioritizing Government-Funded International Students in the 2022 Academic Year

In the 2022 academic year, a special program was adopted, jointly proposed by the Graduate School of Engineering and the Graduate School of Biological Resources, titled "Deployment of Research Talent Leading Sustainable Regional and Global Development through Approaches from Biological Resources and Engineering." Over the next three



years, the program will facilitate the enrollment of eight students from partner institutions in key regions, primarily Southeast Asian countries, into the doctoral programs of the Graduate School of Biological Resources and the Graduate School of Engineering.

Similar to the preceding special program, the initiative will focus on practical environmental education and internships in domestic companies, leveraging Mie University's strengths alongside each student's respective expertise. This approach aims to foster a comprehensive understanding of various perspectives and strategies for regional contributions.

#### (4) Exchange with a Delegation from the Republic of Palau

A delegation of 15 members from Palau, comprising agricultural training visitors, was invited to Mie Prefecture and visited from September 12th (Monday) to September 18th (Sunday). On September 16th (Friday), they visited the Graduate School of Biological Resources at Mie University, where they interacted with faculty members and students. The delegation from the Republic of Palau consisted of teachers and students from Palau Community College and Palau High School, with a focus on agriculture, including students aspiring to pursue agricultural studies.

The visit commenced at the affiliated farm of the Graduate School of Bioresources, where Associate Professor Takashi Mishima delivered a lecture on food security, the agricultural situation in Palau, and the utilization of underutilized resources such as sago palm. A lively exchange of questions and answers followed the lecture. Following the lecture, the delegation toured various crops on the farm, showing particular interest in eggplants and bell peppers grown by the students. Subsequently, in the main conference room of the Faculty of Biological Resources building, Professor Moriou Tsukada gave a lecture on flies (fruit flies), followed by an exchange session. Additionally, Professor Hidehayashi Oka delivered a lecture on food production mechanization and automation. Given the scarcity of vegetables in Palau, the delegation showed keen interest and attentively listened to the lecture on agricultural machinery used for vegetable cultivation.

Following the lectures, the delegation interacted with graduate students, fourth-year undergraduate students, and exchange students from the Environmental Information

Systems Engineering Course of the Graduate School of Biological Resources. The exchange fostered deeper friendship and understanding between Mie Prefecture and Palau through interactions among students, researchers, and practitioners in the field of agriculture.

#### Visit Schedule for Mie University

September 16, 2022 (Fri)

Morning: Discussion session with researchers (Mie University Farm)

- ◎ Graduate School of Bioresources, Professor Takashi Mishima - Discussion on Food Processing 13:00-14:30: Discussion session with researchers (Faculty Meeting Room, Faculty of Bioresources)
- ◎ Graduate School of Bioresources, Professor Mori Tsukada - Discussion on Insect Ecology 14:40-16:10: Discussion session with researchers and student roundtable discussion (Faculty Meeting Room, Faculty of Bioresources)
- ◎ Graduate School of Bioresources, Professor Xiu-lun Wang - Discussion on Food Production Machinery
- ◎ Interaction with graduate students, fourth-year students, and international students from the Faculty of Bioresources  
16:30-18:30: Cooking practical training (Kyohoku Community Center - Food Workshop)
- ◎ Practical cooking session using vegetables from Mie Prefecture
- ◎ Interaction with graduate students, undergraduate students, and international students from the Faculty of Bioresources





## 6. Graduate School of Regional Innovation Studies

### (1) The 14th International Workshop on Regional Innovation Studies (IWRIS2022)

Since its establishment in 2009, the Graduate School of Regional Innovation Studies has been organizing an annual international workshop for researchers and students interested in regional innovation studies. This year, the Graduate School hosted "The 14th International Workshop on Regional Innovation Studies (IWRIS2022)" on October 13, 2022, at the Regional Innovation Hall. Due to the ongoing impact of the COVID-19 pandemic, which restricted the invitation of researchers and students from overseas, the workshop was organized both in-person and online simultaneously and

condensed into a single-day event. On the day of the workshop, strict measures were implemented to prevent infection, including maintaining social distancing, conducting temperature checks using thermal cameras, and ensuring alcohol disinfection. Additionally, the banquet was canceled in response to these constraints. Despite these constraints, the event was attended by 86 participants in person and 13 online, totaling 99



attendees. Despite the international travel restrictions, we were fortunate to have 10 faculty members and students from Chiang Mai University in Thailand, Aletheia University and National Taiwan Normal University in Taiwan, and Ho Chi Minh City Open University in Vietnam join us online. Additionally, 14 foreign nationals residing in Japan attended the event in person, contributing to the diverse and international atmosphere of the workshop.

In this 14th edition of the international workshop, two keynote speeches were delivered: "Energy Saving by PV-Heatpump for Cooling and Heating in Smart Building and Agriculture" by Professor Tanongkiat Kiatsiriroat from Chiang Mai University in Thailand, and "Popular Culture and Country Image: Japan, South Korea, and Taiwan" by Professor C-P Lin from Aletheia University in Taiwan. Additionally, a total of 17 presentations were given by students from our graduate school and international participants in five sessions: Engineering for Regional Innovation, Bio-Science for Regional Innovation, and Social Engineering I, II, III for Regional Innovation.

Students of the Graduate School of Regional Innovation Studies not only engage in the writing of research papers, research presentations, and question-and-answer sessions in English, but also take on the organization of workshops on the day of the event, providing them with a valuable opportunity to experience communication in English, the global lingua franca. Furthermore, Mr. Ryo Konishi, a doctoral student in the latter term of the graduate school program, received the Best Outstanding Paper Award, Mr. Hideki Ogasawara, Mr. Dafi Dinansyah Wiradimadja, also doctoral students in the latter term of the graduate school program, received the Outstanding Paper Award, Mr. Jian-Fu Chen from Aletheia University in Taiwan received the Encouragement Paper Award, Mr. Rakusora Namikawa from our university's Graduate School of Engineering, and Mr. Takumi Hashimoto from the graduate school's master's program were selected and honored by Dean Kazunari Kobayashi.



### **Best Outstanding Paper Award**

“Change of "parent-child relationship" and discourse in Japanese magazines: Preliminary discussion by historical sociological approach”

Ryo Konishi

Graduate School of Regional Innovation Studies, Mie University

### **Outstanding Paper Award**

“Development of a sample preparation method for apramycin residue analysis in livestock products by LC–MS/MS”

Hideki Ogasawara<sup>1, 2</sup>, Mari Seko<sup>2</sup>, Hiroshi Akiyama<sup>3, \*</sup>, Takeo Yano<sup>1</sup>

<sup>1</sup>Graduate School of Regional Innovation Studies, Mie University

<sup>2</sup>Tokai-techno co., ltd, Yokkaichi, Japan;

<sup>3</sup>National Institute of Health Science, Kawasaki, Japan.

\*Present position: Hoshi University, Tokyo, Japan.

“Ethical Dilemmas on Tofu Industry Environmental Management in Cibuntu Tofu Industry Center in Bandung City, West Java, Indonesia”

Dafi Dinansyah Wiradimadja and Hisatsuna Mori

Graduate School of Regional Innovation Studies, Mie University

### **Encouragement Paper Award**

“Does Innovation Stimulate Sales Performance? Evidence from Taiwan”

Chia-Hui Huang, Hsing-Wei Tseng and \*Jian-Fu Chen

Department of Economics, Aletheia University, Taiwan

“Dependence of Substrate Off-cut Angle on N-polar Annealed Sputtered AlN and MOVPE grown AlN”



Gaku Namikawa<sup>1</sup>, Kanako Shojiki<sup>1, 4</sup>, Riku Yoshida<sup>2</sup>, Kenjiro Uesugi<sup>2, 3</sup> and Hideto Miyake<sup>1</sup>

<sup>1</sup>Graduate School of Engineering, Mie University

<sup>2</sup>Graduate School of Regional Innovation Studies, Mie University

<sup>3</sup>Mie Regional Plan Co-creation Organization, Mie University

<sup>4</sup>Graduate School of Engineering, Osaka University

“Realization of Al-Polar Annealed Sputtered AlN Using an Al Metal Target”

Takumi Hashimoto<sup>1</sup>, Kanako Shojiki<sup>2, 4</sup>, Kenjiro Uesugi<sup>1, 3</sup>, Shiyu Xiao<sup>2</sup> and Hideto Miyake<sup>2</sup>

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