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# ANNUAL REPORT FY 2019

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Department of Tourism Science, Tokyo Metropolitan University



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# 1. Research Staff

## 1.1 Environmental Management Unit

### Toshio KIKUCHI

Professor/ D. Sc. (Geography) (The University of Tsukuba)  
Agricultural and Rural Geography, Rural Tourism and Rurality-based Tourism, Food System and Food Tourism, Resource Management

### Shinya NUMATA

Professor/ Ph.D. (Tokyo Metropolitan University)  
Tropical Biology, Urban Ecology, Protected Area Management

### Takeshi Osawa

Associate Professor/Ph.D (Kobe university)  
Biodiversity Informatics, Conservation Science, Ecosystem management

### Koun Sugimoto

Assistant Professor/ Ph.D (Tourism Science) (Tokyo Metropolitan University)  
Tourism Geography, Applied Geography, Geographic Information System

### Etsuro TAKAGI

Assistant Professor/ Ph.D (Agriculture) (The University of Tokyo)  
Forest zoology, Population ecology, Natural history

### Taiyo YAGASAKI

Research Assistant Professor/ Ph.D. (University of Tsukuba)  
Human Geography, Disaster Geography

## 1.2 Regional and Urban Planning Unit

### Tetsuro SHIMIZU

Professor/ Dr. of Engineering (Tokyo Institute of Technology)  
Tourism Policy and Planning, Transport Studies

### Susumu KAWAHARA

Associate Professor/ Ph.D. (Waseda University)  
Urban planning & design, Destination Planning & Management, community-based development and tourism

### Yu OKAMURA

Assistant Professor/ Ph.D. (The University of Tokyo)  
Urban Design, Conservation Planning, Community-Based Tourism and Town Planning

### Yukiko KATAGIRI

Assistant Professor/ Ph.D. (Keio University)  
Landscape Planning, Tourism Planning

### Mitsuru NODA

Assistant Professor/ Ph.D. (WASEDA University)

Rural Planning, Urban & Regional Design, Community-based Tourism Development

### Norie Hirata

Research Assistant Professor/ Ph.D. (Tourism Science) (Tokyo Metropolitan University)  
Community-based tourism planning, Destination branding, Space design

### Akira Uehara

Research Assistant Professor/ Ph.D. (Tourism Science) (Tokyo Metropolitan University)  
Tourist psychology (Environmental psychology, Consumer behavior)

## 1.3 Behavioral and Management Sciences Unit

### Yohei KURATA

Associate Professor/ Ph.D. (Spatial Information Science) (University of Maine, USA)  
Tourism Informatics, Spatial Information Science

### Taketo NAOI

Associate Professor/ Ph.D. (The University of Surrey, UK),  
Doctor of Engineering (Tokyo Institute of Technology)  
Tourism Studies

### Katsuya HIHARA

Associate Professor/ Ph.D. (University of Tsukuba)  
Micro-economics, Management, Tourism/Transport Policy

### Wu Lingling

Associate Professor/ Ph.D. (Hiroshima University)  
Tourism marketing, integrated tourist behavior modeling, big data analysis in tourism

### Yu Ogasawara

Assistant professor/ Ph.D. (Hiroshima University)  
Social systems engineering

### Hajime Tozaki

Research Assistant Professor/ MA in Tourism (University of the Ryukyus, Japan), MBA (Graduate School of Management, Kyoto University, Japan)  
Learning from Experience of Business in Tourism

### Makiko ASO

Assistant Professor/ MA in Tourism (University of the Ryukyus, Japan), MBA (Graduate School of Management, Kyoto University, Japan)  
Tourism management

## 2. Research Summaries

### 2.1 Environmental Management Unit

#### Commodification of rural spaces in British Columbia, Canada (Dr. Kikuchi)

Our research aimed to depict the commodification of rural spaces in a form that embodies the values and lifestyles of an entire region. On the basis of a field survey, we understood the form and characteristics of rural commodification in the Kootenay Region of British Columbia, Canada. The demand for locally grown, fresh, high-quality, safe, and reliable vegetables, fruits, livestock products, etc., has led to the development of organic farming in this region. In other words, the commodification of rural spaces by way of adding value to agricultural products via organic farming and responding to local needs is a unique feature of this region. The Kootenay Co-op, farmers' markets, and Community Supported Agriculture (CSA) programs have played important roles in this development. This region, which has a small population and a small agricultural market, found it difficult to import food products from outside due to high transportation cost. This, in turn, encouraged the growth of safe and reliable food production for the local market. An important factor in the development of organic farming here is the pacifism and environment-oriented cultural traditions represented by the Doukhobors, Quakers, and the influx of retired people and tourists, which caused the development of a free, friendly, healthy, and sustainable community in the region.



#### Explorations of comparative ruralism in the UK and Japan (Drs. Kikuchi and Martin Phillips (Visiting Professor and a Professor of Geography, University of Leicester, UK))

Rural Japan and the UK are locations that are both subject to considerable change and there is significance scope for scholars to engage and learn from each other. There has been some interaction centred around ideas of rural/agricultural restructuring, the commodification of rural space and sustainability, but there has been a tendency for flows to have been limited to these issues and for West-East flows to have

been predominated. The present proposal seeks to counter these tendencies by examining the potential for developing a UK-Japan comparative ruralism' that identifies and addresses key processes of rural transformation within both countries and employs dialogical learning that enable the flow of ideas and practices equally between the two countries. The aims of this project are to facilitate the development of comparative rural research in Japan and the UK, to develop strategies for conducting co-produced comparative rural research that fosters dialogical interaction and multi-directional flows of ideas, understandings and practices, to develop comparative understandings of key transformations in rural space in Japan and UK including: processes of agricultural change, rural demographic change, rural housing development and processes of rural gentrification, and to scope nine rural comparative research projects for future collaborative investigation and funding applications.



#### Diversification of urban agriculture based on communication with urban residents (Dr. Kikuchi)

This research aims to explore the diversification of agricultural management in response to interactions between farms and urban residents based on a case study of Kodaira city in the Tokyo Metropolis. Kodaira city is an urban agricultural area in the Tokyo Metropolis, where many independent farmer markets use their proximity to consumers, and their allotments, PYO farms, and farming-experience gardens to form the potential support base of urban agriculture. Kodaira city is a suitable study area to explore diversification of farming and communication with urban residents. We use not only literature analysis such as previous studies and agricultural promotion plans in Kodaira city but also quantitative analysis of statistical data to illustrate the spatial distribution of agricultural management patterns and classify them. Qualitative analysis from field research and interviews of case farmers reveals farmers' decision making in adopting specific methods of agricultural management and communication with urban residents. Hence, agricultural management is diversified based on the communication with urban residents in Kodaira city. Classification of agricultural management is based on the features of the area in a definite pattern. Such diversification and distribution prevent excessive competition among farms, attract stable customers, and realise sustainable management. Finally,

urban agriculture in Kodaira city is founded on diversification of agricultural management through communication with urban residents.



**Regional revitalization with the development of food tourism in Vancouver Island region, Canada (Dr. Kikuchi)**

In the Vancouver Island region, the research focused especially on the Cowichan subregion, where the commodification of rural spaces is characterized by the development of wine tourism and the establishment of a “slow city” based on the consumption of local food. Many visitors and tourists come to this region because of its excellent accessibility to Victoria and Vancouver. In addition, due to its mild winter climate this region is considered ideal for retirement living in Canada. Small-scale farming is pursued in the narrow farmland area between the Island’s mountains and east coast areas. Various types of local food production are conducted in this region: livestock and dairy farming in mountainous areas, grape production on the slopes, and vegetable production and fishing in the coastal areas. There are approximately 20 wineries, using local grapes, with wine shops, tasting sessions, and wine factory tours. The rural space for production has changed rapidly into a space for the consumption of locally produced food such as cheeses, wines, organic vegetables and fish. Such local food is served at restaurants attached to wineries. A network of local food producers and their organizations is developing various new food brands. Cowichan Bay is one of the two designated slow



cities in Canada, along with Naramata in the Okanagan Valley.

**Biodiversity conservation in urban ecosystems: people’s nature experience and attitude to ecosystem disservices(Drs. Numata, S., E. Takagi, K. Sugimoto)**

In order to understand effects of ecosystem disservice on urban society, studies on urban dwellers’ nature experiences, preference to plants and animals, and tolerance to dis-like animals have been conducted. In FY2019, I stayed at Universiti Teknologi Malaysia as a visiting professor, and conducted some research projects with colleagues. Discussion with stakeholders was held to create business plan for camera-trap based tourist attraction in Malaysian national parks.

**Development of wildlife tourism attraction in Asian tropical rainforests (Drs. S. Numata, E.Takagi)**

The aim of the project is to develop a tourist attraction program using wildlife (VH: virtual hunting), and to construct management system towards tourism, conservation, and environmental education in ERNP. A camera trap system of wildlife-based tourist attraction “virtual hunting” is developed and implemented in nature and semi-nature area in ENRP under the collaboration between TMU-UTM, JNPC, and JSG. The system involves video-trapping camera, tourists’ activity (shooting), archiving, and data delivery as a trophy of the virtual hunting. Tourist guide and education materials are developed to enhance educational effect of VH. The wildlife data obtained by tourists and park managers will be archived, analyzed and utilized for ecologically sustainable park management. In FY2019, we monitored mammalian wildlife using sensor camera traps in ERNP. Our preliminary results showed that distance to tourist place or type of road may influence difference in mammalian fauna and capturing frequency. Effects of animal trails on capturing frequency are being analyzed to understand spatial pattern of mammal observed by camera traps.

**Understanding of the best viewing of plant phenology based on biological and human dimensions(Dr. S.Numata,)**

Promotion of overseas visitors to Japan is a major objective at the present stage. Botanical phenological events such as cherry blossom viewing and autumn foliage viewing have great potential to promote the inbound tourism market in Japan. People may have different evaluations toward best viewing due to the influence of amount and color change of plant organs, but little is known about people’s attitude to botanical phenological change. Therefore, this study attempted to understand the best viewing of plant phenological change. We conducted questionnaire survey to evaluate people’s evaluation of best viewing from different regions and genders. We found that people preferred pure color to mixed color leaves during autumn leaves. We also found that color preference differed between

Japanese, Chinese, and Southeast Asian (Qionghui Fu, Master thesis)

**Does wildlife in urban parks and green spaces add value to us?(Dr. S. Numata )**

Importance of urban parks and green spaces have been highlighted in response to the gain of momentum in biodiversity conservation. However, urban biodiversity may generate ecosystem disservices through human wildlife conflicts. In this study, we conducted a questionnaire survey to understand people's attitude towards wildlife living in urban area using economic valuation method. Our results showed that many greenspaces plays important role in habitat of wildlife in suburban areas. Results of economic valuation suggests that presence of wildlife in urban green space may not influence land price. We also found that many urban dwellers were positive to create habitat of wildlife in urban parks (Takahisa UCHIYAMA, Master thesis).

**Biodiversity Informatics based on Natural history collection(Dr. Osawa)**

Natural history collection such as specimen, observation records and data from citizens are one of important resources for several research themes. Integrate these resources, and conduct research using these we called "Biodiversity informatics". In this year I overviewed current status on that field for ecology and take a future perspective as the review article (Osawa 2019).

**Discovery and evaluation of Ecosystem services (Dr. Osawa)**

Ecosystem services are defined as several benefits that humans gain from the ecosystems. Some of ecosystem services were already provide several benefits for human. However, there might be much more ecosystem services which has insufficient recognition by human society. To grasp and quantitative evaluation is important for the conservation and sustainable use of ecosystem. In this year we evaluated several ecosystem services which have any relationships such as trade-off, synergy focusing land use(Matsuzaki et al. 2019).

**Management of alien invasive species (Dr. Osawa)**

There are too many invasive species in Japan and some of these could become alien invasive species which severely affects for regional biodiversity, human health and agricultural products. Management of alien invasive species is important topic for biodiversity conservation and sustainable use of ecosystem services. Ogasawara (bonin) islands which is one of world natural heritage site have severe problems by alien invasive species. In this year we proposed spatial prioritization strategy for effective management activity on alien invasive plant (Osawa et al. 2019).

**Spatiotemporal analysis and visualization of tourism dynamics using GIS-based techniques (Dr.Sugimoto)**

Using spatiotemporal analysis, a series of studies on tourism dynamics was conducted to elucidate the phenomenon of tourism and elicit acquired knowledge that could be applied to tourism marketing and impact evaluation. In FY 2018, the spatio-temporal structure of daytrip activity and the spatial choice in night time of daytrip tourists who are living in the Tokyo Metropolitan area were analyzed using a large people flow dataset derived from "person trip data." In addition, visitor surveys combining the output from GPS loggers and questionnaires were conducted in cooperation with the local government in Taito city. Based on this survey, I examined how the space consumption and mobility of visitors differed depending on the location of the starting point in the destination.

**Comprehensive study on regional and tourism dynamics to facilitate problem solving and the reconstruction of urban tourism destinations (focusing on the Ueno District in Tokyo)(Drs. Sugimoto, Yagasaki, Kikuchi)**

The number of urban tourism destinations in the Tokyo metropolis has been growing, and stable foundations for management have been established in response to the huge market demand, including among city residents. However, various issues related to regional and tourism management have emerged because of changes in the city's structure resulting from urban development, population changes, globalization, and the growth of competitive regions, among others. To provide a methodology for solving these issues and facilitating the reconstruction of urban tourist destinations, a comprehensive research project on regional and tourism dynamics was conducted in the Ueno District, Tokyo. In FY 2019, we wrote a book about the history of the Ueno district. The book was published and presented to participants at the 70th anniversary ceremony of the Ueno Tourism Federation.

**Spatial analysis of tourism related industries using large amount of POI data(Dr. Sugimoto)**

In this study, we proposed an analysis method for tourism-related industries using large amount of POI (Points of Interest) data and examined its usefulness. In FY2019, I conducted research to clarify the spatio-temporal characteristics and the potential of nighttime economy of typical commercial areas in central Tokyo by using POI data of restaurants. In addition, I conducted spatial analysis using various types of tourism POI data in the entire Tokyo area and the Ueno district, a popular tourist destination in Tokyo, and clarified the spatial characteristics of those areas in terms of tourism.

**Role of wildlife tourism in wildlife conservation in Sri Lanka (Dr.Takagi)**

Insects are mega-diversity group. Their habitats are around the globe, and they play important roles in many ecosystems. In general, however, insects are not preferred by human. They are rarely tourist attractions.

Insects are ecosystem engineers in many ecosystems. Various insects modify ecosystems. Recently, an appreciation has been developing of how these ecosystem engineers affect ecosystems ecologically and economically, namely property values, quantity and quality of marketable timber products, landscape aesthetics, recreational experiences, and tourism appeal. However, to date, limited information is available. Thus, I am focusing on the ecological and economical effects of insects which are ecosystem engineers on ecosystems.

I conducted field surveys, experiments and laboratory works, and revealed new knowledge on a bark beetle, which causes mass mortality in East Eurasia.

### **Decrease in Population and Reorganization of Local Communities After the Great East Japan Earthquake (Dr. YAGASAKI)**

The Great East Japan Earthquake in March 2011 caused a tsunami that resulted in a horrific disaster on the Sanriku coast of northeast Japan. Devastated locals witnessed the decrease in population and community reorganization during the process of reconstruction. On the other hand, people affected by the tsunami relocated and moved to higher ground, and new population concentrations occurred in the interior areas of Kesenuma City. This project attempts to examine the structure of movements caused by tsunami after the Great East Japan Earthquake. Local communities reorganize themselves by exercising their resilience, the response to which depends on the regional characteristics formed prior to the disaster.

### **Fear and Curiosity in the Darkness: Ghost Tourism and Haunted Places in Japan (Drs. YAGASAKI, UEHARA)**

Darkness in the night brings about the feeling of fear and a sense of liberation for human. Japanese ghosts called yokai and yurei were the creation of fear of darkness, while the fear continues to exist today being manifested as urban legends and the occult. Urban legends and the occult are consumed as a result of human curiosity in the form of ghost tours. This study attempts to examine the relationship between the human feeling of fear and the feared places in Japan. Haunted places and ghost tours are thus studied, by analyzing human fear of darkness in the night and ghost tourism based on the curiosity of fear.

## **2.2 Regional and Urban Planning Unit**

### **Studies Relating to National and Regional Tourism Promotion Policies (Drs. Shimizu and Katagiri)**

Several fundamental studies whose purposes are to propose policies for national and regional tourism promotion were conducted. First, potential of national health tourism industry in Nepal was investigated by analyzing the gap between traveler needs and service provision strategies through questionnaire and interview surveys. Second, input-output table analysis was conducted for tourism policy proposal on island economy development in West Papua, Indonesia. Third, potential of Narita Transit & Stay Program on Japanese inbound tourism promotion was investigated through deep interview surveys to various stakeholders and promotion contents analysis. Fourth, effect of travel and visit experiences on regional migration was analyzed.

### **Studies Relating to Transport Policies and Measures for Regional Tourism Promotion (Drs. Shimizu and Katagiri)**

Several fundamental studies whose purposes are to propose policies for secondary transport service provision in rural areas. First, strategic importance of self-drive tourism in Bali Island was examined, and factors of conflict between foreign self-drive tourists and local residents were extracted through psychological analysis. Second, some civil aviation and airport policy implications for inbound tourism promotion in rural area of Japan were provided by analyzing factors on number of overnight stays in rural area of Japan statistically. Third, feasibility of ride-share service for tourist in tourist destinations was analyzed through original person trip survey in Yatsugatake Tourism Zone. Fourth, behavioral characteristics of tourist using rental bike system were analyzed in Okutama area, Tokyo using GPS-based location data.

### **Preparatory Studies toward Policy Proposal on National, Regional and Urban Tourism Promotion (Dr. Kawahara)**

Several studies focusing on policy proposal on tourism promotion in cities, regions and countries were conducted. First, aviation demand forecast model for international flight route development basing Japanese local airports was developed. Second, the competitiveness and future potential of health tourism resources and services in Nepal were discussed basing stakeholder interviews and basic strategies toward sustainable development were suggested. Third, psychological method for analyzing the effect of political risk on tourist satisfaction and revisit intention was developed. Fourth, psychological method for analyzing local people's acceptance on foreign drivers in tourism destinations was developed. Fifth, financing scheme for tourism promotion by local government was proposed. Sixth, method for analyzing mechanism of pedestrian's satisfaction with traffic and tourism function of road network in tourism area toward implementing better traffic management was developed.

**A study on systematization of planning techniques for sustainable destination(Drs. Kawahara)**

We worked on a planning theory that integrate both tangible (e.g., preservation and improvement of urban space and environment) and intangible plans (e.g., plans for tourism programs and contents creation.) to develop more sophisticated sustainable destination, especially due to the recent targets of tourism planning in Japan are biased towards intangible programs.

Our detail methods are

- to learn and reflect sightseeing behaviors and tourism resources in geographical / spatial environment
- to develop environmental improvement, utilize the private sites and the public sites together
- to realize a vision based on social experiments
- to support all the method above by organizational design, process design, and monitoring

This year, as one of the key points to complete finalize these methods, we focused on predicting the negative influence of tourism and controlling external capital operators and tourist behaviors.

This year we focused on several key elements to develop our methods above. One is to predict negative impacts of future tourism, and the other is to control its influential factors such as external capital operators and tourist behaviors

We investigated the Niseko / Kutchan Hirafu district of Hokkaido, known for ski resorts with world-famous power snow. This is an area rapidly gentrifying with growing foreign capital inflows and ownership of real estate. We expanded our views on how to deal with these issues based on the survey results.

**Development of educational program to train sustainable destination planners(Drs. Kawahara)**

We organized the "Planning College for Sustainable Destination" from July to September. College students throughout Japan can learn the methodology of planning and implementing sustainable destination. The initial program of this college was opened in Nagatoyumoto, a hot spring area in Yamaguchi prefecture, where our research team provided planning expertise and promoted a renewal project for the hot spring area. 13 researchers and practitioners, 12 students, and approximately 25 local residents and business professionals participated in the program consists of an online survey seminar and training camp workshop:

- Drawing a "preliminary future vision" that presented the aerial image and activity image that attract various stakeholders'participation.
- Implementing "Human Resource-oriented Planning Approach" to brainstorm for team building, business proposals, and making full use of the characteristics of the local talent through discussions with many key people in the region.
- Proposing a "social experiment event" for learning and

confirming the business needs for realizing a temporary future vision.

- the proposal will be contributed to the actual project implemented by local people.



**Formulation of landscape guidelines to support tourism development(Dr. Kawahara)**

This project aims to realize the "Nagato Yumoto Onsen Tourism Planning Plan" formulated by Nagato City in August 2016, in collaboration with private business operators, regional and administrative agencies.

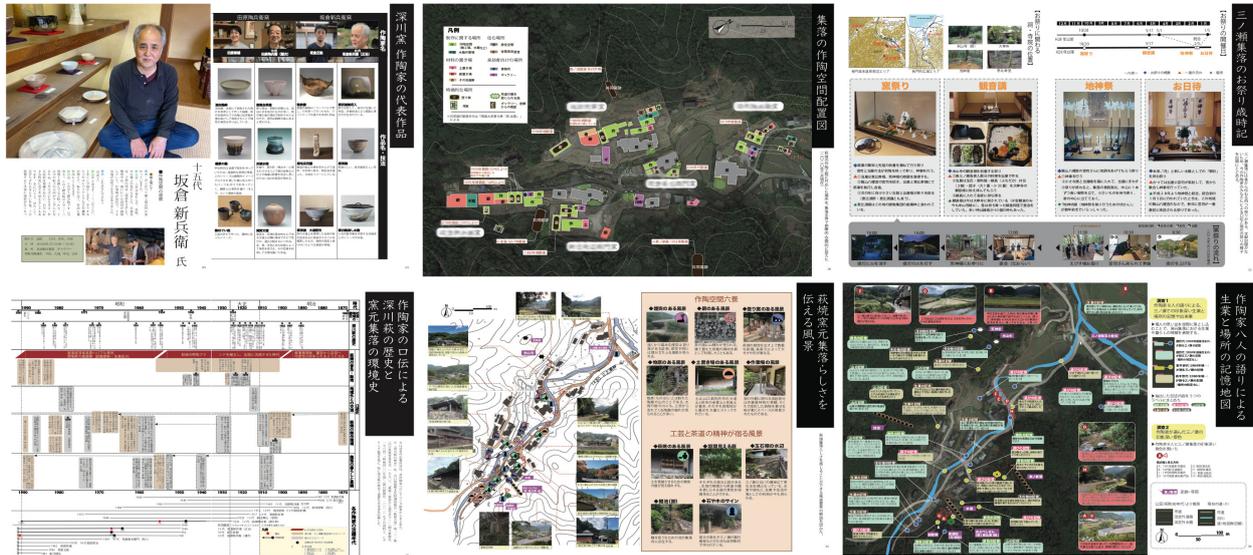
As one of the efforts, we developed an advanced "Nagato Yumoto Onsen Landscape Guidelines" that is strongly aware of the revitalization of tourist areas.

The features are as follows.

- To induce the active utilization of public spaces such as rivers and road spaces ,and the private space along the road.
- To make visualization of the future image through collaboration with social experimental events to quickly create where there is not yet a good quality landscape.
- To foster those who will be responsible for future landscape formation throughout the introduction of workshops jointly with local designers and constructors.
- To link with formation of model case combined with vacant house survey and renovation proposal to owner
- To induce active formation of nighttime landscape
- To show the idea of improvement of hospitality expression and directing

**the Mount Takao Regional Tourist Area Management Project (Drs. Kawahara and Shimizu)**

The aim of this research is to develop a new scheme and methods of sharing tourism revenue with destination planning and management, in order to reduce negative impacts of tourism, and to create the personality and appeal of tourist areas. An example of this in practice is the Mount Takao Regional Tourist Area Management Project, an initiative triggered by the Takaosan-guchi Station Surrounding Area Urban Planning Policy



established in March 2016 by Hachioji City Office.

My laboratory first created models and took action for dealing with the issues raised by this plan, which cannot be resolved without the active involvement of local residents and businesses. The goal is to link these issues to sustained activities by residents and private businesses. For example, the traffic congestion encountered during the autumn leave season is a headache for local residents. One causal factor is the inefficiency of moving cars in and out of the temporary parking lots set up by residents. We created the Takao Town Parking! service, which enables car-parking information at a glance and provide pre-booking online service (via the Internet). This does more than simply address the problem of traffic congestion: it also creates a scheme that allows parking fees to be raised appropriately based on the added value of pre-bookings. Some of the earnings from the higher parking fees are returned to the community in the form of Town Funds. We are dreaming on running community bus services, organizing marché, building new mountain trails to manage overused facilities.

Our research involves establishing a process for expansion by confirming user needs and how much users are willing to pay, building small test cases to verify feasibility, and share the outcome of successful activities with local communities through events and news release. In realizing these dreams, we joined forces with a company involved in the parking lot sharing business. We partnered with a parking business company to provide “Nokisaki parking”, a customized system for renting parking spaces of private houses. From now on, we aim to develop value-added services added to “the Takao Town Parking!”, and to decide how to manage the funds.

**An action research study on an area management methods**

**to regenerate “Satoyama” areas and to support community development at the time of large-scale residential housing development(Dr. Kawahara)**

This project is an action research to promote the conservation and utilization of regional resources by using an area management method. Our laboratory has participated in “Area Management Association Minamiyama (AMAM)” which aim to regenerate “Satoyama”, community-based forest, as a mitigation and to develop a sense of community in large-scale housing development in Inagi City, Tokyo. AMAM is composed of various stakeholders such as a land owner, a developer, an urban planner, a NPO worker who manages forest and vegetable fields, a designer, a community café owner, a musician and a professor. In 2014-2015 our laboratory organized a series of design workshops and events with other AMAM members to build a club house that later became the base of our area management activities, and to establish an area management organization to help start-up of activities. In fiscal 2016, seven projects conducted by AMAM members are started. The construction of the club house have opened at the April in 2017. Our laboratory led the activity archiving project to record and disseminate the history of activities on various media, with the aim of communicating the significance and activities of area management to people in the town for 10 years. In 2017-2018 our laboratory organized a series of workshops to encourage new residents to understand and participate in AMAM.

**Vision creation for the Ota Creative Town and its practices(Dr. Okamura)**

Recently in Japan, the urban environment in industrial cities has been changing due to changes in the industrial, economical, and social structure. Ota Ward in Tokyo Metropolis has small industrial

districts, some of which are mixed-use areas and factories still possess sophisticated skill-sets, their working environment is inadequate as it is surrounded by too many residential dwellings. In addition, it is too difficult to pass technical knowledge onto succeeding generations. In this research, we focus on a comprehensive and active planning method, specifically, on how to integrate manufacturing, community development, and city promotion so as to solve this kind of problem in mixed residential-industrial cities.

In 2019 we conducted multiple projects such as organizing 9th Ota Open Factory and managing the Creative Town Labo Tamagawa, which is a base for local activities as a member of "Ota Creative Town Center", which has played a role as a platform attracting a variety of stakeholders.

#### **Establishment of Walking Trail Projects in a Suburban Area and its Planning Theory(Drs. Okamura,Katagiri)**

A walking-trail project comes into existence based on a push factor generated from changes in lifestyle of walking citizens such as health, recreation and mobility and a pull factor that leads to the environment formation expected by a local area that attracts visitors, such as recreation development, conservation and utilization of natural and cultural resources, community development, etc. In this research, we firstly conduct a historical study regarding a walking-trail in Japan and we secondly explore a case study of walking-trail in a specific area. Based on these findings, we finally try to propose, practice and evaluate a " living experience-based walking-trail."

In response to the idea of a walking-trail proposed through a university exercise program, we conducted a joint research with an outlet mall management company. Specifically, we carried out projects such as production and distribution of maps showing recommended routes, questionnaire surveys, exhibitions at facilities, and photo contests.

#### **THE MODERNIZATION OF CERAMICS INDUSTRY IN CHINESE TRADITIONAL VILLAGES AND ITS IMPACT ON THE HISTORICAL LANDSCAPE -Yaotou Village in Guanzhong area of Shaanxi province-(Dr. Okamura)**

The aim of this paper is to clarify the modernization of the actual status of the pottery industry and its influence on the historical landscape in China by interviewing eight potters and conducting field surveys in Yaotou Village of Shaanxi Province. The elements of the historical landscape for the pottery industry and the modernization of the production environment are investigated; further, their influence on the traditional landscape is analyzed. Then, types, designs, and production methods of products and their influence on the landscape are looked into. In addition, the features of sales methods and distributions and their influence on the landscape are also analyzed. This study is mainly conducted by one of my PhD student Yujia LIU.

#### **Narita Transit & Stay Program as an Experimental Tourism Program for Inbound Promotion(Dr. Katagiri and Shimizu)**

In order to increase demand for inbound tourism to Japan, it is necessary to attract people from Europe, the United States and Australia who are not aware of Japan as a tourism destination.

The transit program is a tourism program offered to transit passengers by transit countries, airports and airlines, and is a tourism promotion that forms a destination image with primary information through experience. In this study, we conducted interviews with related organizations and analyze the transit programs, and clarify the characteristics as an experiential tourism promotion in the inbound promotion of Japan.

#### **Regional Development Model for Sustainable Development with Responsible Tourism in Preah Vihear City, Cambodia(Dr.Katagiri)**

This study aims to establish a model for sustainable regional development base on Responsible Tourism, as a case study of Preah Vihear City in Cambodia. Based on the historical and cultural resources of the region, we will clarify the social, economic, and environmental issues that the region, and the governance system structurally, and propose policies, plans, and designs for sustainable development with cross-sectoral approaches. In this fiscal year, we conducted a field survey on Koh Ker temple site and the surrounding villages and held workshops with six state administrators in the fields of policy, planning and development, transportation and infrastructure, history and archaeology, tourism, and environment.

#### **Strategy and Method toward Disaster Resilient City in Rebuild By Design after Hurricane Sandy (Dr.Katagiri)**

To examine the design framework of the Disaster Resilient City against storm and flood damage, we conducted a case study for Rebuild By Design (RBD) in New York City, a design project for reconstruction from Hurricane Sandy and construction disaster reduction city. Agreement formation for the design would be a program to realize the Disaster Resilient City. We researched two progressing projects; Big-U and Living with the bay. We conducted interviews with local governments (New York City), architectural design firms, and researchers and field surveys on the spatial conditions. Through the survey, we clarified implementation process and role of each relative organization after the design.

#### **AWAJI Long Trail PJ(Dr.NODA)**

The aim of this research is Construction of "Tourism based Rural Planning" through the planning survey and the demonstration project in Awaji Island.

In FY 2019, We held a "ALT Summit" that gathered together past visitors and participants. Throughout the discussion, the

summit reinforced the outside supporter involved in the activities. In addition, we regularly hold trail course maintenance events.

In the next fiscal year as well, we will continue to cooperate with the residents to advance the project and strive to theoretically achieve results.

### **Basic Study of Actual Condition of Sister Cities Partnership by Depopulated Municipality(Dr. NODA)**

This study focuses on domestic sister city, clarifies the potential of community development in depopulated municipality. In this research, based on the questionnaire survey to the person in charge of the local government, the following 3 points were mainly clarified. 1) As a specific measure, courtesy visits, mutual exchanges, information dissemination, and sales of special products were observed at a large rate. 2) Although the evaluation of the efforts is generally high, there are issues such as lack of financial resources, human resources, motivation and distance between local governments. 3) The conditions that the other local governments want in the new agreement tend to emphasize the points that they can directly contribute to the development of regional development, such as the fact that they can share the strengths and weaknesses of the area and that they have Industrial common points.

### **INO Oral History PJ(Dr. NODA)**

The aim of this research is to elucidate the traditional food culture by collecting 「memories of life」, and to consider utilization of "food culture history" for the continuation of the village. To put this project into practice, we have launched a research unit called "TATEMAE", which is made up of local university students and collaborators. This unit is not only for project management, but also for the continuous support of community development.

This year, we conducted a survey on living environment and extracted opinions and issues for community development. Based on the results of the survey and workshop, we created and proposed an action plan for community development.

In the next fiscal year, we will implement actions based on the action plan and expand the units. Then, the goal is to put together a series of activities as a planning theory.

### **The research on advanced human resource development programs for tourism management in Japan and overseas(Drs.HIRATA and SHIMIZU)**

The purpose of this study was to investigate the implementation status of university education programs for human resource development for tourism management in Japan and abroad, to accumulate knowledge that contributes to tourism promotion and policymaking, and to organize the concept of advanced human resource development for tourism in the future. First, we conducted an exhaustive survey in two graduate schools in Japan that offering the tourism MBA degree

course. As a result, we found that there were differences in the background of education provision and that there were discrepancies in the intentions of educational institutions and the tourism industry. We also surveyed and summarized the status of educational programs and implementation of three selected overseas universities which also offering MBA programs and also summarized the current status of international conferences that focus the tourism education and industry. We identified issues such as the lagging response to the fast-changing tourism industry and destination management, and the relative low attractiveness of these programs compared to other MBA programs. Based on these surveys and the identification of issues we proposed the direction of advanced tourism management, human resources development programs to enhance Japan's international competitiveness.

### **Identify the professional skills required of human resources to implement tourism policy planning for sustainable tourism development (Dr. Hirata)**

As a premise of this research, there is a need to practice both regional economic management and regional resource management in cooperation for sustainable tourism community development. To promote tourism and town development through public-private collaboration that achieves regional revitalization in each area, with many actors such as local governments and local businesses, it was hypothesized that local governments in the region would need human resources for tourism policy-making who know to make appropriate policy plans and measures consistent with these policies and projects. First, to understand the skills required of local government officials involved in tourism-related policies, we extracted local government officials and local key persons involved in the development and implementation of characteristic tourism-related policies. Next, we conducted a pre-interview survey and survey design for these human resources and prepared to understand the career paths of key persons. Finally, research is being carried out toward the proposal of an educational program for tourism policy-making practitioners. This research was supported by JSPS KAKENHI Grant-in-Aid for Young Scientists.

### **A study on the ideal way of the corporate museum that contributes to tourism town planning (Drs.HIRATA and KAWAHARA)**

In this research, we mentioned the possibility of using beauty experience contents for sightseeing based on changes in the method of providing exhibition contents of corporate museums and changes in the relationship with visitors. In this research, first, we analyzed the method of providing exhibition contents from the setting of company museums, the use of visitors and the contents of the exhibition. Also, we conducted a case study and interviewed the people involved in the facility regarding the way public spaces can be visited by non-exhibition visitors. In this

research, we identified that the following three factors are linked to the sightseeing that is related to the region using beauty experience contents. These are 1) an increase in the number of tourists from afar due to beauty experience content that appeals to the cosmetics purchaser, 2) an increase in involvement in surrounding areas through the introduction of beauty experience content that also covers areas outside the site, 3) This is an expansion of the number of visitors due to the diversification of exhibition contents in the public spaces in the museum. This research was conducted in cooperation with the master's student at graduate school.

### **Activities for Information sharing Professionals and Citizens(Dr.Hirata)**

The Council for Housing Community Development Support established in the Architectural Institute of Japan take a project on supporting citizens to understand community development and housing issue. The project aims to build a scheme that researcher and residents can share information on community development and housing.

We are working on information dissemination activities for, In this activity, we have lowered the barriers between researchers and the general public, and have created a system and information disclosure so that information on housing and community development can be shared.

We examined the contents and methods of information disclosure that are useful not only to citizens but also to those in charge of measures for vacant houses in local governments, regarding the measures for vacant houses that have recently become a problem in Japan.

We planned to hold a symposium in March to prevent vacant houses as a negative resource and to make effective use of vacant houses. We planned to invite a judicial scrivener and related professionals such as residential land and building transactions, with a view to coordination with experts in other industries at this symposium. The event has been postponed due to the spread of the COVID-19 infection.

### **A study of destination image by analyzing language(Dr. Uehara and Yagasaki)**

In this study, we analyzed the language content (752 reviews) about Mount Takao (Tripadvisor) and extracted the image as a tourist destination. As a result, "go", "climb" (verb), "Mount Takao" (noun), and many others appeared. Regarding the contents of the writing, there are many related terms related to climbing means, scenery, casualness, activities, and congestion, suggesting that tourists have an image of these contents. Posting to such a review site shares personal experiences and opinions with friends and other people through tourism activities, experiences, images, etc. performed at the tourist spot. By analyzing the writing of such a review site, it is possible to capture the image of the visitor and the tourist experience. In addition, as reference information used in the initial stage for the promotion of tourism, it is possible

to quantitatively grasp that a visitor image and potential interest are clarified.

## **2.3 Behavioral and Management Sciences Unit**

### **Enrichment of the flexibility of CT-Planner, an interactive tour planning system (Dr.Kurata)**

In order to enrich flexibility to design tour plans in CT-Planner in collaboration with Prof.Takayama Takeshi,Onomichi City University and his students by utilizing the newly-developedCT-Planner's API. We implemented, a function to partially fix the tour plans created in CT-Planner and a mechanism to give a name to share the tour plans between users.

### **Development and Evaluation of a tourism planning support tool that takes account of city strolling (Dr.Kurata)**

The original CT-Planner has been focusing on generating tour plans which efficiently visits pre-registered major tourist attractions, but after visiting suchmajor tourist attractions Considering the support of city strolling which also visits nearby minor attractions, registered in Google Places, we evaluate the degree of attractiveness of the surrounding walks and take it into consideration in tour planning. This idea was prototyped through joint research with the Tatsunori Hara Laboratory of the University of Tokyo, and it was shown to be useful for supporting decision-making by the user through user experiments.

### **Development of API for interactive travel planning system CT-Planner(Dr.Kurata)**

In order to allow local ICT developers and regional promotion organizations to utilize the tourist destination data and plan recommendation function which CT-Planner has,on their websites, etc. we developed and CT-planner'sAPI in collaboration with Hara Tatasunori Lab, the university of Tokyo.

### **Others' behaviours that induce tourists' pro-environmental behaviours(Dr.Naoi)**

As the first-year phase of Grant-in-Aid for Scientific Research (C), a model that could elucidate the effects of others' pro-environmental behaviour on visitors' pro-environmental motivations and pro-environmental behavioural intention was proposed. The review of past studies in tourism studies and environmental psychology elucidated the scarcity of empirical studies on the effects of external stimuli on visitors' pro-environmental behaviour outside their daily lives and particularly the absence of empirical studies on the effects of others' pro-environmental behavior. In light of the above insights, the concept of Motivation Towards the Environment (MTE) was applied, which was the first attempt in

tourism studies, to propose a model that hypothesized the direct effects of others' pro-environmental behaviour on sea bathers' MTE and its indirect effects on their pro-environmental behavioural intention. An empirical study to verify the model is to come the upcoming academic year.

### **Effects of Incomplete Planned Experiences on Destination Loyalty(Drs. Kawada and Naoi)**

This is the first attempt to propose the concept of Incomplete Planned Experiences (IPE) and incorporate it into a destination loyalty model. Tokyo Disneyland was selected as the research site. A total of 324 usable responses were obtained through an online survey from monitors who had visited TDL. The results revealed a significant indirect effect of IPE on destination loyalty through satisfaction, while expectation was not found to significantly affect IPE although it did affect destination loyalty indirectly. These findings imply the nature of IPE to be independent of expectation, which further points to the importance of offering visitors settings that produce IPE, in addition to understanding and meeting their expectations.

### **A Model of Tourist Decision Making in the Context of Film Induced Tourism(Drs.Tanaka and Naoi)**

This study, for the first time, attempted to examine the interaction effects of audience involvement in films on the effects of multiple psychological variables on the audience's intention to visit the filming locations. The usable responses from 316 monitors of a research company to an online questionnaire survey were with use of PLS-SEM and the simple slope analysis. According to the results, the audience's emotional involvement and their understanding of the educational and social elements of the films strengthen the effects of perceived self-control on their visit intention and weaken the effects of subjective norm on their visit intention. This study is believed to highlight the potential of film-induced tourism to attract visitors to filming locations that are not socially recognized as worth-visiting destinations.

### **The effect of the use of external image and authentic image to the tourism destination(Drs. Kitano and Naoi)**

There are many areas that leverage the image of other famous destinations, which have somewhat similar characteristics to them. Such an image is termed "external image". This study, for the first time, examined the effects of external images and other images on the favorability of areas as tourist destinations. Sho-Kyoto is targeted as a type of external images. Kyoto City was selected as an area that could give other areas the external images, and Kanazawa City was chosen as an area that could receive the external images. The usable responses from 195 university students to a questionnaire survey were analyzed. The results revealed the positive effects of the external images, the other images, and emotional images on the overall favourability

of the cities. Further, the external images of Kyoto City were evaluated more favourably than those of Kanazawa City while the results were the opposite in the case of the other images. These results point to the efficacy of appealing the other images as the authentic attractiveness while retaining the external images when areas that receive the external images intend to promote inbound tourism.

### **Research about Risk Sharing Contracts in the Fields of Tourism and Transport (Dr.HIHARA)**

Some relationships between entities in different industries, such as the relationship between airports and airlines, have complex and multifaceted structures in which conflicting relationships and cooperative relationships coexist, are very much interesting from the viewpoints such as contract theory and game theory, etc. In Japan, we have some examples in which regional airports share the risk of route revenue fluctuations with airlines. Noto-airport Load Factor Guarantee Mechanism (LFGM) Contract (2003-present) is one good precedent. The Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is also considering risk-sharing relationship among airport and airline in deciding the allocations of Haneda Airport slots. Also in many of the concession contracts of the airport, demand fluctuation risk sharing of airport and airline is taken into consideration (2012-) in deciding landing fee.

This study seeks to extend the analysis to a more general context. In fiscal 2019, from the framework of non-cooperative game theory and incomplete contract theory, basic analytical results are obtained about the effects of the third party promotion settings with airport and airline having risk sharing contract that shares the passenger demand fluctuation risk among the concerned parties.

### **Analysis of Airport Management Efficiency(Drs.HIHARA and OGASAWARA)**

The role of airports has long been as starting / ending point infrastructure in transportation networks. Recently, business environments surrounding airports have undergone vast changes such as LCC penetrations, airport privatization (concession) and growing number of foreigners visiting Japan in addition to include commercial businesses, like duty-free shops and parking lots. These multi-functionalization and multi-faceting are still progressing with cooperating with local tourism promotion agencies such as DMOs.

In the past, the management efficiency analyses of overseas airports have been conducted to analyze human flows, logistics and commercial facility businesses. But the efficiency analysis of airport management in Japan is very limited, possibly because of data constraints.

In this study, we use methods such as Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) as efficiency analysis on recent management processes of all civil aviation

airports in Japan, where multi-functionalization and multi-faceting are well in progress. Supporting students: YAMASHIRO Kengo.

**Research about Factors for the Increase in the Number of Visitors to the Hot Spring Areas(Drs.HIHARA and OGASAWARA)**

Hot spring visits are major factor to tourism demand at large. But the number of accommodation users in the hot spring areas has decreased by 13 million since the bubble period. The number of accommodation facilities also decreased significantly. Various studies have been conducted about the factors causing stagnation in hot spring areas and recommendations for revitalization.

Most of the researches are, however, qualitative about strategies of each hot spring area. The quantitative researches, which investigate factors contributing to the growth of customers using open data with the possibility to compare among hot spring areas, are very limited.

This research attempts a new quantitative analysis of the factors leading to the growth of bathers and guests in 85 hot-spring location municipalities nationwide that have not been analyzed sufficiently due to data constraints, by utilizing originally estimated data. In addition to familiar factors, like access to the areas, such factors as related to the number of foreign tourists to Japan are taken into accounts. By these analyses, effective measures and factors for attracting more hot spring customers at the municipality level are expected to be clarified. Supporting students: OKAMOTO Naoyuki.

**Research on the present conditions of "return goods" and its characteristics in oldness and tax payment(Drs.HIHARA and OGASAWARA and SUZUKI)**

The hometown tax payment system is currently at a major crossroads, such as a review of the system, due to the issue of high value returnable goods and the range of local products. On the other hand, with regard to the relationship between returnee goods and donations, which is the starting point of analysis of such situations, the research quantitatively analyzed is very limited, and it can not be said that objective research has been sufficiently conducted. It is very important to analyze the relationship between return items and donations, in order to contribute to the discussion that makes the hometown tax payment system better. From this point of view, this research focuses on Internet sites related to hometown tax payments, which are used by many people when deciding on a donation local government for hometown tax payments, and data on the contents of return items on those sites Collected on your own. Based on the data, we try to analyze quantitatively the relationship between return items and donations. First, it is expected that new findings will be obtained by classifying return items and analyzing the types of return items that are effective

and the relationship between hometown and the amount of tax payment. Collaborating students: Atsushi Sekine.

**Resarch Survey of Sharing Economy focusing on Private Lodging Services provided by Airbnb(Dr.HIHARA)**

This research is conducting research survey of Airbnb in the field of "Sharing Economy" especially focusing on "Private Lodging Services" (Minpaku). Airbnb brought about revolutionary impact on not only travel market or lodging market but also housing space rental service market. The preceding researches spread across numerous adademic disciplines from management, economics, sociology, infomatics and so on. In this research, we conducted vast survey of the more than 200 literatures both in and outside Japan based on the preceeding survey research. The relevant researches have been published quite recently, often in hospitality/tourism journals, and the research has been conducted primarily by researchers in the USA/Canada and Europe. For example, repeated findings have demonstrated the importance of money in motivating both Airbnb guests and hosts, the importance of attributes like room type and guest capacity in determining listing prices, and the geographical concentration of Airbnb listings in many

city centers. By this study, the focus and main reserch results are aligned and the main reseach challenges fort the next steps are brought into light. Cooperating student: Emie Yara.

**Development of tourism recommendation system based on the understanding of tourist's spatial-temporal behavior (Dr.Wu)**

This research aims to build a novel tourism recommendation system (TRS) through modeling of tourist's spatial-temporal behavior. The whole research project includes three steps. Firstly, this research will explore the applicability of new data sources (e.g., geotagged photo data, sensor device data, etc.) and combine them with the traditional survey data to understand tourist's spatial-temporal behavior. Secondly, this research will propose a novel method to represent tourist's spatial-temporal behavior in a more reasonable way. Lastly, tourism recommendation system will be developed by utilizing the developed model system.

**Analyzing Dynamic Change of Tourism Destination Image under the Occurrence of a Natural Disaster (Dr.Wu)**

In order to provide implication for tourism crisis management, this study analyzed one of the important aspects of tourist behavior, which is destination image after the occurrence of natural disaster. For the purpose of this study, a questionnaire with four versions was design. One of the versions is baseline version that ask respondent's current image of Japan. Other three versions are earthquake version which ask respondent's image of Japan under earthquake scenario with different occurrence

timing. The survey was conducted online in China and US, and four groups of respondents were collected from both countries. By using the data collected from the survey, the impact of a natural disaster on tourist's destination image has been analyzed. Based on the analysis results, some implications have been derived for tourism destinations to develop image restoration and tourism recovery strategies in the future.

#### **Hierarchical clustering methods with interval-valued dissimilarities for interval-valued data (Dr. Ogasawara)**

Focusing on the difference between the definition of norm, which is generally used in topology, and the definition of sum of deviation squares, which is used in mathematical statistics, we clarify the definition of the power of interval number preferred for applications through analytical results. Furthermore, the difference between the interval-Ward method-A and the interval-Ward method-B with different dissimilarity definitions, which has been proposed in previous studies, is shown by the Fowlkes-Mallows index, and the stability of the difference is demonstrated by simulation. The results show that the interval-valued Ward method-A with a setting to restrict unique solutions from a minimal set stably causes chain-effect, and overall, the interval-valued Ward method-B, which requires solving convex quadratic programming problems, is intuitively preferred.

#### **Construction of a comprehensive hotel database in Japan and its application to the analysis of tourism management in local governments (Dr. Ogasawara and Hihara)**

We acquired data of staying results on a "tourism forecasting platform" and product data on some reservation services. In addition, we created a database and validated the data content. We have already achieved stable operation of the data acquisition system for domestic data of reservation services, and the database is being updated sequentially. In this study, we calculated deviation rate between the acquired staying results and government statistics from 2013 to 2017, to evaluate the reliability of the data of which items are the number of all guests, the number of domestic guests, and the number of foreign guests. As a result, it was found that 1) there is no significant separation in the number of all guests, 2) the deviation of the number of staying in each municipality is increasing every year and 3) the number of municipalities with no staying is decreasing at the same time.

#### **Construction of a comprehensive hotel database in Japan and its application to the analysis of tourism management in local governments (Dr. Tozaki)**

We acquired data of staying results on a "tourism forecasting platform" and product data on some reservation services. In addition, we created a database and validated the data content. We have already achieved stable operation of the data acquisition system for domestic data of reservation services, and

the database is being updated sequentially. In this study, we calculated deviation rate between the acquired staying results and government statistics from 2013 to 2017, to evaluate the reliability of the data of which items are the number of all guests, the number of domestic guests, and the number of foreign guests. As a result, it was found that 1) there is no significant separation in the number of all guests, 2) the deviation of the number of staying in each municipality is increasing every year and 3) the number of municipalities with no staying is decreasing at the same time.

#### **Value creation in services (Assis. Prof Aso)**

This research focuses especially on the co-creation process in which value is created by the knowledge of the employee in the interaction of the customer and the employee in the research of service. This research explores why employees have become able to accumulate the knowledge to meet the needs of customers and how they are learning the skills to meet those demands.

#### **A study on tourism education and regional revitalization that link programming education and local resources (Assis. Prof Aso)**

Since joining the university, I have been involved in education for people working in the tourism related industry and job experience education for students. Since 2018, I have been involved in programming education and tourism education that connects local resources, and in the same year I participated in classes at Koniya Elementary School in Amami Oshima and Shodon Elementary School in Kakeroma Island. Since last year, I have participated in classes at Higashi Nose Elementary School, Kofudai Elementary School in Osaka Prefecture, and Mibu Daini Elementary School in Yamanashi Prefecture, and as a result, I am creating a tourism resource map on the Internet. Through them, I work with elementary schools to revitalize the area. Also, based on these activities, I research for tourism education of elementary schools.

## 3. Publications

### 3.1 Environmental Management Unit

#### Toshio KIKUCHI

##### Presentations

- Waldichuk, T., Kikuchi, T., Tabayashi, A. and Nihei, T. Agriculture Diversity in BC's Thompson and Cariboo Regions. Association of BC Studies, Thompson Rivers University, May, 2019.
- Iizuka, R., Kikuchi, T. and Phillips, M. Change in mobility and impact of rural gentrification in remote commuter villages: The case of the rural area of Leicestershire, England. XXVIII European Society for Rural Sociology Congress, Trondheim, June, 2019.
- Kikuchi, T. Commodification of rural environments for regional development in Japan; Attention to differences of regional environments. The Workshop of Economic and Social Research Council, The University of Leicester, Leicester, August, 2019.
- Kikuchi, T. Presidential Address: A New View of the World Developed by Geography and its Fieldworks. Conference on Geographical Space, The University of Tsukuba, Tokyo Ohtsuka Campus, June, 2019.

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- Iizuka, R., Ota, K. and Kikuchi, T. 2019. Growth and Sustaining Strategies of Urban Agriculture Based on Interaction with Urban Residents: The Case of Kodaira City, Tokyo Metropolis. *Journal of Geography*, 128, 171-187.
- Kikuchi, T. and Tabayashi, A. 2019. Strategies for Sustaining and Developing Paddy Farming in the Saga Plain, Southwestern Japan. *Journal of Geography*, 128, 209-283.
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- Sydney metropolis, Australia. *The International Journal of Tourism Science*, 13. 33-41.
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- Sugimoto, K. and Kikuchi, T. 2020. Activity report for the research project based on the collaboration between government, industry and academia in the Ueno district, Taito ward, Tokyo. *The International Journal of Tourism Science*, 13.55-60.
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- Kikuchi, T. 2020. Regional revitalization with food tourism: a case of Cowichan Valley in Vancouver Island, Canada. *The shukan nôrin*, 2407, 6-9.
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- Tabayashi, A. and Kikuchi, T. et. al. 2020. Urban-Rural Symbiotic System in Canada: The Commodification of Rural Space and Regional Protection. Agriculture and Forestry Statistics Publishing Inc, Tokyo, 288p.
- Inui, T. and Kikuchi, T. et.al 2020. Geographical Recognition on Japanese Rural Areas with Fieldwork. Kokon Shoin Ltd, Tokyo, 266p.

#### Shinya NUMATA

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**Articles • Books • Reports**

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**Takeshi Osawa.**

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**Koun Sugimoto**

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## Etsuro Takagi

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- Ota, A., Takagi, E.\*, Yasuda, M., Hashim, M., Hosaka, T. & Numata, S. (2019) Effects of nonlethal tourist activity on the diel activity patterns of mammals in a National Park in Peninsular Malaysia. *Global Ecology and Conservation*, 20, e00772. \*Corresponding author

## Taiyo Yagasaki

### Presentations

- Yagasaki, T. The relocation project and livelihood reconstruction in Moune district after the Great East Japan Earthquake, The 117th Usual Meeting of Man-Environment Research Association, Tokyo, Japan, May 2019. (in Japanese)
- Yagasaki, T. and Uehara, A. Fear and curiosity of human in night and darkness, The 12th annual meeting of Japan Association on Geographical Space, Tokyo, Japan, June 2019. (in Japanese)
- YAGASAKI Taiyo and UEHARA Akira, Fear and curiosity in the darkness: Ghost tourism in Japan, The 3rd EAJS Conference in Japan, University of Tsukuba, September 2019.
- Sugimoto, K. and Yagasaki, T. Inbound tourism development and regional transformation in an urban tourism destination, Annual meeting of the Association of Japanese Geographers Autumn 2019, Niigata, Japan, September 2019. (in Japanese)
- Yagasaki, T. and Uehara, A. The possibility of co-creation using night terrors: The case of ghost tourism in Japan, The report conference on Regional Liaison Center, Sendai, Japan, November 2019.
- Uehara, A. and Yagasaki, T. A study on tourist's image to destinations approached by text mining: The case of Mt. Takao, The report conference on Regional Liaison Center,

Sendai, Japan, November 2019.

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- Yagasaki, T. 2019. Decrease in Population and Reorganization of Local Communities After the Great East Japan Earthquake: Case Study of a Tsunami Disaster and Resilience in Urashima of Kesenuma City. *Japanese Journal of Human Geography* 71(4): 371-392.
- Yagasaki, T. and Uehara, A. 2019. Fear and Curiosity in the Darkness: Ghost Tourism and Haunted Places in Japan. *Geographical Space* 12(3), 263-276.
- Yagsaki, N. and Yagasaki, T. 2020. Rural commodification by wine tourism in the Okanagan Valley, Canada. Tabayashi eds. *Urban-rural symbiotic systems in Canada: The commodification of rural space and regional promotion*. Agriculture and Forestry Statistics Publishing Inc.
- Doi, T., Sugimoto, K. and Yagasaki, T. 2019. Frompast to the future: The history of Ueno Tourism Federation Office for 70 years. Ueno Tourism Federation Office.

## 3.2 Regional and Urban Planning Unit

### Susumu KAWAHARA

#### Presentations

- HIRATA Norie, KAWAHARA Susumu, Possibilities of Blue Flag as a Tool to Promote Sustainable Tourism Development, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- FURUYA Rikako, KODA Ryosuke, SEKIYA Haruka, KIDA Momo, KAWAHARA Susumu, NODA Mitsuru, Creation of Promotion Video through Cooperation both Inside and Outside the Village in Depopulated Areas In the Cases of Takehara in Sumoto city, Hyogo prefecture, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- KODA Ryosuke, FURUYA Rikako, NAKAMURA Yuri, KAWAHARA Susumu, NODA Mitsuru, "Tourism Machizukuri Oral History" as a method of planning destinations through multi-party cooperation -from the practice in Mount Takao area -, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- OKAMURA Yu, KAWAHARA Susumu, et al., Development of an Initial Program in Sustainable Destination Planning, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- AOKI Takuya, KAWAHARA Susumu, NODA Mitsuru, Research on the influence of the internal problems and the external relations of the accommodation type guest house on the

management purpose, , Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)

#### Articles

- Norie HIRATA, Susumu KAWAHARA, CAN BLUE FLAG AWARD CONTRIBUTE TO DEVELOP SUSTAINABLE TOURISM DESTINATIONS? - A case study of first certified two destinations - , The Architectural Institute of Japan Journal of Technology and Design, Vol. 26, No.63, 719-724, Jun., 2020, DOI <https://doi.org/10.3130/aijt.26.719>
- ASHIZAWA Yuya, KAWAHARA Susumu, NODA Mitsuru, How to Establish a Lasting Relationship among Stakeholders of FURUSATO Donation of Green Tourism - Focus on Intention of Local Governments, Green Tourism Operators and Donators - , The international journal of tourism science, VOL.13, 2020.03

#### Yu OKAMURA

##### Presentations

- Okamura Y. and Katagiri Y.(2019): Why and How have Walking-Trail Booms Occurred —On the Yaen Mountain Pass Route in the Tama Hills, Tokyo—: 4th International Conference on “CHANGING CITIES: Spatial, Design, Landscape & Socio-economic Dimensions”, Chania, Crete Island, Greece, 24-29 June 2019

##### Articles

- T. Temmoku and Y. Okamura(2019): A Study on the Use of Regional Airport Terminal as a Local Community Hub:A case of the Noto Airport Terminal, Journal of the City Planning Institute of Japan, 54(3), pp. 1387-1394

#### Yukiko KATAGIRI

##### Presentations

- Katagiri,Y., Toriyama, S., Doi,S (2019): Transition and Tourist Perception of the Green in Yanaka Cemetery, Annual Meeting of the Japanese Institute of Landscape Architecture, 2019.5[In Japanese/poster session]
- Katagiri,Y., Doi,S (2019): Transition and Management of the Green in Yanaka Cemetery, Summaries of technical papers of Annual Meeting Architectural Institute of Japan, 2019.9[In Japanese]
- Nakamura, Y., Kawahara,S. and Katagiri, Y.(2019): Effect and Event Legacy of the National Urban Greenery Fair - Casestudy of Nine Cities' National Greenery Fair, Annual Meeting of the City Planning Institute of Japan, 2019.11[In Japanese]
- Kato, S., Fukuoka,T., and Katagiri, Y. (2019) : How to Connect Site-scale Projects and City-scale Green Infrastructure Strategies- Case study of repurposing vacant land as green infrastructure in the City of Detroit, Michigan, USA, Annual Meeting of the City Planning Institute of Japan, 2019.11[In Japanese]

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- Nakamura, Y., Kawahara,S. and Katagiri, Y.(2019): Effect and

Event Legacy of the National Urban Greenery Fair - Casestudy of Nine Cities' National Greenery Fair, Annual Meeting of the City Planning Institute of Japan,Journal of the City Planning Institute of Japan 54(3), 268-275[In Japanese]

- Kato, S., Fukuoka,T., and Katagiri, Y. (2019) : How to Connect Site-scale Projects and City-scale Green Infrastructure Strategies- Case study of repurposing vacant land as green infrastructure in the City of Detroit, Michigan, USA, Reports of the City Planning Institute of Japan 18,112-116[In Japanese]
- Nakajima, K., Katagiri, Y., Shimizu, T(2020): A study on the role of public museum and staffs for tourism promotion, International Journal of Tourism Science 18 City of Philadelphia's Framework towards Strategic Green Infrastructure Planning and Implementation Journal of the Japanese Institute of Landscape Architecture 83(5)(in printing )[In Japanese]
- Okamura, Y., Katagiri, Y(2019): A Viewpoint for the Creation and Inheritance of a Walking-Trail as an Urban Legacy, Journal of the Japanese Institute of Landscape Architecture 83(3), 288-291
- Katagiri, Y., Ueno, Y., Tokue, Y.(2019): Preface for the Special Issue: Landscape Design and Management toward Healthy City, Journal of the Japanese Institute of Landscape Architecture 83(3), 244-245

#### Mitsuru NODA

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- Mitsuru NODA • Susumu KAWAHARA • Ryosuke KODA • Rikako FURUYA • Haruka SEKIYA • Momo KIDA : Creation of Promotion Video through Cooperation both Inside and Outside the Village、Poster Session of ARP、 2019.04 (In Japanese)
- Mitsuru NODA : Aiming to design of daily life by Outside Supporters、 AIJ Rural Planning Comitee Academic Research Meeting、 2019.09 (In Japanese)
- Mitsuru NODA : Basic Study of Actual Condition of Sister Cities Partnership by Depopulated Municipality、 AIJ Kanto Branch Research Report、 2020.03 (In Japanese)

##### Books • Reports

- Mitsuru NODA:A Tentative Assumption of 「Community-Based Rural Tourism Planning」、 Journal of Rural Planning Vol.38-1、 pp.37-40、 2019.06

#### Norie HIRATA

##### Presentations

- Hirata,N. and Kawahara,S.,Possibilities of Blue Flag as a tool to promote sustainable tourism development, Abstracts of Academic Lectures, Architectural Institute of Japan.Selected Abstracts OS,Kanazawa, Japan,3-6,September 2019.

##### Articles

- Hirata,N.and Kawahara,S.,Can Blue Flag Award contribute

to develop sustainable tourism destinations? A case study of first certified two destinations, Architectural Institute of Japan, Technol.Des. Vol.26, No.63, pp.719-724 (in Japanese : Publication decision) Jun, 2020.

- Hirata, N. and Kawahara, S. 2019. Possibilities of Blue Flag as a tool to promote sustainable tourism development. Abstracts of Academic Lectures, Architectural Institute of Japan. Selected Abstracts(OS), pp.41-44. (in Japanese)

#### Books • Reports

- Shimizu, T. and Hirata, N. et al., 2019. Report of the Survey on Advanced Tourism Management Human Resources Development "Tokyo Metropolitan Tourism Management Human Resources Development Project", Edited by Shimizu, T. and Hirata, N. (in Japanese)

#### Akira Uehara

##### Presentations

- Yagasaki, T. and Uehara, A.: Fear, curiosity and regional image in darkness, 13th Journal of Geographical Space, Jun 2019 (in Japanese)
- Yagasaki Taiyo, Uehara Akira, Fear and curiosity in the darkness: Ghost tourism in Japan, The 3rd EAJS Conference in Japan, University of Tsukuba, September 2019.
- Ii, D., Uehara, A., Naoi, T. and Iijima, S. A note of transactionalism in the study of tourism : The case of front-back environment at the commercial facilities in Kokusai-street Naha Okinawa, 32th JITR annual conference, December 2019 (in Japanese)

##### Articles

- Yagasaki, T. and Uehara, A. 2019. Fear and curiosity in the darkness: ghost tourism and haunted places in Japan, Journal of Geographical Space 12(3): 263-276. (in Japanese)
- Uehara, A., Naoi, T., Iijima, S. and Iramina, H. in press. The evaluation of shops that fosters tourists' purchase behavior - A case of tourists' purchase of souvenirs in a shopping district in Naha city-, The tourism Studies (Journal of Japan Institute of Tourism Research), In press. (in Japanese)

#### Books • Reports

- Uehara, A., Naoi, T. and Iijima, S. 2019. Chapter3 "Relationship between servicescapes and tourists' evaluation of shops: Case of a shopping district in Naha city", Experiential Consumption and Marketing in Tourism within a Cross-Cultural Context: 24-41.

### 3.3 Behavioral and Management Sciences Unit

#### Yohei KURATA

##### Presentations

- Kohei Izuta, Tsuyoshi Takayama, Tatsunori Hara, Yohei Kurata, Enrichment of Flexibility of Interactive Tour Planning System,

82nd Annual Convention of IPSJ, online, March 2020.

- Hara Tatsunori, Ho Quang Bach, Yohei Kurata: Service Design and Destination Marketing - implementation of tour planning service and utilization of its data, 8th Conference of Society for Serviceology, pp.315-318, March 2020.
- Takashi Aoike, Ho Quang Bach, Tatsunori Hara, Jun Ota, Yohei Kurata: Dynamic change of tourist capacity in tourism services, 8th Conference of Society for Serviceology, pp.334-341, online, March 2020.
- Tatsunori Hara, Ho Quang Bach, Yohei Kurata : Infrastructure and Social Implementation of Tour planning service: publication of technologies for tourism destinations and API its application Study. 16th Conference of Society for Tourism Informatic, June 2019, Yonago.
- Tatsunori Hara, Ho Quang Bach, Ryo Miyamoto, Takashi Aoike, Jun Ota, Yohei Kurata: Evaluation and Development Of a Method for Supporting Tour Planning considering City strolling. 19th Research Conf. of STI, pp.16-19, Tokyo.

#### Taketo NAOI

##### Presentations

- Nakamata, R., and Naoi, T., The effect of information intervention on a model of potential visitors' intentions to avoid visiting volcanic destinations, Travel and Tourism Research Association 2019 International Conference, Melbourne, Australia, June, 24-27, 2019.
- Tachikawa, M., and Naoi, T., Effects of crowding in two adjacent subspaces on favorability of the entire space, The 10th Advances in Hospitality and Tourism Marketing and Management (AHTMM) Conference, Sao Paulo, Brazil, Accepted (to be presented on June, 2021).

##### Articles

- Kawada, H., and Naoi, T. 2020. Effects of incomplete planned experiences on destination loyalty: The Tokyo Disneyland Theme Park Case. A referred full research paper of The Council for Australian Tourism and Hospitality Research Education (CAUTHE) 2020 Conference (Auckland University of Technology, Auckland, New Zealand): 12 pages (English).
- Naoi, T., Shoshiroda, A., and Iijima, S. 2020. How others' behaviours affect visitors' pro-environmental behavioural intention: a research model based on the case of beach cleaning. The International Journal of Tourism Science (13): 43-53 (English).
- Tanaka, R., and Naoi, T. 2019. Tourist Decision Making in the Context of Film Induced Tourism: Proposing a research model based on the theory of making attitude and audience involvement. Proceedings of JITR annual conference 34: 157-160 (Japanese).
- Ii, D., Uehara, A., Naoi, T., and Iijima, S. 2019. A note of transactionalism in the study of tourism: The case of front-back environment at the commercial facilities in Kokusai-street Naha Okinawa. Proceedings of JITR annual conference

34: 169-172 (Japanese).

- Naoi, T., and Kawada, H. (accepted). The aspect of tourism as service and its management. *Serviceology* (Japanese).

### Katsuya HIHARA

#### Articles

- THIHARA Katsuya, "Analysis of Airport- Airline Relationship with a Third Party Tourism Promotion" Informs International Conference working paper, March 9th - 12th, 2019, Cancun, Mexico.
- HIHARA Katsuya, "Analysis of Airport- Airline Relationship with a Third Party Tourism Promotion" Regional Science Association Annual Meeting/International Conference (Territory, Tourism and Sustainable Development), September 12th - 13th 2019, Kurume University, Fukuoka Prefecture
- YAMASHIRO Kengo, OGASAWARA Yu, HIHARA Katsuya Efficiently Analysis of Airports in Japan with DEA methods, Association of Regional Sciences Annual Meeting November 2019, Saga University, Saga Prefecture.

#### Books

- HIHARA Katsuya and MAKIMOTO Naoki (2018), Analyses of Risk Sharing Contract -- Bargaining and Agency Analysis, *Airline Economics in Asia (Advances in Airline Economics 7th edition, J.K. Brueckner, M. Dresner, T. Oum et al. ed.)*(Emerald Group Publishing), pp. 267-286
- HIHARA Katsuya (2019), "Analysis of Airport- Airline Relationship with a Third Party Tourism Promotion,"
- Applied Regional Science Conference Annual Meeting at Kurume University, Fukuoka, working paper

### Wu Lingling

#### Articles

- Wu, L., & Shimizu, T. (2020). Analyzing dynamic change of tourism destination image under the occurrence of a natural disaster: Evidence from Japan. *Current Issues in Tourism*. (in press)

### Yu Ogasawara

#### Presentations

- Efficiency of gastric and colorectal cancer screening rates in Yokohama City by DEA, Yu Ogasawara, Workshop of Operations Research in Healthcare, 2019/5/18.
- Comparing two clustering methods for interval-valued data, Yu Ogasawara, Yuto Hisano, and Masamichi Kon, International Conference on Nonlinear Analysis and Convex Analysis-Optimization Techniques and Applications, 2019/8/30.
- Efficiency analysis of airports in Japan: using data envelope analysis and stochastic frontier analysis, Kengo Yamashiro, Katsuya Hihara, Yu Ogasawara, Annual Conference of The Japan Society of Transportation Economics, 2019/10/20.

- Quantitative analysis for the number of visitors in major hot spring areas, Naoyuki Okamoto, Yu Ogasawara, Katsuya Hihara, Annual Conference of The Japan Society of Transportation Economics, 2019/10/20.
- Reliability of Japanese number of nights data by municipalities and its bias, Yu Ogasawara, Annual Conference of Japan Institute of Tourism Research, 2013/12/15.
- The current status of hometown tax system and impact of tourism-related return goods for the number and amount of donations, Yusuke Sekine, Yu Ogasawara, Shohei Suzuki, Katsuya Hihara, Annual conference of Society for Serviceology, 2020/3/12.

#### Articles • Books • Reports

- Efficiency analysis of airports in Japan: using data envelope analysis and stochastic frontier analysis, Kengo Yamashiro, Katsuya Hihara, Yu Ogasawara, *The Japan Society of Transportation Economics*, 63, 39-46, 2020.
- Reliability of Japanese number of nights data by municipalities and its bias, Yu Ogasawara, *Proceedings of JITR annual conference*, 34, 429-432, 2019.
- Current situation of regional tourism statistics and their challenges, Noyuki Okamoto, Yu Ogasawara, Shohei Suzuki, Katsuya Hihara, *The international journal of tourism science*, 13, 61-70, 2020.

### Makiko tozaki

#### Articles

- Aso, M., Takasawa. 2018. Formation of student networks in "Top-Management-Seminar" A preliminary of networking of personal connections for Tourism. *The International Journal of Tourism Science* 11, 53-59. (in Japanese)

### Makiko ASO

#### Reports

- Ministry of Internal Affairs and Communications FY2019 "Regional IoT Implementation Promotion Business: Programming Education in which Elementary School Students Disseminate Information on Regional Historical Resources and Natural Resources", March 2nd Reiwa.

## 4. Awards and Honors

### Toshio KIKUCHI

- Outstanding Paper Award in Japan Institute of Tourism Research

Interest Incorporated Association Japan Tourism and Travel Association and its supporting organization Tourism Forecast Platform Promotion Council was given to Ms Mitsuishi and 4 other members in October 2019. (Advising to Undergraduate Course Students)

### Koun Sugimoto

- Excellent Paper Award, Japan Tourism Research Association, May, 2019.

### Susumu KAWAHARA

Young Excellent presentation award:Architectural Institute of Japan

- FURUYA Rikako,KODA Ryosuke, SEKIYA Haruka, KIDA Momo, KAWAHARA Susumu, NODA Mitsuru, Creation of Promotion Video through Cooperation both Inside and Outside the Village in Depopulated Areas In the Cases of Takehara in Sumoto city,Hyogo prefecture, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- KODA Ryosuke, FURUYA Rikako, NAKAMURA Yuri, KAWAHARA Susumu, NODA Mitsuru, "Tourism Machizukuri Oral History" as a method of planning destinations through multi-party cooperation -from the practice in Mount Takao area -, Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)
- AOKI Takuya, KAWAHARA Susumu, NODA Mitsuru, Research on the influence of the internal problems and the external relations of the accommodation type guest house on the management purpose, , Summaries of technical papers of annual meeting (selected summary) , 2019.09, Architectural Institute of Japan (in Japanese)

### Yohei Kurata

- Tatsunori Hara, Ho Quang Bach, Ryo Miyamoto, Takashi Aoike, Jun Ota, Yohei Kurata(2019):Evaluation and Development Of a Method for Supporting Tour Planning considering City strolling.19th Research Conf. of STI, pp.16-19, Tokyo June 2019 (in Japanese) conference award.

### Katsuya HIHARA

- The Operations Research Society of Japan Tohoku Branch Young Researcher Conference Best Student Presentation Award was given to YAMASHIRO Shingo's Efficiency Analysis of Airports in Japan with DEA in November 2019. (Advising to Master Course Student)
- The Best Student Paper Award in The Third Tourism Forecast Platform Utilization Contest held by Public



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