

Organization and Activities of the Doctoral Program in Geoenvironmental Sciences for the Academic Year 2017

Organization

During the year from April, 2017 to March, 2018, several promotions and appointments were made so that our research and teaching activities covering geoenvironmental sciences were enforced. Following is the list of all faculty and administrative staffs with specialties:

Professors:

- Asanuma, Jun, Ph.D., Chair, surface hydrology, hydro-meteorology, environmental dynamics
Kureha, Masaaki, Ph.D., regional geography, geography of tourism, rural geography
Kusaka, Hiroyuki, D.Sc., urban climate, local wind, numerical modeling
Matsui, Keisuke, D.Sc., cultural geography, geography of religion and tourism
Matsuoka, Norikazu, D.Sc., geomorphology, geocryology
Murayama, Yuji, D.Sc., GIS, urban and transportation geography, quantitative methodology
Sugita, Michiaki, D.Sc., hydrologic sciences, surface hydrology, boundary layer meteorology
Tanaka, Hiroshi, Ph.D., atmospheric science, general circulation
Tsujimura, Maki, D.Sc., hydrologic sciences, ground-water hydrology, isotope hydrology
Ueda, Hiroaki, D.Sc., atmospheric science, climate dynamics

Associate Professors:

- Ikeda, Atsushi, D.Sc., geomorphology, geocryology
Ueno, Kenichi, D.Sc., atmospheric science, precipitation system, regional climatology
Tsutsumi, Jun, D.Sc., urban geography, regional geography of Australia, GIS
Yamanaka, Tsutomu, D.Sc., hydrologic sciences, isotope tracers, ecohydrology

Assistant Professors:

- Akiyama, M. Chiaki, D.Sc., geography of land use issues, spatial information science
Hattanji, Tsuyoshi, D.Sc., hydrogeomorphology, slope processes
Morimoto, Takehiro, D.Sc., agricultural geography, GIS, rural geography

- Parkner, Thomas, Ph.D., geomorphology, gully erosion, soil erosion, mass movements
Sekiguchi, Tomohiro, Ph.D., geomorphology, sedimentology
Shinozaki, Tetsuya, Ph.D., erosion and deposition around coastal land, tsunami deposit
Yamashita, Akio, D.Sc., regional geography, geography of urban environmental issues

Technical Staffs:

- Miyasaka, Kazuhito, B.A.
Ozaki, Shiro

Administrative Staff:

- Aita, Machiko

Doctor and Master's Theses

[Abbreviations]

- D.Sc. Doctor of Philosophy (Science or Geoscience)
M.Sc. Master of Science
M.Eng. Master of Engineering
M.Env. Master of Environmental Science
M.A. (E) Master of Arts in Education
M.A. (A) Master of Arts in Area Studies

[a] Human Geography

- D. Sc. Hata, Tsukasa (2018): A Geographical Study on the Variety Renewal Process of Fruit Production Areas in Japan and Brazil.
D. Sc. Yagasaki, Taiyo (2018): Geography of the Resilience of Household and Regional Community after the Great East Japan Earthquake: A Case Study in Kesennuma City, Miyagi Prefecture.
M.Sc. Li, Yuhan (2018): Residential Choice of Chinese White Colored Women Living in Tokyo Metropolitan Area.
M.Sc. Matsuyama, Shuichi (2018): Representation of Places and the Social Effects in the Creator led "Pilgrimage of Pop Culture": A Case Study of "Love Live! Sunshine!!"
M.Sc. Takechi, Kumito (2018): Recreation of Tourism Area by Inbound Tourism: A Case Study in Kumano Kodo Nakahechi.
M.Sc. Zhou, Anqi (2018): Relationship between

Tourists' Customer Satisfaction and their Place Attachment in Chinese Tourists Visiting Japan.

[b] Regional Geography

- D.Sc. Kodama, Eri (2018): Sustainability of Urban Farming from the Viewpoint of Workforce in the Southern Part of Saitama Prefecture.
- M.Sc. Kaneko, Sae (2018): Cyclist Behavior and Creation of Urban Cycle-Tourism in Utsunomiya City.
- M.Sc. Koizumi, Asako (2018): Regional Impact of Multinational Corporation on the Peripheral Area in Emerging Economy: A Case Study of Japan-Russia Joint Automobile Manufacturing Project in Primorye Province, Russia.
- M.Sc. Watanabe, Junya (2018): The Change of the Tourist Site Occurred by Media-Induced Tourism: A Case Study of Takeda District, Asago City, Hyogo Prefecture.

[c] Spatial Information Science

- D. Sc. Gong, Hao (2018): A Study on Urbanization and Future Sustainable Development in Shanghai Using Geospatial Predictive Models.
- D. Sc. Haji Mirza Aghasi, Niloofar (2018): Spatio-temporal Analysis of Urban Traffic Accidents: A Case Study of Tehran City, Iran.
- D. Sc. Simwanda, Matamyio (2018): Spatial Analysis and Modeling of Urban Land Use Changes in Lusaka, Zambia: A Case Study of a Rapidly Urbanizing Sub-Saharan African City.
- M.Sc. Asano, Yuki (2018): Dynamical Effect of Topography of Aso Caldera on "Matsubori-kaze".
- M. Sc. Athukorala Arachchige, Sumudu Darshana (2018): Spatio-Temporal Transformation of Western Wetlands in Sri Lanka: A Case Study of Muthurajawela Marsh and Negombo Lagoon.
- M. Sc. Dourdour, Ahmed (2018): Onshore Wind Farm Suitability Analysis Using GIS-based Analytical Hierarchy Process: A Case Study of Fukushima Prefecture, Japan.
- M. Sc. Ji, Xinmiao (2018): Locational Characteristics of Large Commercial Facilities in Central Area of Changchun, China.
- M.Sc. Kimura, Ryuhei (2018): Comparison of heat stroke measures effect in pergola and tent considering visual effect.
- M.Sc. Koyanagi, Takuma (2018): On the Generation of the Local Strong Wind "Inamikaze", in Tonami Plain, Toyama Prefecture.

- M. Sc. Lyu, Xiaokai (2018): Spatial Evaluation of Optimal Routes of Walking Behavior of Elderly People: A Case Study of Hikarigaoka District, Kashiwa, Chiba Prefecture.
- M. Sc. Liu, Fei (2018): Urban Spatiotemporal Dynamics Based on Impervious Surface Satellite Data: A Case Study of Tokyo.
- M.Sc. Nakamura, Yoshie (2018): Predicting ramp events with an analog-based method considering atmospheric pressure pattern change.
- M.Sc. Sato, Takuto (2018): Development of Blade-unresolved wind turbine model for meteorological RANS model.
- M. Sc. Zheng, Zilai (2018): Allocation Studies of Commodity Delivery Goods Using AHP and Huff Model: A Case Study of Shiweitang District, Cuanhzhou, China.

[d] Hydrologic Sciences

- M. Env. Yamamoto, Chisato (2018): Groundwater Flow and Microbe Dynamics in a Mountainous Catchment.
- D. Env. Sakakibara, Koichi (2018): Age Dating of Rainfall-runoff Water with Sulfur Hexafluoride and Discharge Processes in a Forested Headwater Catchment.
- D. Env. Kambuku, Dwight Davison (2018): Groundwater Recharge and Flow Processes in Rivirivi Catchment Underlain by Fractured and Faulted Lithology, Malawi.
- M. Env. Bi, Shiming (2018): Elucidation of Water Balance of Lake Yamanaka with Emphasis on Lake-groundwater Interaction.
- M. Sc. Ogawa, Shinpei (2018): Heat Balance and Heat Distribution in Lake Kasumigaura.

[e] Atmospheric Science

- D. Sc. Endo, Hirokazu (2017): Future Changes in Monsoon Precipitation and Their Uncertainty Projected by Global Climate Models.
- M. Sc. Anzai, Risa (2017): Structure of Extratropical Cyclone Associated with Heavy and Expanded Precipitation in Winter Season.
- M. Sc. Otsuka, Takaharu (2017): A Construction of a New Barotropic Prediction Model and Validation of the Prediction of the Blocking Anticyclone Formation.
- M. Sc. Sasaki, Tsuyoshi (2017): Structure and Development Mechanism of the Arctic Cyclone by Trajectory Analysis.
- M. Env. Amagai, Yuusuke (2017): A Regulating Mech-

- anism Involved in the Wintertime South-Coast Cyclones around Japan.
- M. Env. Koutoku, Mizuki (2017): Remote Impact of Indian Ocean on Anomalous Northwest-Pacific Anticyclone.

[f] Geomorphology

- M. Sc. Imamura, Tomonori (2018): Erosion depths and processes of snow-induced bare grounds on Mt. Tairappyo, Mikuni Range in Japan.

Research Activities

Each research group had the following research activities during the academic year 2017.

[a] Human Geography

Research projects

- Matsui, K. and Akiyama, C. (2017-2018): Geographical studies on sustainable development in Tsuchiura City and the surrounding region.
- Matsui, K. (2016-): Theoretical and practical studies on the creation of World Heritage Sites in terms of commodification of the place, project with Kureha, M., Tsutsumi, J. and others.

Research grants

- Akiyama, C. (2016-): Research on the proposal of a water environment management system scenario based on regional population and economic estimation. Grant-in-Aid for Young Scientists (B), JSPS, JPY 4,030,000.
- _____ (2017): Research on spatiotemporal fluctuation of water pollution load in the Seto Inland Sea watershed area commissioned work. National Institute for Environmental Studies, JPY 2,100,000.
- Matsui, K. (PI: Kureha, M.) (2015-): A geographical study on the development of inbound tourism in Japan. Grant-in Aid for Scientific Research (B), JSPS, JPY 300,000.
- _____ (PI: Matsui, K.) (2015-): Theoretical and practical studies on the creation of World Heritage Sites in terms of commodification of the place. Grant-in Aid for Scientific Research (A), JSPS, JPY 6,890,000.
- _____ (PI: Matsui, K.) (2016-): Geographical study on the healing space for the Otaku. Grant-in Aid for Challenging Exploratory Research, JSPS, JPY 1,430,000.

Others

- Akiyama, C. (2017, Jul. 14): Invited lecture supported by Super Science High Schools, MEXT and JST in Ise Senior High.

- Matsui, K. (2017, Apr.-Aug.): Special lecture on human geography in Toyo Univ.

_____ (2017, Sep.-2018, Mar.): Special lecture on cultural geography in Rikkyo Univ.

_____ (2017, Sep.-2018, Mar.): Special lecture on regional geography in Kyoritsu Women's Univ.

[b] Regional Geography

Research projects

- Kureha, M. (2015-): A geographical study on the development of inbound tourism in Japan, project with Funck, C. (Hiroshima Univ.), etc.
- Kureha, M. and Tsutsumi, J. (2015-): Theoretical and practical studies on the creation of World Heritage Sites in terms of commodification of the place, project with Matsui, K. and others.
- Kureha, M., Tsutsumi, J. and Yamashita, A. (2017-2019): Geographical studies on regional ecology in Ina City and the surrounding region.
- Yamashita, A. (2014-2018): Assessment for tolerance to drought with the investigation of the sharp increase of biofuel raw material production and hydrological environment in Sertão, Brazil, project with Miyaoka, K. (Mie Univ.).
- _____ (2015-): Study on Korean urban structure for revitalization of local cities in low development period, project with Kaneko, J. (Ehime Univ.).

Research grants

- Kureha, M. (2015-2018): A geographical study on the development of inbound tourism in Japan. Grant-in Aid for Scientific Research (B), JSPS, JPY 3,000,000.
- _____ (2015-2018): Building model of the resort development in terms of landscape changes and local image. Grant-in Aid for Challenging Exploratory Research, JSPS, JPY 600,000.
- Yamashita, A. (2017-2019): Building of governance for appropriate utilization and management of irrigation canals in urbanized area. Grant-in Aid for Scientific Research (C), JSPS, JPY 2,340,000.

Overseas fieldwork

- Kureha, M. (2017, Jul.-Aug.): Development of ski resorts in Tyrol, Austria.
- _____ (2017, Aug.-Sep.): Tourism development of world heritage areas and commodification of local places in Austria.
- _____ (2018, Feb.): Development of ski resorts in Tyrol, Austria.
- Tsutsumi, J. (2017, Jul.-Aug.): Improvement of educational effect by overseas field excursion in a new undergraduate course "Earth science degree program."

(Discretionary grant from the dean of faculty).

_____ (2017 Aug.-Sep.): Investigation of urban development in Melbourne and tourism development in Naracoorte Area, Australia, under JSPS grant.

_____ (2018, Feb.-Mar.): Investigation of urban development in Sydney and surrounding areas (Research Support Program from the Faculty).

Yamashita, A. (2017, Aug.): Urban revitalization in Gongju City, South Korea, under JSPS grant.

_____ (2017, Aug.-Sep.): Environmental and agricultural changes by irrigation development in Nordeste, Brazil, under JSPS grant.

_____ (2018, Feb.-Mar.): Land use change in Yangsan City, South Korea, under JSPS grant.

Visited researchers

Dr. Jin Yushi from Qingdao University, Sep. 2017-Aug. 2018 (Host researcher: Kureha, M.).

Others

Kureha, M. (2017): Special lecture on socioeconomic geography in Hosei Univ.

_____ (2017): Special lecture on region and tourism in the Open Air Univ. of Japan.

_____ (2017): Special lecture on regional geography of Europe in Rikkyo Univ.

Tsutsumi, J. (2017): Geography A in Takasaki City University of Economics.

_____ (2017): Methodology of fieldwork in Takasaki City University of Economics.

_____ (2017): Area studies 5 in Rikkyo University.

_____ (2017): Regional geography A in Toyo University.

_____ (2017): Regional geography B in Toyo University.

_____ (2017): Human geography A in Ibaraki University.

Yamashita, A. (2017, Jun.): An award of Japanese Association for Water Resources and Environment.

_____ (2017, Jul.): An academic award of Japan Association on Geographical Space.

[c] Spatial Information Science

Research projects

Kusaka, H. (2015-2019): SI-CAT project, Ministry of Education, Culture, Sports, Science and Technology (MEXT) in Japan. Development of evaluation technologies of sectoral impact and adaptation measures on climate change/ Development of models of thermal environment and health impact for assessment of adaptation measures.

_____ (2014-2018): NEDO project, Research and development on adapting technology of power sys-

tem to output fluctuation/ Wind power generation prediction, Control sophistication.

_____ (2014-2018): SIP project, Ministry of Agriculture, Forestry and Fisheries in Japan. Creation of elucidation and risk information of occurrence realities of Foehn.

_____ (2017-2019): Regional Adaptation Consortium Project, Ministry of the Environment, Government of Japan. Arrangement and building of evaluation method of heat stroke risk.

_____ (2017-2019): JSPS KAKENHI, Research on Big Data Machine Learning Base to Open up Extreme Weather Forecast. (collaborated with Prof. Tatebe, O.)

_____ (2017-2019): JSPS KAKENHI, Estimation and Mechanism-Clarification of Trade-off in Urban Atmospheric Environment. (collaborated with Prof. Tsunematu, N.)

_____ (2017): Collaborative research with TAKENAKA, weather prediction.

_____ (2017-2020): Collaborative research with WEATHERNEWS, weather prediction.

Morimoto, T. (2017): Productivity and Land Use Change of Agriculture in the Mountainous Areas of Central Japan: Spatial Information Science and Field Observation.

_____ (2017): Improvement of Usage of Field GIS in Education.

_____ (2017): Urbanization and land use/cover change in peri-urban zones in Tokyo Metropolitan Area.

Murayama, Y. (2017): Transformation of urban volume and ecosystem services in the mega-cities of Southeast Asia, project under JSPS.

_____ (2017): Land-use classification in mega cities in developing countries, project under Statistical Data Bank, University of Tsukuba.

_____ (2017): Population estimation of rapidly growing cities in Southeast Asia using GIS/RS.

_____ (2017): Development and application of next-generation analysis tool box of the space-time information, project under JSPS.

_____ (2017): Publication and development of open-access e-learning material for GIS education, project under JSPS.

Research grants

Kusaka, H. (2015-2019): Development of evaluation technologies of sectoral impact and adaptation measures on climate change/ Development of models of thermal environment and health impact for assessment of adaptation measures. Ministry of

- Education, Culture, Sports, Science and Technology (MEXT) in Japan, Social Implementation Program on Climate Change Adaptation Technology (SI-CAT), JPY 3,273,000 (2017)
- _____ (2014-2018): Research and development on adapting technology of power system to output fluctuation/ Wind power generation prediction, Control sophistication. New Energy and Industrial Technology Development Organization (NEDO), JPY 33,782,000 (2017).
- _____ (2014-2018): Creation of elucidation and risk information of occurrence realities of Foehn. Ministry of Agriculture, Forestry and Fisheries in Japan, the Cross-ministerial Strategic Innovation Promotion Program (SIP), 2,300,000 (2017).
- Morimoto, T. (2017): Land use/cover change in the plain areas in the eastern Japan. Statistical Data Bank Project, University of Tsukuba, JPY 250,000.
- Murayama, Y. (2017): Land-use classification in mega cities in developing countries. Statistical Data Bank Project, University of Tsukuba, JPY 200,000.
- _____ (2017): Publication and development of open-access e-learning material for GIS education. Grant-in-Aid for Scientific Research A, JSPS (Representative: Oguchi, T.).
- _____ (2017): Transformation of urban volume and ecosystem services in the mega-cities of Southeast Asia. Grant-in-Aid for Challenging Exploratory Research, JSPS, JPY 1,040,000.
- _____ (2017): Development and application of next-generation analysis tool box of the space-time information. Grant-in-Aid for Scientific Research A, JSPS, JPY 100,000 (Representative: Asami, Y.).

[d] Hydrologic Sciences

Research projects

- Asanuma, J. and Aida, K. (2014-): Hydro-Meteorological studies with Multi-satellite sensors and Multidimensional approaches at Mongolian Grassland (Hydro4m, JAXA G-COM Research Announcement).
- _____ (2014-): Development of turbulence measurement methodologies with Doppler sodar and sonic anemometer for AWS. (with Sonic inc.)
- _____ and Aida, K. (2016-2018): Validating measurements of surface soil moisture from satellite images, cooperative research (with NEC)
- Tsujimura, M. (2015-): Spatial and Temporal Variation of Residence Time in Groundwater and Spring Water in Headwater Catchments Underlain by Different Lithology.
- _____ (2016-): Application Microbe Information

to Groundwater Flow System Research.

- Tsujimura, M. and Asanuma, J. (2012-2017): Interdisciplinary Study on Environmental Transfer of Radionuclides from the Fukushima Daiichi NPP Accident (ISET-R).

Research grants

- Asanuma, J. and Aida, K. (2017-2018): Reconstructing Validation System of Satellite Soil Moisture Products (JAXA G-COM Research Announcement).
- _____ (2014-2017): Land surface data assimilation experiments with in-situ large-scale observations, Grant-in-Aid for Scientific Research (B) of the Japan Society for the Promotion of Science.
- _____ and Aida, K. (2016-2018): Validating measurements of surface soil moisture from satellite images, cooperative research with NEC.
- Sugita, M. (2015-2020): Grant-in-Aid for Scientific Research (C) of the Japan Society for the Promotion of Science.
- Tsujimura, M. (2016-2019): Evaluation of Groundwater Residence Time Using Multi Tracers and Numerical Simulation Approaches in Headwater Catchments. Grant-in-Aid for Scientific Research (B) of the Japan Society for the Promotion of Science.
- _____ (2017-2019): Evaluation of Water Resources in Mountainous Catchments Focusing on Residence Time and Microbe. Suntory Global Innovation Center Limited.
- _____ (2017): Water environment research. Ono City, Fukui Prefecture.
- _____ (2017-2018): International Comparison Research on Residence Time and Storage of Groundwater using Isotope and Gas. Bi-lateral Joint Research Projects, Japan Society for the Promotion of Science.
- Yamanaka, T. (2015-2019): Improving evaluation of water balance at mountainous catchments with combined use of isotopic tracers and numerical models. Grant-in-Aid for Scientific Research (B) of the Japan Society for the Promotion of Science.

Attendance at international meetings

- Tsujimura, M. (2017, Apr.): General Assembly of European Geophysical Union, 2017/4/24-28, Vienna, Austria.
- _____ (2017, Jul.): Scientific Assembly of International Association of Hydrological Sciences, 2017/7/10-14, Port Elizabeth, South Africa.
- _____ (2017, Sep): 9th Jeju Water World Forum, 2017/9/20-21.
- _____ (2017, Nov.): IAEA/RCA Mid-term Progress Review Meeting on Assessing Deep Ground-

water Resources for Sustainable Management through Utilization of Isotopic Techniques (RCA) RAS/7/030. 2017/11/6-10, Sri Lanka, Colombo.

_____ (2018, Mar.): International Good Water Forum. 2018/3/15, Kangwon National University, Chuncheon, Kangwon Province, Korea.

_____ (2018, Mar.): 14th Australasian Environmental Isotope Conference. 2018/3/26-28, Wellington, New Zealand.

Yamanaka, T. (2017, Dec.): American Geophysics Union 2017 Fall Meeting. 2017/12/11-15, New Orleans, USA.

[e] Atmospheric Science

Research projects

Tanaka, H. L. (2007-): Joint study of NICAM (AORI, the University of Tokyo).

_____ (2009-): Normal mode of the atmosphere (University of Ljubljana).

_____ (2013-): Volcanic ash prediction by PUFF model (SATREPS, Kyoto University).

_____ (2015-): Norway and Japan Education and Research Partnership (NORPAN, Univ. Bergen).

Ueno, K. (2017-): Joint study of PMM 8thRA (JAXA).

Research grants

Tanaka, H. (2017-2019): The theory of Rossby wave breaking and saturation for geostrophic turbulence. Grant-in-Aid for Scientific Research (C), JSPS, JPY 4,420,000.

Ueda, H. (2017-2020): Grant-in-Aid for Scientific Research (C) of the Japan Society for the Promotion of Science.

_____ (2017): Industry-academia collaboration project of University of Tsukuba.

_____ (2017): Global and local air-sea interaction over the Okhotsk Sea, Institute of Low Temperature Science, Hokkaido University.

_____ (2017-): Joint study of MRI-CGCM (Japan Meteorological Agency).

Ueno, K. (2017): Joint study of JAXA PMM 8thRA, (PI by K. Ueno) JPY 762,000.

_____ (2017): International Fellowships for Research in Japan by JSPS, (PI by K. Ueno).

Attendance at international meetings

Ueno, K. (2017, Oct.): International workshop on climate downscaling studies. Tsukuba, Japan.

Visited researchers

Dr. G. Balsinger (Univ. of Geneva, Swiss), International symposium on Mountain Sciences, Nov., 2017 (Host researcher: Ueno, K.).

Dr. M. Price (Univ. of Perth, UK), Mountain science

and Eco-park in Japan, March, 2017 (Host researcher: Ueno, K.).

Others

Kobayashi, Y and Ueno, K. (2017, Nov.): An award of best poster for students in the third domestic workshop of mountain sciences, Kofu.

[f] Geomorphology

Research projects

Hattanji, T. (2009-): Estimating long-term chemical weathering rate in granitic areas of Japan using cosmogenic radio nuclides and geochemical analysis, project with Matsushi, Y. (Kyoto Univ.).

_____ (2016-): Improving prediction models for shallow landslides based on channel-head mapping using LiDAR DEMs, project with Tanaka, Y. (Komazawa Univ.), Doshida, S. (National Research Institute of Fire and Disaster) and Furuichi, T. (Hokkaido Univ.).

_____ (2017-): Interaction of weathering, water erosion and landsliding in the Yahata Okuzure, Hokkaido, project with Parkner, T. (Univ. Tsukuba).

Ikeda, A. (2008-): Permafrost monitoring on Mt. Fuji, project with Iwahana, G. (IARC-UAF) and Imaizumi, F. (Shizuoka Univ.).

_____ (2017): Geocological study on moor and forest in Naeba-Sanroku Geopark.

Matsuoka, N. (2004-): Arctic periglacial geomorphology, international project with Christiansen, H. H. (Univ. Centre in Svalbard, Norway), Humlum, O. (Univ. of Oslo, Norway) and Watanabe, T. (Kitami I. T.).

_____ (2017-): Multi-method approach to modeling erosion of high-relief mountains, international project with Stoffel, M., Ballesteros, J. (Univ. of Geneva), Imaizumi, F. (Shizuoka Univ.), Matsushi, Y. (Kyoto Univ.), Kariya, Y. (Senshu Univ.), Nishii, R. (Niigata Univ.) and Ikeda, A. (Univ. Tsukuba).

Parkner, T. (2014-): Gully erosion on unstable hillslopes in the East Coast Region, North Island, New Zealand.

_____ (2013-): Evaluation of class response systems in G30 lectures, project with Pietzner, V. (Univ. Oldenburg, Germany).

_____ (2017-): Interaction of weathering, water erosion and landsliding in the Yahata Okuzure, Hokkaido, project with Hattanji, T. (Univ. Tsukuba).

Sekiguchi, T. (2007-): Self-organization of 3D-patterned bedforms under complex oscillatory flow.

_____ (2010-): Study on ripple transition under unsteady oscillatory flows.

_____ (2013-): An experiment on sedimentary process of onshore tsunami deposit, project with Yamaguchi, N. (Ibaraki Univ.).

Research grants

Hattanji, T. (2017): Improving prediction models for shallow landslides based on channel-head mapping using LiDAR DEMs. Grant-in-Aid for Scientific Research (C), JSPS, JPY 1,200,000.

Ikeda, A. (2017): Geomorphic history of glacial and periglacial environments on the Japanese Alps: An estimation using digital elevation data and present conditions. Grant-in-Aid for Scientific Research (C), JSPS, JPY 500,000.

_____ (2017): Factors controlling linear distribution of moors and surrounding bushes on Mt. Naeba. Grant for Academic Research, Naeba-Sanroku Geopark, JPY 100,000.

_____ (2017): Research workshop: multi-approach to reveal permafrost dynamics. Grant for collaboration, Inst. Low Temp. Sci., Hokkaido Univ., JPY 407,000.

Matsuoka, N. and Ikeda, A. (2017): Multi-method approach to modelling erosion of high-relief mountains, JSPS, JPY 3,030,000.

Parkner, T. (2017): Interaction of weathering, water erosion and landsliding in the Yahata Okuzure, Hokkaido. Sabo & Landslide Technical Center, JPY 1,960,000.

Overseas fieldwork

Matsuoka, N. and Ikeda, A. (2017, Jul.–Aug.): Periglacial observations in the Swiss Alps, toward systematic understanding of mountain landform dynamics (under JSPS grant).

Matsuoka, N. (2017, Aug.): Landscape dynamics of polar permafrost in Svalbard (under CryoJaNo project).

Attendance at international meetings

Hattanji, T. (2017, May): 21st International Geographical Conference of Taiwan, Taipei, Taiwan.

Ikeda, A. and Matsuoka, N. (2017, Jul.): 2nd Asian Conference on Permafrost, Sapporo, Japan.

Matsuoka, N. (2017, Oct.): 4th Slope Tectonics Conference, Kyoto, Japan.

Parkner, T. (2017, Nov.): 9th International Conference on Geomorphology, New Delhi, India.

Shinozaki, T. (2017, Aug.): 14th Annual Meeting Asia Oceania Geoscience Society, Singapore.

Visited Researchers

Dr. Sarah Marie Strand and Dr. Graham Lewis Gilbert (Univ. Center in Svalbard), 10th–13th Jul., 2017.

Prof. Markus Stoffel and Dr. Juan Ballesteros (Univ. of Geneva, Switzerland), 11th–22nd Nov., 2017.

Prof. Tilak Hewawasam (Univ. of Peradeniya, Sri Lanka), 27th–29th Nov., 2017.

[Symbol]

† Students, research assistants, researchers and fellows belonging to the research group

[Acronyms]

ACCU: Asia/Pacific Cultural Centre for UNESCO

AGU: American Geophysical Union

CAMP: CEOP Asia-Australia Monsoon Project

CAS: Chinese Academy of Sciences

CEOP: Coordinated Enhanced Observation Period

CliC: Climate and Cryosphere

CREST: Core Research for Evolutional Science and Technology

EGU: European Geosciences Union

GCCA: Global Change: Connection to the Arctic

GEWEX: Global Energy and Water Cycle Experiment

GEOSS: Global Earth Observation System of Systems

GI: Geophysical Institute

GISA: GIS Association in Japan

IARC: International Arctic Research Center

IPCC: Intergovernmental Panel on Climate Change

IPY: International Polar Year

IGU: International Geographical Union

JAXA: Japan Aerospace Exploration Agency

JICA: Japan International Cooperation Agency

JSPS: Japan Society for the Promotion of Science

JST: Japan Science and Technology Agency

KAGIS: Korean Association of Geographic Information Studies

MAHASRI: Monsoon Asia Hydro-Atmosphere Scientific Research and Prediction Initiative

MAS: Mongolian Academy of Sciences

MEXT: The Ministry of Education, Culture, Sports, Science and Technology of Japan

MHLW: Ministry of Health, Labour and Welfare

MRI: Meteorological Research Institute (Japan)

NSF: National Science Foundation

RIHN: Research Institute for Humanity and Nature

TERC: Terrestrial Environment Research Center, University of Tsukuba

TRMM: Tropical Rainfall Measuring Mission

UAF: University of Alaska, Fairbanks

WERC: Water and Environmental Research Center

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNESCO-IHP: International Hydrological Programme for UNESCO

Activity Report for Academic Exchange and Cooperation between University of Tsukuba, Japan and University of Alaska Fairbanks, U.S.A.

An agreement for Academic Exchange and Cooperation has been established on 11 January, 2000 between the Institute of Geoscience, the Doctoral Program in Geoscience of the University of Tsukuba, Japan and the International Arctic Research Center (IARC), the Geophysical Institute (GI) of the University of Alaska Fairbanks (UAF), U.S.A. (see the Annual Report, 2000). The agreement was successfully extended in 2005 for the five years (from 2005 to 2009), in 2009 for the next five years (from 2010 to 2014) and in 2015 for the next five years (from 2015 to 2019) under the new contract names of the Graduate School of Life and Environmental Sciences, the Center for Computational Sciences (CCS) of the University of Tsukuba, Japan. The agreement includes (1) exchange of professors and research scholars, (2) exchange of graduate students, (3) collaborative research and joint academic meetings, and (4) exchange of scientific documents, publications, and information. The agreement will be effective for a period of five years, and may be renewed for another period by mutual agreement.

During 15 to 18 January 2018, the 5th International Symposium on Arctic Research (ISAR-5) was held at Hitotsubashi Hall in Tokyo with the main theme of Climate Change in the Arctic. About 300 researchers from 20 countries came to the symposium. ISAR-5 was organized by JCAR (Japan Consortium for Arctic Environmental Research) and supported by many research institutes including IARC and CCS. Dr. John Walsh of IARC and Dr. Kabir Rasouli of University of Calgary, Canada were invited by travel support of CCS. Dr. Syun-Ichi Akasofu of IARC was also invited by CCS, although he was no-show by health problem. Dr. Walsh and Dr. Tanaka organized the Special Session 1: Arctic Warming by Natural Variability and/or Human Impact, and 4 students from the University of Tsukuba: Mr. Sunaga, Ito, Kurihana, and Yamagami presented their research topics.

- (1) Exchange of Researchers: Dr. John E. Walsh of IARC.
- (2) Exchange of Graduate Students: None
- (3) Collaborative Research: Supporting the ISAR-5.

Research on Arctic Oscillation, PI: H.L. Tanaka (Univ. of Tsukuba).

- (4) Exchange of scientific documents:

Tsukuba Geo-environmental Science, Vol.11, 2016, Univ. of Tsukuba.

Geophysical Institute Biennial Report, 2017, Univ. of Alaska.

Geophysical Institute Quarterly, 2017 Univ. of Alaska.