

Organization and Activities of the Doctoral Program in Geoenvironmental Sciences for the Academic Year 2015

Organization

During the year from April, 2015 to March, 2016, 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:

- Kureha, Masaaki, Ph.D., Chair, regional geography, geography of tourism, rural geography
Asanuma, Jun, Ph.D., surface hydrology, hydrometeorology, environmental dynamics
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
Tsuji-mura, Maki, D.Sc., hydrologic sciences, groundwater hydrology, isotope hydrology
Ueda, Hiroaki, D.Sc., atmospheric science, climate dynamics
Yamashita, Kiyomi, D.Sc., cultural geography, ethnic geography, China, Southeast Asia

Associate Professors:

- Ikeda, Atsushi, D.Sc., geomorphology, geocryology
Kusaka, Hiroyuki, D.Sc., urban climate, local wind, numerical modeling
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:

- Hattanji, Tsuyoshi, D.Sc., hydrogeomorphology, slope processes
Ichikawa, Yasuo, D.Sc., rural geography, geography of France

- Kawachi, Atsushi, D. Eng., environmental hydraulics, ecological hydraulics
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
Tabayashi, Yu, Ph.D., river water quality, terrestrial nitrogen circulation
Wakazuki, Yasutaka, Ph.D., meteorology, climatology
Yamashita, Akio, D.Sc., regional geography, geography of urban environmental issues

Technical Staffs:

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

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

- M.A. (E) Ono, Hisashi (2016): Transformation of School-Local Relations by School Integration and Abolition: A Case Study of Namegata City, Ibaraki Prefecture.
D.Sc. Ikeda, Mariko (2015): Human Geographical Study on the Transformation of Urban Space in Berlin: The Emergence of Conflicts over Cultural and Creative Spaces in the Former Border Area between East and West Berlin.
D.Sc. Mashita, Michiriro (2016): The Neo-Confucian Explanation of Geography.
M.Sc. Abe, Yoriko (2016): Transformation and Sustainability of Relationship between People and

- Cats and its Utilization as a Tourism Resource: A Case Study of Tashiro-jima Island, Miyagi Prefecture, Japan.
- M.Sc. Kawaguchi, Shinobu (2016): Black Church's Possibility on Regional Development in Fussa City, Tokyo.
- M.Sc. Watanabe, Ryosuke (2016): The School's Role in Reviving the Local Society of Some Fishing Villages with Fewer Children: In Case of East Yuki Town, Tokushima Prefecture.

[b] Regional Geography

- D.Sc. Jeon, Jiyoung (2015): Development Process of Agri-tourism in Sannae-myeon, Miryang-si, Korea -An Analysis of the Eoreumgol Apple Production Area-.
- D.Sc. Isono, Takumi (2015): Structural Change of Tourist Destinations through Developing the Geopark Movement in Australia.
- D.Sc. Fukui, Kazuki (2016): Local Potential Fostering IT Venture Companies: An Analysis of Programming-Community in Japan.
- M.Sc. Asano, Genki (2016): The Actual Condition of Shopping Environment and Future Issues of Shopping Support Projects in a Stricken Area of the Great East Japan Earthquake: The Case of Onagawa Town, Miyagi Prefecture.
- M.Sc. Honda, Hiroki (2016): Formation of Smart Community by Using Next-Generation Vehicle: A Case of Saitama City, Saitama Prefecture.
- M.Sc. Inomata, Yasuhiro (2016): The Sustainability of Mountaineering Tourism through the Developing Function of Mountain Huts: The Case of the Alps-Ginza in the Northern Japan Alps.
- M.Sc. Ito, Mizuki (2016): Transformation of Urban Space: The Case of Minato Mirai 21 District in Yokohama City, Kanagawa Prefecture.
- M.Sc. Nakagawa, Sachi (2016): Decision-making of Prostitution Selection as Seen from the Life History of a Prostitute -The Case of the Post-war Yokohama City on Kangai Area and Noge Area-.

[c] Spatial Information Science

- D. Sc. Voulgaris, Gerasimos (2016): Spatiotemporal analysis of Tsunami vertical evacuation: A case study of the Shizuoka Metropolitan Area.
- M. Sc. Lei, Ying (2016): Accessibility problem for the grocery goods in aged society in China.

- M. Sc. Liang, Zhenwu (2016): Changes in residence of migrants in Shenzhen City, China: A study of laborers in Longhua Foxconn industrial zone, Baoan district.
- M. Sc. Luan, Yarong (2016): Spatial structure of urban villages in Shenzhen in China.
- M. Sc. Oku, Nobuaki (2016): Commuting behavior in Tokyo metropolitan area as seen from the person trip data.
- M. Sc. Qu, Yuhang (2016): Geographical study on the port hinterlands based on the Huff model: A case study of Bohai area, China.
- M. Sc. Zhang, Hanlu (2016): Spatial evaluation of the sightseeing places in Yichang, China.
- M. Sc. Zhang, Xinmin (2016): Urban growth modeling using neural network simulation: A case study of Dongguan, China.

[d] Hydrologic Sciences

- M. Env. Akkas, Mohammad Tanvir (2015): Hydrological Characteristics of Groundwater Resources in Dhaka City, Bangladesh.
- M. Env. Konuma, Ryohei (2016): Runoff Mechanism of Radio Cesium in Stream Water During Rainstorms.
- M. Env. Le, Hoang Anh (2015): Hydrological Environment of Surface Water and Groundwater in Ninh Thuan Province, South-east, Vietnam.
- M. Env. Liu, Gen (2016): Water Footprint of Rice Cultivation in Japan.
- M. Env. Nguyen Thu Thuy (2015): Hydrological Characteristics of Surface Water and Groundwater in Hanoi Capital City, Vietnam.
- M. Env. Uchida, Chisato (2016): Effect of Irrigation Activity on Groundwater Salinization in Semi-arid Coastal Area.

[e] Atmospheric Science

- M. Sc. Arai, Kazunaga (2015): Lag-correlation Analysis of Long-term Variations in the Northern Hemisphere of the Atmosphere and the Ocean.
- M. Sc. Kaneko, Takaya (2015): Occurrence and Environment of Mesoscale Convective Systems around the Indian Subcontinent.
- M. Sc. Sakamoto, Koji (2015): Verification of Climatological Reproducibility on Incremental Dynamical Downscaling Method.
- M. Sc. Tamura, Mina (2015): A Study of Contribution from the Natural Variability of Atmosphere in the Northern Hemisphere to Decadal Variability of Surface Air Temperature.

Research Activities

Each research group had the following research activities during the academic year 2015.

[a] Human Geography

Research projects

Matsui, K. (2015): Town planning of Joso City in terms of film commission activities, project with Yamashita, K. Ichikawa, Y. and others.

_____ (2015-): 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.

_____ (2012-): Restructuring urban geography for the task of reshaping the sustainable urban space, project with Hino, M. (Tohoku Univ.)

Yamashita, K., Matsui, K. and Ichikawa, Y. (2014-): Geographical studies on sustainable development in Oarai Town and the surrounding area.

Research grants

Ichikawa, Y. (2015-): Reuse of cultural resources and walking tourism in France—A case study of the “Stevenson trail. Grant-in Aid of Kobayashi Koji, The Association of Japanese Geographers, JPY 250,000.

Matsui, K. (PI: Hino, M.) (2012-): Restructuring urban geography for the task of reshaping the sustainable urban space. Grant-in Aid for Scientific Research (A), JSPS, JPY 170,000.

_____ (PI: Tsutsumi, J.) (2012-): A geographical study on the changing social structure of Australian metropolitan areas focusing both on the impacts of “Neo-liberalism” reform and “Asian engagement”. Grant-in Aid for Scientific Research (B), JSPS, JPY 450,000.

_____ (PI: Kureha, M.) (2015-): Geographical study on the inbound tourism in Japan. Grant-in Aid for Scientific Research (B), JSPS, JPY 350,000.

_____ (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 7,020,000.

_____ (PI: Matsui, K.) (2015): Town planning of Joso City in terms of film commission activities. Joso City, JPY 1,000,000.

Yamashita, K. (2014-): Adaptation strategy of the ethnic groups. Grant-in Aid for Scientific Research

(Challenging Exploratory Research), JSPS, JPY 800,000.

Overseas fieldwork

Ichikawa, Y. (2016, Mar.): Observation of cultural heritage in France, under JSPS grant.

Matsui, K. (2015, Aug.-Sep.): Observation of heritage tourism in Australia, under JSPS grant.

Yamashita, K. (2015, Sep.): Chinese community and Chinatowns in Mexico, under JSPS grant.

_____ (2016, Feb.): Chinese community and Chinatowns in Vietnam, under JSPS grant.

Others

Ichikawa, Y. (2015, Apr.-Aug.): Special lecture on physical geography and regional geography of Japan in Nagano Univ.

_____ (2015, Sep.): Special lecture on regional geography of Europe, human geography, and geographical education in Nagano Univ.

Matsui, K. (2015, Apr.-Aug.): Special lecture on human geography in Toyo Univ.

_____ (2015, Sep.-2016, Mar.): Special lecture on cultural geography in Rikkyo Univ.

_____ (2015, Dec.): Special lecture on religion and tourism in the Open Univ. of Japan.

Yamashita, K. (2015, Apr.-2016, Mar.): Special lecture on regional geography and cultural geography in Waseda 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-): Tourism development of world heritage areas and commodification of local places, project with Matsui, K. (Univ. of Tsukuba), etc.

Kureha, M., Tsutsumi, J. and Yamashita, A. (2015-): Geographical studies on regional ecology in Iiyama City and the surrounding region.

Tsutsumi, J. (2012-): Restructuring urban geography for the task of reshaping the sustainable urban space, project with Hino, M. (Tohoku Univ.).

_____ (2013-2016): Strengthening of geoenvironmental and disaster-prevention education based on ubiquitous GIS and Augmented Reality techniques, project with Itoh, S. (Kanazawa Univ.).

Yamashita, A. (2011-2015): Low input sustainable agriculture and its endogenous development strategy in Brazilian Amazon, project with Maruyama, H. (Rikkyo Univ.).

- _____ (2014-): Assessment for tolerance to drought with the investigation of the sharp increase of bio-fuel raw material production and hydrological environment in Sertão, Brazil, project with Miyaoka, K. (Mie Univ.).
- _____ (2014-): Spatial visualization of urbanization in Asian and African capital cities, project with Murayama, Y. (Univ. of Tsukuba).
- _____ (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 4,200,000.
- Kureha, M. (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 900,000.
- Tsutsumi, J. (2012-2016): A geographical study on the changing social structure of Australian metropolitan areas focusing both on the impacts of “Neo-liberalism” reform and “Asian engagement”. Grant-in Aid for Scientific Research (B), JSPS, JPY 3,200,000.
- _____ (2013-2017): A study of the coordination between Aboriginal’s land resource management and tourism development by using WebGIS. Grant-in Aid for Scientific Research (C), JSPS, JPY 1,200,000.
- Overseas fieldwork*
- Kureha, M. (2015, Aug): Tourism development of world heritage areas and commodification of local places in Austria.
- _____ (2015, Sep.): Development of ski resorts in Tyrol, Austria.
- _____ (2016, Feb.): Development of ski resorts in Tyrol, Austria.
- Tsutsumi, J. (2015, Aug.-Sep.): Investigation of urban development in Sydney, Australia, under JSPS grant.
- _____ (2016, Feb.): Investigation of urban growth process of Melbourne, Australia, under JSPS grant.
- Yamashita, A. (2015, Jul.): Urban structure in local cities in South Korea, under JSPS grant.
- _____ (2015, Aug.-Sep.): Environmental and agricultural changes by irrigation development in Nordeste, Brazil, under JSPS grant.
- _____ (2016, Feb.-Mar.): Urban development in Colombo Metropolitan Region, Sri Lanka, under JSPS grant.
- _____ (2016, Mar.): Land use characteristics in Yangsan City, South Korea, under JSPS grant.
- Attendance at international meetings*
- Tsutsumi, J. (2015, Aug.): International Geographical Union: Urban commission annual meeting, University College Dublin, Dublin, Ireland.
- Others*
- Kureha, M. (2015): Special lecture on socioeconomic geography in Hosei Univ.
- _____ (2015): Special lecture on region and tourism in the Open Air Univ. of Japan.
- _____ (2015): Special lecture on geography of tourism in Rikkyo Univ.
- Tsutsumi, J. (2015): Geography A in Takasaki City University of Economics.
- _____ (2015): Methodology of fieldwork in Takasaki City University of Economics.
- _____ (2015): Area studies 2 in Rissho University.
- _____ (2015): Regional geography A in Toyo University.
- _____ (2015): Regional geography B in Toyo University.
- _____ (2015): Human geography D in Ibaraki University.
- [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 system 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.
- _____ (2014-2015): JICA project, Project of Capacity Development for Climate Change Strategies.
- _____ (2013-2017): JSPS KAKENHI, Urban precipitation observations. (collaborated with Prof. T. Mikami)
- _____ (2013-2015): Collaborative research with Weathernews INC., snow prediction.
- _____ (2012-2015): Collaborative research with

TOSHIBA, weather prediction.

_____ (2010-2015): Collaborative research with Tajimi City, mitigation of urban heat island.

Morimoto, T. (2015): New development of spatial analysis functions connecting geographical information science and urban engineering, project under JSPS.

_____ (2015): Research using WebGIS on the adjustment of Aborigine's land resource management and tourism development, project under JSPS.

Murayama, Y. (2015): Spatial visualization of urbanization in Asian and African capital cities, project under JSPS.

_____ (2015): Land-use classification in mega cities in developing countries, project under Statistical Data Bank, University of Tsukuba.

_____ (2015): Population estimation of rapidly growing cities in Southeast Asia using GIS/RS, project under JSPS.

_____ (2015): New development of spatial analysis functions connecting geographical information science and urban engineering, project under JSPS.

_____ (2015): 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 5,500,000 (2015).

_____ (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 33,026,000 (2015).

_____ (2014-2018): Creation of elucidation and risk information of occurrence realities of Foehn. Ministry of Agriculture, Forestry and Fisheries in Japan, the Closs-ministerial Strategic Innovation Promotion Program (SIP), JPY 4,459,400 (2015).

_____ (2013-2017): Elucidation of occurrence factor in summer heat island, tropical cyclone and local heavy rain in the Tokyo metropolitan area. Urban precipitation observations (JSPS KAKEN-HI), JPY 200,000 (2015).

Morimoto, T. (2015): New development of spatial anal-

ysis functions connecting geographical information science and urban engineering. Grant-in-Aid for Scientific Research A, JSPS, JPY 400,000 (Representative: Suzuki, T.).

_____ (2015): Research using WebGIS on the adjustment of Aborigine's land resource management and tourism development. Grant-in-Aid for Scientific Research C, JSPS, JPY 350,000 (Representative: Tsutsumi, J.)

Murayama, Y. (2015): Spatial visualization of urbanization in Asian and African capital cities. Grant-in-Aid for Scientific Research B, JSPS, JPY 2,600,000.

_____ (2015): New development of spatial analysis functions connecting geographical information science and urban engineering. Grant-in-Aid for Scientific Research A, JSPS, JPY 400,000 (Representative: Suzuki, T.).

_____ (2015): Land-use classification in mega cities in developing countries. Statistical Data Bank Project, University of Tsukuba, JPY 1,000,000.

_____ (2015): Publication and development of open-access e-learning material for GIS education. Grant-in-Aid for Scientific Research A, JSPS, JPY 400,000 (Representative: Oguchi, T.).

_____ (2015): Reconstruction of urban geography toward the formation of sustainable urban space. Grant-in-Aid for Scientific Research A, JSPS, JPY 130,000 (Representative: Hino, M.).

_____ (2015): Geospatial analysis using GIS. Education-research. Fund from Tokyo Metropolitan University, JPY 80,000.

Overseas fieldwork

Morimoto, T. (2015, Aug.-Sep.): On a research using WebGIS for the adjustment of Aborigine's land resource management and tourism development in Australia, under JSPS grant.

Murayama, Y. (2016, Feb.-Mar.): Urbanization in Colombo, Sri Lanka, under JSPS grant.

Attendance at international meetings

Kusaka, H. (2016, Mar.): The International Science Conference on MAHASRI. Tokyo, Japan.

_____ (2015, Jul.): 9th International Conference for Urban Climate. Toulouse, France.

Visited researchers

Dr. Ronald C. Estoque from JSPS, Apr. 2015- Mar. 2016 (Host researcher: Murayama, Y.).

[d] Hydrologic Sciences

Research projects

Asanuma, J and Aida, K. (2014-): Hydro-Meteorolog-

- ical studies with Multi-satellite sensors and Multidimensional approaches at Mongolian Grassland (Hydro4m, JAXA G-COM Research Announcement).
- Asanuma, J and Tsujimura, M. (2006-2015): Monsoon Asia Hydro-Atmosphere Scientific Research and Prediction Initiative (MAHASRI, under CEOP-GEWEX).
- Asanuma, J. (2014-2015): Development of turbulence measurement methodologies with Doppler sodar and sonic anemometer for AWS.
- Tsujimura, M. and Asanuma, J. (2012-2017): Interdisciplinary Study on Environmental Transfer of Radionuclides from the Fukushima Daiichi NPP Accident (ISET-R).
- Yamanaka, T. (2010-): Japanese Alps Inter-Universities Cooperative Project.
- Research grants*
- Asanuma, J. and Aida, K. (2014-2016): Multi-scale Validations of AMSR2 Products with In-situ Observations at Mongolian Grassland and Modeling Outputs (JAXA G-COM Research Announcement).
- Asanuma, J. (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.
- Sugita, M. (2015-2020): Grant-in-Aid for Scientific Research (C) of the Japan Society for the Promotion of Science.
- Tsujimura, M. and Asanuma, J. (2012-2017): Interdisciplinary Study on Environmental Transfer of Radionuclides from the Fukushima Daiichi NPP Accident (ISET-R), Grant-in-Aid for Scientific Research on Innovative Areas from MEXT.
- Tsujimura, M. (2015): Water resources evaluation in mountainous area focusing on residence time and storage volume of groundwater. Suntory Global Innovation Center Limited.
- _____ (2015): Water environment research. Ono City, Fukui Prefecture.
- _____ (2015): Sustainable groundwater management. Kamisu City, Ibaraki Prefecture.
- 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.
- _____ (2015): Use of national land information toward supporting upstream areas by downstream residents with special emphasis on groundwater conservation. Funding support for spatial policy related studies of the Ministry of Land, Infrastructure, Transport and Tourism.
- Kawachi, A. (2015-2017): Evaluation and prediction of groundwater salinization in coastal agricultural area of arid and semi-arid regions. Grant-in-Aid for Young Scientists (B) of the Japan Society for the Promotion of Science.
- Overseas fieldwork*
- Asanuma, J. and Aida, K. (2015, Sep.): Field investigation and instruments maintenance at Semi-arid grassland in Mongolia (under, MAHASRI and Hydro4m project).
- Tsujimura, M. (2015, Aug.) Groundwater survey in Ulaanbaatar, Mongolia (under UNESCO Chair Program).
- _____ (2015, Aug.) Groundwater and surface water survey in Vietnam.
- Kawachi, A. (2015, Sep., and 2016, Mar.) Hydrological survey in Tunisia.
- _____ (2015, Oct. to 2016, Jan.) Physical and numerical modeling in Australia (under medium to short-term overseas dispatch program).
- Attendance at international meetings*
- Asanuma, J. (2015, Sep): SMAP Cal/Val Workshop #8, 2015/09/01-2015/09/03, Columbia, Maryland.
- _____ (2016, Jan.): Joint PI Meeting of Global Environment Observation Mission 2016, 2016/1/12-16, Tokyo.
- _____ (2016, Mar.): The International Science Conference on MAHASRI, 2016/3/2-4, Tokyo, Japan.
- Tsujimura, M. (2015, Apr.): General Assembly of European Geophysical Union, 2015/4/12-17, Vienna, Austria.
- _____ (2015, Jun.): UNESCO 6th Asian G-WADI and 1st IDI Expert Group Meeting, 2015/6/13-16, Tehran, Iran.
- _____ (2015, Jul.): UNESCO International Scientific Symposium on Scientific, Technological and Policy Innovations for Improved Water Quality Monitoring in the Post-2015 SDGs Framework, 2015/7/15-18, Kyoto, Japan.
- _____ (2015, Sep.): The 42nd International Association of Hydrogeologists Congress. 2015/9/13-18, Rome, Italy.
- _____ (2016, Feb.): Training Workshop on: “Advances in Water Resources Management in Arid and Semi-Arid Areas: A G-WADI approach” and Global G-WADI Advisory Group Meeting, 2016/2/17-19, Khartoum, Sudan.
- _____ (2016, Mar.): Malaysia-Japan International Institute of Technology and University of Tsukuba

Joint Degree Program Workshop, 2016/3/8, Kuala Lumpur, Malaysia.

Yamanaka, T. (2015, Oct.): AGU Chapman Conference: The MADE Challenge for Groundwater Transport in Highly Heterogeneous Aquifers: Insights from 30 Years of Modeling and Characterization at the Field Scale and Promising Future Directions, 2015/10/5-8, Valencia, Spain.

Others

Yamanaka, T. (2015, Oct.): Presentation on Isoscapes at the Shanghai high school, China.

[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).

_____ (2011-2015): GRENE Arctic Study (National Institute of Polar Research).

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

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

Ueda, H. (2015-): Joint study of MRI-CGCM (Japan Meteorological Agency).

_____ (2015-): Palaeoclimate Modelling Intercomparison Project (PMIP)

_____ (2015-): Pliocene Model Intercomparison Project (PliMIP)

Ueno, K. (2009-): Third Pole Environment program (China, TPI).

Wakazuki, Y. (2011-): Joint study of precipitation (HyARC, Nagoya University)

Research grants

Tanaka, H. (2015-2016): Kuchinoerabu-jima Volcanic Ash Project 2015, JSPS, (PI by Iguchi) JPY 300,000.

Ueda, H. (2015-2016): Program for Risk Information on Climate Change, Ministry of Education, Culture, Sports, Science and Technology, JPY 194,033,320.

Wakazuki, Y. (2015-2016): Social Implementation Program on Climate Change Adaptation Technology, Ministry of Education, Culture, Sports, Science and Technology, JPY 10,590,000.

Attendance at international meetings

Tanaka, H. (2015, Apr.): Arctic Science Summit Week, (ASSW-2015) Toyama, Japan, April 23-30, Toyama.

_____ (2015, Aug.): MODES Workshop for 3D

Normal Modes, Boulder, Colorado, August 26-28, USA.

Ueda, H. (2015, Oct.): Asian Conference on Meteorology, Oct. 26-27, Kyoto.

Ueno, K. (2015, Oct.): Mountain of our future earth, Perth 3, Oct. 5, Perth, England.

_____ (2015, Oct.): Mountain Research Initiative, Science Leadership Council. Oct. 8-9, Perth, England.

Wakazuki, Y. (2015, Dec.): 2015 AGU Fall Meeting, 14-18 December 2015, San Francisco, USA.

Visited researchers

Mr. Kurniasi, from BMKG, Indonesia, January 12-February 10, 2016 (Host researcher: Tanaka, H.)

Mr. Misani Ahmad from BMKG, Indonesia, January 12-February 10, 2016 (Host researcher: Tanaka, H.)

Dr. Hsin-I Chang, from University of Arizona, Department of Atmospheric Sciences, USA, September-October 2015 (Host researcher: Ueda, H.)

Associate Professor Christophe Sturm, from Stockholm University, Department of Geological Sciences, Sweden, September-October 2015 (Host researcher: Ueda, H.)

Dr. Jing Xiang Chung, from Universiti Kebangsaan Malaysia, Faculty of Science and Technology, Malaysia, September-November 2015 (Host researcher: Ueda, H.)

Dr. Roy M. Rasmussen, from National Center for Atmospheric Research, USA, October 2015 (Host researcher: Ueda, H.)

Dr. Ethan Gutmann, from National Center for Atmospheric Research, USA, October 2015 (Host researcher: Ueda, H.)

Dr. Gemma Narisma, from Manila Observatory, Philippines, October 2015 (Host researcher: Ueda, H.)

Dr. Huang-Hsiung Hsu, from Research Center for Environmental Change, Taiwan, October 2015 (Host researcher: Ueda, H.)

Dr. Hiep Van Nguyen, from Institute of Meteorology, Vietnam, October 2015 (Host researcher: Ueda, H.)

Others

Ueno, K (2014, Nov.-): A member of Science Leadership Council, Mountain Research Initiative, Swiss.

[f] Geomorphology

Research projects

Hattanji, T. (2009-): Estimating long-term chemical weathering rate in granitic areas of Japan using cosmogenic radio nuclides and geochemical analy-

- sis, project with Matsushi, Y. (Kyoto Univ.)
- _____ (2009-): Monitoring subsurface water response to heavy rainfall for prediction of slope stability in landslide-prone areas, project with Wakatsuki, T. (NIED)
- _____ (2013-): Hydrogeomorphic factors triggering shallow landslides in the Izu Ohshima Island, project with Terajima T. (Kyoto Univ.) and Matsushi, Y. (Kyoto Univ.)
- Ikeda, A. (2008-): Permafrost monitoring on Mt. Fuji, project with Iwahana, G. (IARC-UAF)
- _____ (2012-): Ground temperature monitoring in Nishikoma Research Forest, project with Tanaka, K. (Univ. Tsukuba) and Kobayashi, H. (Shinshu Univ.)
- Matsuoka, N. (2004-): Arctic periglacial geomorphology, international project with Christiansen, H. H. (Univ. Centre in Svalbard, Norway), Humlum, O. (Univ. Oslo, Norway) and Watanabe, T. (Kitami IT)
- _____ (2007-): Monitoring rock slope deformation and failure in the Japanese Alps, project with Nishii, R. (PWRI)
- _____ (2013-): Experimental study on Martian landscape, project by the geomorphological research group.
- _____ (2014-): Systematic understanding of mountain landform dynamics in the Japanese and Swiss Alps, international project with Stoffel, M., Trappman, D. (Univ. of Bern), Imaizumi, F. (Shizuoka Univ.) and Ikeda, A.
- 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)
- 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. (2015): Controlling factor determining spatial distribution of chemical weathering rates of granite in Japan. Grant-in-Aid for Young Scientist (B), JSPS, JPY 500,000.
- Ikeda, A. (2015): Research workshop: multi-approach to reveal permafrost dynamics. Grant for collaboration, Inst. Low Temp. Sci., Hokkaido Univ., JPY 335,000.
- Matsuoka, N., Ikeda, A., Imaizumi, F. and Nishii, R. (2015): Systematic understanding of mountain landform dynamics: comparison between Japanese and Swiss Alps, JSPS, JPY 5,000,000.
- Matsuoka, N., Hattanji, T., Ikeda, A., Parkner, T. and Sekiguchi, T. (2015): Reproducing Martian landscape in the Laboratory, Grant-in-Aid for Scientific Research, JSPS, JPY 900,000.
- Overseas fieldwork*
- Matsuoka, N. and Ikeda, A. (2015, Jul.-Aug.): Periglacial observations in the Swiss Alps and Svalbard, toward systematic understanding of mountain landform dynamics and planetary geomorphology (under JSPS grant).
- Attendance at international meetings*
- Ikeda, A. and Hattanji, T. (2015, Jul.-Aug.): International Union for Quaternary Research, XIX Congress, Nagoya, Japan.
- Visited Researchers*
- Dr. Sam McColl (Massey University, New Zealand), July, 2015.
- Dr. Markus Stoffel and Dr. Daniel Trappman (University of Bern, Switzerland), 10th-25th September, 2015.
- Dr. Mark Dickson (University of Auckland, New Zealand), 22nd September - 5th October, 2015.
- Dr. Verena Pietzner (University of Oldenburg, Germany), 5th-6th March, 2016.
- [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.

The Arctic Science Summit Week (ASSW-2016) were successfully held at the University of Alaska Fairbanks for 12 to 18 March 2016 gathering 1,200 international scientists, students and policy makers. Dr. Tanaka attended the IASC/AWG (International Arctic Science Committee, Atmospheric Science Working Group) meeting, representing Japan. The director of IARC has changed from Larry Hinzman to Hajo Eicken since 2014.

- (1) Exchange of Researchers: Dr. H. Tanaka visited IARC/UAF for ASSW-2106.
- (2) Exchange of Graduate Students: None
- (3) Collaborative Research:
 Research on Arctic Oscillation, PI: H.L. Tanaka (Univ. of Tsukuba).
- (4) Exchange of scientific documents:
 Tsukuba Geoenvironmental Sciences, Vol.11, 2015, Univ. of Tsukuba.
 Geophysical Institute Biennial Report, 2015, Univ. of Alaska.
 Geophysical Institute Quarterly, 2015 Univ. of Alaska.

