

Organization and Activities of the Doctoral Program in Geoenvironmental Sciences for the Academic Year 2014

Organization

During the year from April, 2014 to March, 2015, 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:

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

Associate Professors:

Ikeda, Atsushi, D.Sc., geomorphology, geocryology
Kusaka, Hiroyuki, D.Sc., urban climate, local wind, numerical modeling
Tsutsumi, Jun, D.Sc., urban geography, regional geography of Australia, GIS
Ueno, Kenichi, D.Sc., atmospheric science, precipitation system, regional climatology
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
Kaneko, Jun, D.Sc., regional geography, economic geography

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

D.Sc. Uda, Takuya (2015): A Geographical Study of Tourism's Impact on the Spatial Restructuring of Mount Hiei.
M.Sc. Hosoya, Miki (2015): Inspection of Theory and Methodology in Geography of Education: Empirical Research in Okinawa Prefecture, Japan.
M.Sc. Ueno, Rikako (2015): The maintenance factors of the Natsumikan Landscape in Horinouchi Area, Hagi City.
M.Sc. Yagasaki, Taiyo (2015): The Resilience of the Community after the Great East Japan Earthquake: The Case of the Relocation Project in Moune of Kesenuma City, Miyagi Prefecture.
M.Sc. Hata, Tsukasa (2015): Structure of Cultivar Innova-

- tion in a Fruit Producing Area: A Case Study of Suko Area, Nagano Prefecture.
- M.Sc. Horie, Yoko (2015): Development of ethnic business enclaves in the Isezaki Mall, Yokohama City.

[b] Regional Geography

- D.Sc. Suzuki, Tomiyuki (2015): Transformation of Pension Villages in the Outer Zone of Tokyo Metropolitan Area: A Case Study of Minenohara Kogen, Nagano Prefecture.
- M.Sc. Arai, Yuji (2015): Sustainability of Zao Onsen as the hot spring tourist destination in Yamagata Prefecture -Focusing on advertising by various actors of tourism management.
- M.Sc. Kawamura, Kazuki (2015): The expansion of offices' business territory involved in reorganization of branches -A case of Omiya area, inside Saitama City.
- M.Sc. Kuribayashi, Kei (2015): Structure of Marshalian industrial district from the standpoint of product planning of the eyeglass frame -A case of Sabae City, Fukui Pref.
- M.Sc. Yamanaka, Hiroki (2015): Development of the environmental preservation activities with oriental stork nature return project in Toyooka City.

[c] Spatial Information Science

- D. Sc. Greger, Konstantin (2015): Spatio-Temporal Analysis of Terrorism Vulnerability: A Case Study of Central Tokyo, Japan.
- D. Sc. Hara, Masayuki (2015): Numerical Study on Dynamical Downscaling for Regional Climate Projection -Application to Asian Regions and Development of a Regional NICAM-.
- D. Sc. Hashimoto, Misao (2015): A Geographical Study on Factors Influencing Wild Animal-related Damages: A Case Study of Nagano Prefecture, Japan.
- M. Sc. Gong, Hao (2014): Numerical Studies on Multi-period of Urban Heat Islands Effect during Rapid Urbanization: A Case Study of Shanghai, China (1987 - 2014).
- M. Sc. Ichizawa, Tomohiro (2014): Formation Mechanism of Snow and Rain Spatial Distributions in the Kanto Plain.
- M. Sc. Kakinuma, Ai (2014): Impacts of Foehn for High Temperature in Hokuriku and North Kanto Districts.
- M. Sc. Kubo, Takafumi (2015): Development of Residences for the Aged People through the Regionally Integrated Care System: A Case Study of Fukuoka City.
- M. Sc. Liu, Kai (2015): Hedonic Price Modeling of New

- Residential Property Values in Xi fan City, China.
- M. Sc. Otaka, Sanae (2014): Impacts of Urban Dynamical Effect on Precipitation in Tokyo Metropolitan Area.
- M. Sc. Takahashi, Kazunari (2014): A study of the nighttime heat island and the acceleration of LES on the multi-GPU cluster.
- M. Sc. Watanabe, Keiichiro (2014): Development of next generation wind condition simulation model based on meteorological LES model : Towards forecast of wind condition in wind farm.
- M. Sc. Zhou, Yifei (2015): Accessibility Evaluation of the Aged Population to the Medical Facilities in the Central Area of Shanghai, China.
- M. Sc. Zux, Qi (2015): Location Pattern and Formation Factors of Foreign Invested Companies in Shenyang.

[d] Hydrologic Sciences

- M. Sc. An, Tran Dang (2014): Groundwater Flow System at Coastal Region of Soc Trang Province, Southern Vietnam.
- M. Sc. Kobayashi Kensi (2015): The Spatio-temporal Variability of Surface Soil Moisture Upscaled to Satellite Footprint with a In-situ Multiyear Dataset in Semi-arid Mongolian Grassland.
- M. Sc. Matsunaga, Masumi (2015): Characteristics of the Atmospheric Boundary Layer under the Influence of Variable Surfaces and Mean Wind - a LES Studies.
- M. Env. Furukawa, Mariko (2015): Groundwater and Surface Water Cycle System in Inland and Coastal Watersheds, Northern Tunisia.
- M. Env. Van, Bui Thi Tuyet (2014): Groundwater Flow System in Binh Chanh District in Ho Chi Minh City, Vietnam.
- M. Env. Sakakibara, Koichi (2015): Groundwater Recharge and Flow Processes in a Headwater, Taihang Mountains, North China.
- M. Env. Shibayama, Naoyuki (2015): Temporal and Spatial Variation of Groundwater Flow and Chemical Characteristics in Coastal Watersheds, North-east Tunisia.
- M. Env. Yaginuma, Taku (2015): Variation of Hydrological Processes Before and After Thinning in Headwater Catchments Covered by Plantation.
- M. Env. Suzuki, Naoki (2015): Inorganic solute nitrogen dynamics in creek waters of mangrove swamps, Nagura Amparu, Ishigaki Island.

[e] Atmospheric Science

- M. Sc. Ando, Naoki (2014): Characteristics of extratropi-

- cal cyclones along south coast of Japan with heavy rainfall and snowfall in the inland district of Japan.
- M. Sc. Inaba, Naoki (2014): Developing raindrop size distribution retrieving method using radar parameter.
- M. Sc. Nozawa, Tomohiro (2014): Formulation of the initial structure of cumulus convection by air lifting and blending for short range precipitation forecast.
- M. Sc. Watanabe, Tomoya (2014): Study on numerical simulation of mesoscale precipitation system in the Baiu frontal zone.
- M. Env. Adachi, Shuuhei (2014): Recent cooling trend over the eastern part of Eurasia and its impact on general circulation.
- M. Env. Kumai, Atsuki (2014): Reproducibility of the Asian summer monsoon associated with cumulus parameterization.
- M. Env. Miki, Yurisa (2014): Recent Change in Tropical Convection and Its Linkage with Global Warming Trend.
- M. Env. Watanabe, Shigeru (2014): Uncertainties involved in the projected future change of the South-Asian monsoon.
- M. Env. Yoshida, Masaru (2014): Study on climate changes in the atmosphere and land surface environment at Japan Alps during the snow melting season.

Research Activities

Each research group had the following research activities during the academic year 2014.

[a] Human Geography

Research projects

- Matsui, K. (2012-): Sustainable residential system of remote islands, project with Hiraoka, A. (Shimonoseki City Univ.) and others.
- _____ (2012-): Support project for the reconstruction of residential environments in East Japan earthquake disaster area, project with Iwama, N. (Ibaraki Christian Univ.) and Kubo, T. (Meiji Univ.).
- _____ (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.
- Yamashita, K. (2011-): Ethnic groups in U.S.A., project with Yagasaki, N. (Nihon University).

Research grants

- 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: Hiraoka, A.) (2012-): Sustainable residential system of remote islands. Grant-in Aid for Scientific Research (C), JSPS, JPY 250,000.

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

Yamashita, K. (2012-): Applied geography of ethnic conflict in Japan. Grant-in Aid for Scientific Research (A), JSPS, JPY 7,670,000.

_____ (2014-): Adaptation strategy of the ethnic groups. Grant-in Aid for Scientific Research (Challenging Exploratory Research), JSPS, JPY 3,250,000.

Overseas fieldwork

Matsui, K. (2014, Aug.-Sep.): Heritage tourism in Uluru, Australia, under JSPS grant.

_____ (2014, Sep.): Observation of cultural ecology in Malaysia and Singapore, under Univ. of Tsukuba grant.

Yamashita, K. (2014, Jul.-Aug.): Chinese community and Chinatowns in Netherlands and Belgium, under JSPS grant.

_____ (2014, Sep.): Toronto Chinatown in Canada, under JSPS grant.

_____ (2015, Feb.): Ethnic communities in London, Dusseldorf and Paris, under JSPS grant.

Others

Ichikawa, Y. (2014, Apr.-Aug.): Special lecture on physical geography and regional geography of Japan in Nagano Univ.

_____ (2014, Sep.-2015, Mar.): Special lecture on regional geography of Europe, human geography, and geographical education in Nagano Univ.

Matsui, K. (2014, Apr.-Aug.): Special lecture on human geography in Toyo Univ.

_____ (2014, Sep.-2015, Mar.): Special lecture on cultural geography in Rikkyo Univ.

_____ (2014, Dec.): Special lecture on religion and tourism in the Open Univ. of Japan.

Yamashita, K. (2014, Apr.-2015, Mar.): Special lecture on regional geography and cultural geography in Waseda Univ.

_____ (2014, Aug.): Special lecture on cultural geography in Kyoto Univ.

[b] Regional Geography

Research projects

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

Kaneko, J. (2014-): Empirical studies for construction of

symbiotic system between urban and rural by commodification of rural space in Canada, project with Tabayashi, A. (Univ. of Tsukuba).

Kureha, M., Tsutsumi, J., Kaneko, J. and Yamashita, A. (2013-2015): Geographical studies on regional ecology in Saku City and the surrounding region.

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

Yamashita, A. (2011-): 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 biofuel 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).

Research grants

Kaneko, J. (PI: Tabayashi, A.)(2014-2017): Empirical studies for construction of symbiotic system between urban and rural by commodification of rural space in Canada. Grant-in Aid for Scientific Research (B), JSPS, JPY 600,000.

Kaneko, J. and Tsutsumi, J. (PI: Hino, M.)(2012-2015): Restructuring urban geography for the task of reshaping the sustainable urban space. Grant-in Aid for Scientific Research (A), JSPS, JPY 150,000.

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.

Yamashita, A. (2012-2015): Study on adjustment of water supply-demand system in the period of water resource restructuring. Grant-in Aid for Young Scientists (B), JSPS, JPY 2,080,000.

_____ (2014-2015): Regional aspects of water environmental issues. Grant-in-Aid for Publication of Scientific Research Results, JSPS, JPY 1,200,000.

Overseas fieldwork

Kaneko, J. (2014, Jul.): The practice and educational effects of field trip in Tyrol, Austria.

_____ (2014, Aug.-Sep.): Empirical studies for construction of symbiotic system between urban and ru-

ral by commodification of rural space in Canada, under JSPS grant.

Kureha, M. (2014, July): Further development of ski resorts in Austria.

_____ (2015, Feb.): Development of ski tourism in Ötz Valley, Austria.

Tsutsumi, J. (2014, Aug.-Sep.): Investigation of primary industries in South Australia, under JSPS grant.

_____ (2015, Mar.): Investigation of urban growth process of Melbourne, Australia, under JSPS grant.

Yamashita, A. (2014, Sep.): Environmental and agricultural changes by irrigation development in Nordeste, Brazil, under JSPS grant.

_____ (2015, Mar.): Urban development in Seoul Metropolitan Region, under JSPS grant.

Attendance at international meetings

Tsutsumi, J. (2014, Aug.): International Geographical Union: Urban commission annual meeting, Adam Mickiewicz University, Poznan, Poland.

Others

Kaneko, J. (2014): Special lecture on industries and consumption in the region in Seitoku Univ.

_____ (2014): Special lecture on environment and transportation in Japan in Seitoku Univ.

_____ (2014): Special lecture on regional geography in Seitoku Univ.

_____ (2014): Special lecture on human geography II in Waseda Univ.

_____ (2014): Special lecture on human geography B in Waseda Univ.

Kureha, M. (2014): Special lecture on socioeconomic geography in Hosei Univ.

_____ (2014): Special lecture on region and tourism in the Open Univ. of Japan.

_____ (2014): Introductory lecture on geography in Rikkyo Univ.

Tsutsumi, J. (2014): Geography A in Takasaki City University of Economics.

_____ (2014): Methodology of fieldwork in Takasaki City University of Economics.

_____ (2014): Regional geography A in Toyo University.

_____ (2014): Regional geography B in Toyo University.

_____ (2014): Human geography D in Ibaraki University.

[c] Spatial Information Science

Research projects

Kusaka, H. (2010-2014): Ministry of Environment, S8 Project, Development of Downscaler for Global Warming and Its Application to Preliminary Experi-

- ment.
- _____ (2010-2014): MEXT, RECCA project, Development of downscale model with feedback parameterization and its application to urban thermal environment and heavy rainfall.
- _____ (2014-2018): NEDO project, Power system output fluctuation corresponding technology research and development projects.
- _____ (2014-2018): The Ministry of Agriculture, Forestry and Fisheries in Japan, SIP project, Creation of elucidation and risk information of occurrence realities of Foehn.
- _____ (2013-2017): JSPS KAKENHI, Urban precipitation observations.
- _____ (2013-2014): Collaborative research with Weathernews INC., snow prediction.
- _____ (2012-2014): Collaborative research with TOSHIBA, weather prediction.
- _____ (2010-2014): Collaborative research with TAJIMI city, mitigation of urban heat island.
- _____ (2012-2014): Heat disorder prevention project.
- _____ (2010-2014): Interdisciplinary Computational Science Program.
- Morimoto, T. (2014): Spatial database construction in a small area statistics, project under Statistical Data Bank, University of Tsukuba.
- _____ (2014): New development of spatial analysis functions connecting geographical information science and urban engineering, project under JSPS.
- _____ (2014): Research using WebGIS on the adjustment of Aborigine's land resource management and tourism development, project under JSPS.
- Murayama, Y. (2014): Spatial visualization of urbanization in Asian and African capital cities, project under JSPS.
- _____ (2014): Land-use classification in mega cities in developing countries, project under Statistical Data Bank, University of Tsukuba.
- _____ (2014): Population estimation of rapidly growing cities in Southeast Asia using GIS/RS, project under JSPS.
- _____ (2014): New development of spatial analysis functions connecting geographical information science and urban engineering, project under JSPS.
- _____ (2014): Reconstruction of urban geography toward the formation of sustainable urban space, under JSPS.
- Research grants*
- Kusaka, H. (2010-2014): Development of Downscaler for Global Warming and Its Application to Preliminary Experiment, Global Environment Research Fund(S8). Ministry of the Environment, JPY 25,950,000 (2014).
- _____ (2010-2014): Development of downscale model with feedback parameterization and its application to urban thermal environment and heavy rainfall. Research Program on Climate Change Adaptation, Initiative for Strategic Adaptation to Climate Change. Ministry of Education, Culture, Sports, Science and Technology of Japan, JPY 9,200,000 (2014).
- _____ (2014-2018): Research on the reason of sudden fluctuation phenomenon of the wind causing RAMP phenomena using WRF model from meteorological point of view. New Energy and Industrial Technology Development Organization (NEDO), JPY 20,430,000 (2014).
- _____ (2014-2018): To reveal the frequency of appearance and typical features of Foehn in parts of the country (SIP). The Ministry of Agriculture, Forestry and Fisheries in Japan, JPY 611,392.
- Morimoto, T. (2014): 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.).
- _____ (2014): Spatial database construction in a small area. Statistical Data Bank Project, University of Tsukuba, JPY 500,000 (Representative: Kishimoto, K.)
- _____ (2014): 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. (2014): Spatial visualization of urbanization in Asian and African capital cities. Grant-in-Aid for Scientific Research B, JSPS, JPY 6,800,000.
- _____ (2014): Urban development of hill-stations in Southeast Asia using GIS/RS. Grant-in-Aid for JSPS Fellows, JSPS, JPY 900,000.
- _____ (2014): New development of spatial analysis functions connecting geographical information science and urban engineering. Grant-in-Aid for Scientific Research A, JSPS, JPY 520,000 (Representative: Suzuki, T.).
- _____ (2014): Reconstruction of urban geography toward the formation of sustainable urban space. Grant-in-Aid for Scientific Research A, JSPS, JPY 156,000 (Representative: Hino, M.).
- _____ (2014): Land-use classification in mega cities in developing countries. Statistical Data Bank Project, University of Tsukuba, JPY 1,000,000 (Representative: Kishimoto, K.).
- Attendance at international meetings*
- Kusaka, H. (2014, Oct.): 20th international congress on

biometeorology. Cleveland, USA.

————— (2014, Aug.): AOGS 2014. Sapporo, Japan.

————— (2014, Jun.): 3rd International Lund Regional-scale climate modeling. Workshop, Lund, Sweden.

Morimoto, T. (2014, Apr.): Japan Geoscience Union Meeting 2014, Yokohama, Japan.

Murayama, Y. (2015, Mar.): Urbanization in Seoul, under JSPS grant.

Visited researchers

Dr. KoKo Lwin from JSPS, Apr. 2014- Nov. 2014 (Host researcher: Murayama, Y.).

Dr. Ronald C. Estoque from JSPS, Apr. 2014- Mar. 2015 (Host researcher: Murayama, Y.).

Dr. Koun Sugimoto from JSPS, Apr. 2014- June 2014 (Host researcher: Murayama, Y.).

[d] Hydrologic Sciences

Research projects

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

Sugita, M. (2008-2015): Sustainable Systems for Food and Bio-energy Production with Water-saving Irrigation in the Egyptian Nile Basin (JST/JICA, Science and Technology Research Partnership for Sustainable Development (SATREPS) project).

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

Tsujimura, M. and Yamanaka, T. (2009-2014): Development of Innovative Technologies for Increasing in Watershed Runoff and Improving River Environment by the Management Practice of Devastated Forest Plantation (JST, Core Research for Evolutional Science and Technology (CREST) project).

Tsujimura, M. and Kawachi, A. (2010-2014): Valorization of Bi-resources in Semi Arid and Arid Land for Regional Development. JST-JICA, SATREPS Project.

Yamanaka, T. (2010-): Toward recovering Earth's environments, inter-university project with Shinshu and Gifu Universities.

Research grants

Asanuma, J. and Aida, T. (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): Landsurface 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.

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. and Yamanaka, T. (2011-2014): Mapping of groundwater residence time and water storage volume in mountainous catchment in Japan. Grant-in-Aid for Scientific Research (B) of the Japan Society for the Promotion of Science.

Tsujimura, M. (2011-2014): Groundwater and surface water interaction in arid and semi-arid regions. Grant-in-Aid for Scientific Research (B) (Overseas research) of the Japan Society for the Promotion of Science.

Overseas fieldwork

Asanuma, J. and Aida, K. (2014, Sep.): Field investigation and instruments maintenance at Semi-arid grassland in Mongolia (under, MAHASRI and Hydro4m project).

Kawachi, A. (2014, Aug., Dec. and 2015, Mar.) Hydrological survey in Tunisia (under SATREPS project).

Sugita, M. (2014, May, Sep., Nov., 2015, Feb.-Mar.) Data acquisition and station maintenance in Egypt (Under Satreps project).

Tsujimura, M. (2014, Aug.) Groundwater survey in Ulaanbaatar, Mongolia (under UNESCO Chair Program).

————— (2014, Aug.) Groundwater and surface water survey in Vietnam.

Attendance at international meetings

Asanuma, J. (2014, Apr.): MAIRS Open Science Conference, Friendship Hotel, 2014/4/7-10, Beijing, China.

————— (2014, Apr.): JPGU Meeting 2014, 2014/4/28-5/1, Yokohama, Japan.

————— (2014, Jul.): 7th International Scientific Conference on the Global Water and Energy Cycle, 2014/7/14-17, The Hague, The Netherlands.

————— (2015, Jan.): Joint PI Meeting of Global Environment Observation Mission 2014, 2015/1/12-16, Tokyo.

————— (2015, Mar.): Asian Monsoon Hydroclimate - Review of MAHASRI and Beyond-, 2015/3/4-5, Nagoya Univ., Japan.

Sugita, M. (2015, Mar.): The final symposium of SATREPS project "Sustainable systems for food and bio-energy production with water-saving irrigation in the Egyptian Nile Basin" on Water Saving Agriculture in the Egyptian Nile Delta, Cairo, Egypt.

Tsujimura, M. (2014, Apr.): General Assembly of Europe-

an Geophysical Union, 2014/4/27-5/2, Vienna, Austria.

_____ (2014, Sep.): IAEA/UNESCO Technical Meeting on Groundwater Contamination following the Fukushima Nuclear Accident, IAEA Headquarters, 2014/9/8-10, Vienna, Austria.

Yamanaka, T. (2014, Jul.): AOGS 11th Annual Meeting, 2014/7/28-8/1, Sapporo, Japan.

Visited researchers

Dr Mohammad Kamruzzaman (Centre for Water Management and Reuse, University of South Australia): 28th November-30th December, 2014.

Others

Yamanaka, T. (2014, Oct.): Presentation on environmental education 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-): GRENE Arctic Study (National Institute of Polar Research).

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

Ueda, H. (2014-): Joint study of MRI-CGCM (Japan Meteorological Agency).

_____ (2014-): Palaeoclimate Modelling Intercomparison Project (PMIP)

_____ (2014-): Pliocene Model Intercomparison Project (PlioMIP)

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

_____ (2010-): JALPS program (Japan, inter-university cooperation).

Research grants

Ueda, H. (2014-2015): Global environment research fund, Ministry of Environment, JPY 8,449,000.

_____ (2014-2015): Program for Risk Information on Climate Change, Ministry of Education, Culture, Sports, Science and Technology, JPY 215,129,000.

Ueno, K. (2014): Urgent investigation of extreme snow fall disaster on Feb. in Kanto-Koshinetsu areas, 2013, Grant-in-Aid for Scientific Research, JSPS, JPY 15,000.

Attendance at international meetings

Tanaka, H. L. (2015, Feb.): Seminar on Volcanic Hazard in Indonesia. BMKG, Feb 2-7, 2015, Jakarta.

Ueda, H. (2014, Jul.): Takio Murakami Memorial Symposium on Tropical Meteorology and Monsoon, July 2-3, Honolulu, USA.

Ueno, K. (2014, Jul.): A global fair and workshop in social-ecological systems, Extended abstract, July 16-19, Reno, USA.

_____ (2014, Aug.): Asia Oceania Geosciences Society 11th Annual Meeting, Sapporo, Japan.

_____ (2014, Oct.): Mountain Research Initiative, Science Leadership Council. 19-22 October 2014, Kandersteg, CH

Visited researchers

Prof. Shang-Ping, Xie from Scripps Institute of Oceanography, University of California, San Diego, U.S.A, March 2014 (Host researcher: Ueda, H.)

Dr. Faye Abigail Cruz, from Regional Climate Systems, Manila Observatory, Philippines, June 2014 (Host researcher: Ueda, H.)

Dr. Vu Thanh Hang, from Faculty of Meteorology, Hydrology and Oceanography, Hanoi University of Science, Vietnam, July 2014 (Host researcher: Ueda, H.)

Dr. Ramesh Vellore Kumaraswamy, from Centre for Climate Change Research, Indian Institute of Tropical Meteorology, India, July 2014 (Host researcher: Ueda, H.)

Dr. Lai-Yung Leung, from Atmospheric Sciences and Global Change Division, Pacific Northwest National Laboratory, U.S.A, July 2014 (Host researcher: Ueda, H.)

Dr. Hideko, Kanemaru, from FAO, Italy, July 2014 (Host researcher: Ueda, H.)

Dr. Ferdika Amsal Harapan, from Research and Development Center, The Indonesia Agency for Meteorology Climatology and Geophysics, Indonesia, September 2014 (Host researcher: Ueda, H.)

Prof. Xin-Zhong LIANG, from Department of Atmospheric & Oceanic Science, University of Maryland, U.S.A, November 2014 (Host researcher: Ueda, H.)

Associate Prof. Vasubandhu MISRA, from Department of Earth, Ocean and Atmospheric Science, Florida State University, U.S.A, November 2014 (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 analysis, 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) and Sueyoshi, T. (JAMSTEC)
- (2012-): Ground temperature monitoring in Nishikoma Research Forest, project with Tanaka, K. (Univ. Tsukuba), Kobayashi, H. (Shinshu Univ.) and Ohtsuka, T. (Gifu 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)
- (2010-): Recovering Earth's environments (JALPS), inter-university project with Shinshu and Gifu Universities.
- (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. (2014): Controlling factor determining spatial distribution of chemical weathering rates of granite in Japan. Grant-in-Aid for Young Scientist (B), JSPS, JPY 800,000.
- Ikeda, A. (2014): Permafrost on Mt. Fuji: characteristics, distribution and related geomorphological change. Grant-in-Aid for Young Scientists (B), JSPS, JPY 700,000.
- Matsuoka, N., Ikeda, A., Imaizumi, F. and Nishii, R.

(2014): Systematic understanding of mountain landform dynamics: comparison between Japanese and Swiss Alps, Grant-in-Aid for Scientific Research, JSPS, JPY 4,300,000.

- Matsuoka, N., Hattanji, T., Ikeda, A., Parkner, T. and Sekiguchi, T. (2014): Reproducing Martian landscape in the laboratory, Grant-in-Aid for Scientific Research, JSPS, JPY 800,000.
- Matsuoka, N. (2014): Research University Promotion Program, MEXT, JPY 420,000.
- Sekiguchi, T. (2014): Analogue experiment on dynamics of complex dunes. Grant-in-Aid for Scientific Research (C), MEXT, JPY 910,000.

Overseas fieldwork

- Matsuoka, N. and Ikeda, A. (2014, 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. (2014, Jun.): 4th European Conference on Permafrost, Evora, Portugal.
- (2015, Feb.): Final Symposium on the Evolution of Mountain Permafrost in Switzerland, Sion, Switzerland.
- Parkner, T. (2014, Aug.): 11th Annual Meeting of the Asia Oceania Geoscience Society, Sapporo, Japan.
- (2014, Aug.): IGU Regional Conference 2014, Krakow, Poland.
- Matsuoka, N. (2014, Jun.): 4th European Conference on Permafrost, Evora, Portugal.

Visited Researchers

- Dr. Ian. Fuller (Massey University, New Zealand), July, 2014.
- Dr. Christophe Lambiel (University of Lausanne, Switzerland), 24th September–3rd October, 2014.
- Dr. Markus Stoffel and Dr. Daniel Trappman (University of Bern, Switzerland), 15th–29th October, 2014.
- Prof. Dr. Verena Pietzner (University of Oldenburg, Germany), 26th-30th January, 2015.

[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 Forth International Symposium on the Arctic Research (ISAR-4) and the Arctic Science Summit Week (ASSW-2015) were successfully held in Toyama for 23 to 30 April 2015 gathering 700 international scientists, students and policy makers. The conferences are supported by many international partners including IARC/UAF and CCS University of Tsukuba.

- (1) Exchange of Researchers, Dr. John E. Walsh came to Japan supported by CCS
- (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 Science, Vol.9, 2014, Univ. of Tsukuba.
 Geophysical Institute Biennial Report, 2014, Univ. of Alaska.
 Geophysical Institute Quarterly, 2014 Univ. of Alaska.

List of Publications

The following articles arranged in each research field were published by our faculty members during April 2014 to March 2015. Our department and/or research groups also published the following publications.

- 1) *Annals of Human and Regional Geography*, 37 (2015)
- 2) *Studies in Human Geography*, 35 (2015)

The exchanges of the publications will be gratefully acknowledged.

[Symbols]

- J** in Japanese
JE in Japanese with English abstract
° The first author
* Researchers belonging to University of Tsukuba, not to the Doctoral Program in Geoenvironmental Sciences
** Researchers not belonging to University of Tsukuba
*** Undergraduate students, graduate students and auditors belonging to University of Tsukuba

[a] Human Geography

- Ichikawa, Y. (2014): Randonneuring and tourism in the Massif Central in France: Robert Louis Stevenson's *Travels with a Donkey in the Cévennes*. *Geogr. Space*, 7 185-202. (**J**)
- (2015): *Globalization and New Challenges of Agricultural and Rural Systems*. IGU Commission on the Sustainability of Rural Systems and Graduate School of Environmental Studies, Nagoya. (**J**, with Kim, D. C°, and Firmino, A. M.**)
- (2015): Tourism in the fishery region: A case study of Hirakata, Ibaraki. In Tabayashi, A. ed., *Chiiki-shinko toshiteno Noson-kukan no Shohinka*, Agriculture and Forestry Statistics Publishing, Tokyo, 299-314. (**J**, with Hashimoto, A.** and Yokoyama, T.**)
- Matsui, K. (2015): Characteristics of the Community Activities in Narita New Town in the Tokyo Metropolitan Area. In Singh, R. B. ed., *Urban Development Challenges, Risks and Resilience in Asian Mega Cities*. Pudukcherry, India: Springer, 367-394. (with Kubo, T. °**)
- (2014): The Nagasaki Church Group and Religious Tourism. *Histr. Geogr.*, 57(1), 88-103. (**JE**)
- (2014): Discussions on the Religious Space of Edo City: The Landscape and Functions of Temples and Shrines. *Jour. of Geogr.* 123, 451-471. (**JE**)
- (2014): Geography of BLS Community and Disaster Prevention. *E-journal GEO*, 9(2), 201-208. (**J**, with Iwafune, M. °**, Ueno, Y.**, Sakai, S.**, Yamaguchi, F.**, Isokawa, K.**, Ishida, Y.**, Hasegawa, M.**, Ko-

bashi, T.**, Hashimoto, M.** and Onishi, K.**)

- (2014): Book review of *Political Geography of International Relations: Modern Geopolitics*, by Yokoyama, S.. *Geogr. Space*, 7, 126-129. (**J**)
- (2014): Book review of *Economic Growth in Southeast Asia and Global Financial Crisis*, by Hashimoto, Y.. *Geogr. Space*, 7, 104-107. (**J**)
- Yamashita, K. ed. (2014): *The hometowns of overseas Chinese since China adopted the "Reform and Opening-up" policy*. Akashi-shoten, Tokyo, 278p. (**J**)
- (2015): Transformation of the Chinese community in Mauritius and the regional characteristics of the Port Louis Chinatown. *Ritsumeikan Annual Review of International Studies*, 27, 907-931. (**JE**)

[b] Regional Geography

- Kaneko, J. (2015): The practice and educational effects of field trip in Tyrol, Austria: A case of the course "Field Works on Regional Geography A" held at the University of Tsukuba (College of Geoscience, School of Life and Environmental Sciences). *Studies in Human Geography*, 35, 15-30. (**J**, with Kureha, M.)
- (2015): Regional transformation of commercial space in Iwamura Area, Saku City, Nagano Prefecture. *Annals of Human and Regional Geography*, 37, 231-254. (**J**, with Fukui, K. °**, Kim, Y.*** and Ueno, R.***)
- Kureha, M. (2014): Changes in Japanese ski resorts with the development of inbound tourism: A case study of Niseko-Hirafu District, Hokkaido. *Asia Pacific World*, 5(2), 32-43.
- (2014): Regional pattern of lost and closed ski fields in Japan. *Journal of Ski Science*, 11(1), 27-42. (**JE**)
- (2014): Continuous development of ski resorts in the Austrian Alps. *Geographical Space*, 7, 149-168. (**JE**)
- (2014): Tourism (A survey of geographical studies in Japan 2013). *Japanese Journal of Human Geography*, 66, 285-287. (**J**)
- (2014): Ski resorts in Japan in the era of tourism globalization. In Matsumura, K., Ishioka, T. and Murata, S. eds., *The sociology of "development and tourism"*. Nansosha, 85-101. (**J**)
- (2014): Tourism in the Alps: Switzerland, Austria and Bavaria. In Yamamoto, K. and Hirakawa, K. eds., *Central and Northern Europe*. Asakura-Shoten, 278-290. (**J**)
- (2014): Introduction to the special issue on "To-

- kyo: Past, present, and future (part II)". *Journal of Geography*, **122**, 159-162. (with Kikuchi, T.^{o**}, Maruyama, S.^{**}, Inazaki, T.^{**}, Kumaki, Y.^{**}, Sano, O.^{**}, Sugai, T.^{**} and Marui, A.^{**})
- _____ (2014): Preface for the special issue on "Tokyo: Past, present, and future (part II)". *Journal of Geography*, **122**, 163-171. (*J*, with Kikuchi, T.^{o**}, Maruyama, S.^{**}, Inazaki, T.^{**}, Kumaki, Y.^{**}, Sano, O.^{**}, Sugai, T.^{**} and Marui, A.^{**})
- _____ (2014): Tokyo Skytree, high-rise buildings, and Mt. Fuji. *Journal of Geography*, **123(4)**, Cover04_01. (*JE*)
- _____ (2014): Waterfront space in Tokyo: Sumida River -from transportation space to tourism space (Pictorial 1). *Journal of Geography*, **123(4)**, xi. (*JE*)
- _____ (2014): Waterfront Tokyo as a tourism space (Pictorial 2). *Journal of Geography*, **123(4)**, xii. (*JE*)
- _____ (2014): Discussion of conclusion for the special issue on "Tokyo: Past, present, and future". *Journal of Geography*, **123**, 614-627. (*J*, with Kikuchi, T.^{o**}, Inazaki, T.^{**}, Kumaki, Y.^{**}, Sano, O.^{**}, Sugai, T.^{**} and Marui, A.^{**})
- _____ (2014): Overview of the special issue on "Tokyo: Past, present, and future (part III)". *Journal of Geography*, **123**, 628-633. (with Kikuchi, T.^{o**}, Inazaki, T.^{**}, Kumaki, Y.^{**}, Sano, O.^{**}, Sugai, T.^{**} and Marui, A.^{**})
- _____ (2014): Afterword of the special issue on "Tokyo: Past, present, and future (part III)". *Journal of Geography*, **123**, 634-641. (*J*, with Kikuchi, T.^{o**}, Inazaki, T.^{**}, Kumaki, Y.^{**}, Sano, O.^{**}, Sugai, T.^{**} and Marui, A.^{**})
- _____ (2015): The practice and educational effects of field trip in Tyrol, Austria: A case of the course "Field works on regional geography A" held at the University of Tsukuba (College of Geoscience, School of Life and Environmental Sciences). *Studies in Human Geography*, **35**, 15-30. (*J*, with Kaneko, J.^o)
- Tsutsumi, J. (2014): Expanding Australian metropolitan areas and related structural change. In Kikuchi, T. and Oda, H. eds., *Regional Geography in the World Series 7: Southeast Asia and Oceania*. Asakura Shoten, 129-138. (*J*)
- _____ (2014): Socio-economic differences in terms of spoken language - Gentrification in Sydney metropolitan area. *Statistics (Zasshi Toukei)*, **65(6)**, 42-45. (*J*)
- _____ (2014): Recent trend of resource trade in the state of Western Australia. *Geographical Space*, **7**, 83-93. (*J*, with Isono, T.^{***}, Yoshida, M.^{**} and Yeh, C.^{**})
- _____ (2014): Vertical extension processes and urban restructuring in Sydney, Australia. In O'Donoghue, D. P. ed., *Urban Transformations: Centres, Peripheries and Systems*. Ashgate Publishing, 121-128.
- _____ (2014): <Book Review> Edgington, D. W. (2010): *Reconstruction KOBE - The geography of crisis and opportunity* – Translated by Kagawa, T. and Kubo, T. in 2014. *Annals of the Japan Association of Economic Geographers*, **60**, 335-336. (*J*)
- _____ ed. (2015): *Urban Geography of Post-Growth Society*. Tohoku University Press. Sendai, 258p. (with Hino, M.^{**})
- _____ (2015): Utilisation of augmented reality (AR) information system in geography education - Development and practice of fieldwork materials. *Bulltin Report of Environmental Symbiosis Research*, **8**, 11-24. (*J*, with Akimoto, H.^{**}, Itoh, S.^{**}, Ugawa, Y.^{**}, Fukuchi, A.^{**} and Ida, Y.^{*})
- Yamashita, A. (2014): Geospatial analysis of urban landscape patterns in three major cities of Southeast Asia. *Tsukuba Geoenvironmental Sciences*, **10**, 3-10. (with Estoque, R. C.^o, Murayama, Y. and Kamusoko, C.^{**})
- _____ (2014): Aspects of water environmental issues in Jakarta due to its rapid urbanization. *Tsukuba Geoenvironmental Sciences*, **10**, 43-50.
- _____ (2015): *Regional aspects of water environmental issues*. Kokon-Shoin, Tokyo, 196p. (*J*)
- _____ (2015): Disaster risk and residents' awareness of disaster prevention in Saku City, Nagano Prefecture, Japan. *Annals of Human and Regional Geography*, **37**, 81-103. (*J*, with Yagasaki, T.^{o***}, Yamanaka, H.^{***} and Lian, M.^{***})
- _____ (2015): Analysis of the characteristics of Japanese major river basins with GIS and mesh data. *Studies in Human Geography*, **35**, 1-14. (*J*, with Kim, Y.^{***} and Ishizaka, M.^{***})

[c] Spatial Information Science

- Kusaka, H. (2014): Mechanism of precipitation increase with urbanization in Tokyo as revealed by ensemble climate simulations. *J. Appl. Meteor. Clim.*, **53**, 824-839. (with Nawata, K.^{**}, Suzuki-Parker, A.^{*}, Takane, Y.^{**} and Furuhashi, N.^{**})
- _____ (2014): A Polyethylene Chamber for Use in Physical Modelling of the Heat Exchange on Surfaces Exposed to a Radiation Regime. *Boundary-Layer Meteorology*, **153(2)**, 305-325. (with Okada, M.^{o**})
- _____ (2014): Climatological study of the heavy precipitation around the Nobi plain in summer. *Tenki*, **61(8)**, 661-667. (*J*, with Kuno, Y.^{o**})
- _____ (2014): A climatological study of fog in Japan based on event data. *Atmos. Res.*, **151**, 200-211. (with Akimoto, Y.^{o*})
- _____ (2014): Future projection of thermal environment in Japan using WBGT. *Japanese Journal of Biometeorology*, **52(1)**, 59-72. (*J*, with Suzuki-Parker, A.^{o*})
- Morimoto, T. (2014): Spatial pattern of agriculture using GIS

- and small area statistics. *Proceedings of the JPGU Annual Meeting*, HTT34-09, 1p. (J)
- _____ (2015): A geographical data bank on the productivity of agriculture in Japan. *Annual Report on the Multi Use Social and Economic Data Bank*, **92**, 73-80. (J)
- Murayama, Y. (2014): Measuring sustainability based upon various perspectives: A case study of a hill station in Southeast Asia. *AMBIO*, **43**, 943-956. (with Estoque, R. C.°)
- _____ (2014): Real-time geospatial data collection and visualization with smartphone. *Journal of Geographic Information Systems*, **6**, 99-108. (with Lwin, K. K.° and Hashimoto, M.***)
- _____ (2014): Tsunami vulnerability assessment in the Southern Boso Peninsula, Japan. *International Journal of Risk Reduction*, **10A**, 190-200. (with Voulgaris, G.****)
- _____ (2014): Social-ecological status index: A preliminary study of its structural composition and application. *Ecological Indicators*, **43**, 183-194. (with Estoque, R. C.°)
- _____ (2014): Comparison of urban landscape patterns in three major cities of Southeast Asia: A geospatial approach. *Tsukuba Geoenvironmental Sciences*, **10**, 3-10. (with Estoque, R. C.°, Kamusoko, C.** and Yamashita, A.)
- _____ (2014): Mobility and urban structure: A Case study of four capital cities in Asia. *Tsukuba Geoenvironmental Sciences*, **10**, 33-42. (with Greger, K.****)
- _____ (2014): Experimental study on smart tracking and geo-event data warehousing system for person trip surveying. *Tsukuba Geoenvironmental Sciences*, **10**, 51-55. (with Lwin, K. K.° and Hashimoto, M.***)
- _____ (2014): Comparative analysis of urban land changes in the major cities of Southeast Asia. *Proceedings of the Geographic Information Systems Association Conference*, **23**, 5p. (CD-ROM). (with Estoque, R. C.°)
- _____ (2014): Analysis of tourist dynamics in metropolitan areas using people flow data. *Proceedings of the Geographic Information Systems Association Conference*, **23**, 4p. (CD-ROM). (with Sugimoto, K.°)
- _____ (2015): Land-use/cover changes in megacities in Asia and Africa. *Annual Report on the Multi Use Social and Economic Data Bank*, **92**, 17-64. (with Estoque, R. C.°, Subasinghe, H.***, Hou, H.*** and Gong, H.***)
- _____ (2015): Intensity and spatial pattern of urban land changes in the megacities of Southeast Asia. *Land Use Policy*, **48**, 213-222. (with Estoque, R. C.°)
- _____ (2015): Classification and change detection of built-up lands from Landsat-7 ETM+ and Landsat-8 OLI/TIRS imageries: A comparative assessment of various spectral indices. *Ecological Indicators*, **56**, 205-217. (with Estoque, R. C.°)
- _____ (2015): Identification of suitability of sites for microenterprises for value chain development: A study in Gazipur District, Bangladesh. *Growth and Change*, **46**, 274-291. (with Syeda, K.****)
- _____ (2015): History of geographical information systems and geographical information science. In Asami, Y. et al. eds., *Geographic Information Science: GIS Standards*. Kokon-shoin, Tokyo, 8-15. (J)
- _____ (2015): Pixel-based and object-based classifications using high- and medium-spatial-resolution imageries in the urban and suburban landscapes. *Geocarto International*, in press. (with Estoque, R. C.° and Akiyama, C. M.**)
- _____ (2015): Modeling deforestation in Dzalanyama Forest Reserve, Lilongwe, Malawi: A multi-agent simulation approach. *GeoJournal*, in press. (with Munthali, K. G.****)

[d] Hydrologic Sciences

- Asanuma, J. (2014): Impact of soil parameter and physical process on reproducibility of hydrological processes by land surface model in semiarid grassland. *American Geophysical Union, Fall Meeting 2014, abstract*, #A43F-3341. (with Miyazaki, S.***, Yorozu, K.** , Kon-do, M.** and Saito, K.**)
- _____ (2015): Spatial and seasonal variations of CO₂ flux and photosynthetic and respiratory parameters of larch forests in East Asia. *Soil Science and Plant Nutrition*, **61(1)**, 61-75. (with Takagi, K.***, Hirata, R.** , Ide, R.** , Ueyama, M.** , Ichii, K.** , Saigusa, N.** , Hirano, T.** , Li, S-G.** , Machimura, T.** , Nakai, Y.** , Ohta, T.** and Takahashi, Y.**)
- _____ (2014): Satellite-Based Analysis of Evapotranspiration and Water Balance in the Grassland Ecosystems of Dryland East Asia. *PLoS one*, doi:10.1371/journal.pone.0097295. (with Xia, J.***, Yuan, W.** , Liang, S.** , Chen, J.** , Li, L.** , Li, X.** , Zhang, L.** , Fu, Y.** , Zhao, T.** , Feng, J.** , Ma, Z.** , Ma, M.** , Liu, S.** , Zhou, G.** , Chen, S.** , Du, M.** , Davaa, G.** , Kato, T.** , Liu, Q.** , Liu, S.** , Li, S.** , Shao, C.** , Tang, Y.** and Zhao, X.**)
- Sugita, M. (2014): Evaporation from Lake Kasumigaura: annual totals and variability in time and space. *Hydrological Research Letters*, **8**, 103-107. (with Ikura, H.** , Miyano, A.** , Yamamoto, K.** and Wei, Z.**)
- _____ (2014): Limiting factors for nomadic pastoralism in Mongolian steppe: a hydrologic perspective. *Journal of Hydrology*, **524**, 455-467. (with Yoshizawa, S.** and Byambakhuu, I.**)
- Tsujimura, M. (2014): 3D simulation of a multi-stressed coastal aquifer, northeast of Tunisia: salt transport pro-

- cesses and remediation scenarios. *Environmental Earth Sciences*, DOI 10.1007/s12665-014-3495-z. (with Chekirbane, A.^{****}, Kawachi, A., Isoda, H.^{*}, Tarhouni, J.^{**} and Benalaya, A.^{**})
- _____ (2014): Use of a time-domain electromagnetic method with geochemical tracers to explore the salinity anomalies in a small coastal aquifer in north-eastern Tunisia. *Hydrogeology Journal*, DOI 10.1007/s10040-014-1180-7. (with Chekirbane, A.^{****}, Kawachi, A., Isoda, H.^{*} and Tarhouni, J.^{**})
- _____ (2014): Chemical characteristics of surface water and groundwater in coastal watershed, Mekong Delta, Vietnam. *Procedia Environmental Sciences*, **20**, 712-721. (with An, T. D.^{****}, Phu, V.^{**}, Kawachi, A. and Ha, D. T.^{**})
- _____ (2014): Groundwater recharge revealed by multi-tracers approach and EMMA in semi-arid irrigated village, Heihe River Basin, Northwest China. *Journal of Arid Land Studies*, **24**(1), 97-100. (with Abe, Y.^{***} and Nakawo, M.^{**})
- _____ (2014): Temporal and Spatial Variation of Stable Isotopic Composition in Precipitation in Central Headwater, Japan: A Case in Mt. Ontake. *Journal of Japanese Association of Hydrological Sciences*, **44**(2), 67-77. (**JE**, with Asai, K.^{***} and Fantong, W. Y.^{**})
- _____ (2014): *Physical Geography*. Minerva, Tokyo, 324p. (**J**, with Matsuyama, H.^{**}, Kawase, K.^{**}, Takaoka, S.^{**} and Miura, H.^{**})
- Yamanaka, T. (2013): Hydrochemical characteristics and genesis analysis of the Jifei hot spring in Yunnan, southwestern China. *Geothermics*, **53**, 38-45. (with Liu, Y.^{***}, Zhou, X.^{**}, Deng, Z.^{**}, Fang, B.^{**}, Zhao J.^{**} and Wang, X.^{**})
- _____ (2013): Combined use of tracer approach and numerical simulation to estimate groundwater recharge in an alluvial aquifer system: A case study of Nasunogahara area, central Japan. *Journal of Hydrology*, **519**, 833-847. (with Ma, W.^{****}, Liu, Y.^{***}, Zhou, X.^{**} and Tian, F.^{**})
- _____ (2013): Year-to-year variation in snowmelt runoff from a small forested watershed in the mountainous region of central Japan. *Hydrological Research Letters*, **8**, 90-95. (with Wakiyama, Y.[°])
- _____ (2014): Different isotopic evolutionary trends of $\delta^{34}\text{S}$ and $\delta^{18}\text{O}$ compositions of dissolved sulfate in an anaerobic deltaic aquifer system. *Applied Geochemistry*, **45**, 30-42. (with Hosono, T.^{***}, Lorphensriand, O.^{**}, Onodera, S.^{**}, Okawa, H.^{**}, Nakano, T.^{**}, Tsujimura, M.^{**} and Taniguchi, M.^{**})
- _____ (2014): Application of a two-source model for partitioning evapotranspiration and assessing its controls in temperate grasslands in central Japan. *Ecohydrology*, **7**, 345-353. (with Wang, P.^{****})
- _____ (2014): Snowmelt contribution to discharge from mountains in a snow-dominated region, northern central Japan. *AOGS 11th Annual Meeting*, July 28 - August 1, Sapporo, Japan. (with Ueno, K.^{**} and Wakiyama, Y.^{*})
- _____ (2014): Isoscapes – a new trend of isotopic tracer use. *Shinrin-Gijutsu*, **876**, 8-11. (**J**)
- _____ (2014): Vadose zone hydrology and groundwater recharge. In Taniguchi, M. and Hiyama, T. eds., *Groundwater as a Key for Adaptation to Changing Climate and Society*, Springer, New York, 29-44.

[e] Atmospheric Science

- Tanaka, H. L. (2014): Analysis of unstable solution with an MJO structure using a three-dimensional spectral linear baroclinic model. *SOLA*, **10**, 103-107. (with Yamagami, A.^{***})
- _____ (2014): *Global Warming: The Mechanism and Uncertainty. Chap. 6.4 and 6.5*. Meteorological Society of Japan. Asakura Publ. 69-73. (**J**)
- _____ (2014): *Chigaku Kiso. Textbook. (Revised Version)*. Ed. Morimoto, Jikkyo Ltd. 191 p. (**J**)
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