

List of Publications

The following articles arranged in each research field were published by our faculty members during April 2017 to March 2018. Our department and/or research groups also published the following publications.

- 1) *Annals of Human and Regional Geography*, 40 (2018)
- 2) *Studies in Human Geography*, 38 (2018)

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

Akiyama, C. (2017): Population Distribution Characteristics analyzed by the Grid Square Statistics Data. In: Education Committee in GIS Association of Japan (eds.). *GIS Teaching Materials for Utilizing Geospatial Information*. Kokon shoin, 60-65. (**J**)

_____ (2017): Approach from discovery to solution of regional issues by Geography and its neighboring fields. *E-journal GEO*, 12(2), 322-328. (**J**)

_____ (2018): The Centrality and Its Transformation of Tsuchiura City in Ibaraki Prefecture from a Viewpoint of Urban System Theory. *Annals of Human and Regional Geography*, 40, 1-25. (**J**, with Honda, H.°, Arimura, T.°, Sano, H.° and Ge, Y.°)

_____ (2018): Changing lake use of fishery and leisure on Lake Kasumigaura. *Annals of Human and Regional Geography*, 40, 149-180. (**J**, with Komuro, J.°, Li, Y.°, Suzuki, S.°, Nagasaki, H.°, Zhang, R.°, Nagura, K.°, Hashizume, K.° and Tabayashi, A.°)

_____ (2018): Changes in Water Pollutant Emission from Miyagi and Fukushima Prefectures Before and After the Great East Japan Earthquake. *Annual journal of Hydraulic Engineering, JSCE*, 62, I_541-I_546. (**JE**, with Higashi, H.°, Watanabe, H.° and Tange, H.°)

Matsui, K (2018): Sustainability of anime tourism in

terms of repeater's tourism behavior: Case on "Girls &Panzer" in Oarai, Ibaraki Prefecture. *Studies in Human Geography*, 38, 13-43. (**J**, with Sato, S.°, Watanabe, J.°, Sakamoto, Y.°, Kawazoe, W.° and Kiba, K.°)

_____ (2018): Characteristics of Anime Pilgrimage Behavior of "Girls & Panzer" fun in Sacred Place, Oarai Town. *Studies in Human Geography*, 38, 45-58. (**J**, with Kiba, K.°, Sato, S.°, Watanabe, J.°, Kawazoe, W.°, Sakamoto, Y.°, Uda, T.°, Ishizaka, M.° and Hata, T.°)

_____ (2018): Preface. *Annals of Human and Regional Geography*, 40, i-iii. (**J**)

_____ (2018): Changes of Festivals in Provincial City: An Analysis of Correspondence to Tsuchiura Yasaka Shrine's Parisioner. *Annals of Human and Regional Geography*, 40, 51-74. (**J**, with Sakamoto, Y.°, Ishizaka, M.°, Takechi, K.°, Zhou, A.°, Iwai, Y.°, Shinohara, K.° and Bay, Y.°)

_____ (2018): The Development of Tourist Space in Mt. Tsukuba: Focus on Changing of Regional Characteristics of Monzen-machi. *Annals of Human and Regional Geography*, 40, 181-218. (**J**, with Inomata, Y.°, Okada, K.°, Kiba, K.°, Kato, Y.°, Matsumura, K.°, Yamamoto, J.° and Liu, B.°)

_____ (2017): New Geography Education and Diversity of the World in terms of Life and Culture. *New Geography*, 65(3), 106-116. (**J**)

[b] Regional Geography

Kureha, M. (2017): *Development process of ski resorts: A comparative study of Japan and Austria*. Ninomiya-Shoten. (**J**)

_____ (2017): Tourism and climate. In Yamakawa, S. et al. eds., *Encyclopedia of climatic variations*. Asakura Shoten, 152-155. (**J**)

_____ (2017): Practice of international excursion in Austrian Tyrol and its educational effects. *Geographical Space*, 10, 97-110. (**J**, with Sakamoto, Y.°, Inomata, Y.°, Okada, K.°, Matsumura, K.° and Tsutsumi, J.)

_____ (2018): Tourism in the era of globalization. In Yagasaki, N. et al. eds., *Globalization: The shrinking world*. Asakura Shoten, 90-100. (**J**)

Tsutsumi, J. (2017): Practice of international excursion in Austrian Tyrol and its educational effects. *Geographical Space*, 10, 97-110. (**J**, with Sakamoto, Y.°,

- Inomata, Y.^{***}, Okada, K.^{***}, Matsumura, K.^{***} and Kureha, M.)
 _____ eds. (2018): *Contemporary Transformation of Urban Societies in Australia*. Tsukuba University Press. 200p. (J)
- Yamashita, A. (2018): Fieldwork methodology on commercial area and database building of commercial land use in a local city in South Korea. *Geographical Space*, **10**, 236-246. (J, with Hashimoto, A.^{***}, Jeon, J.^{**}, Komaki, N.^{**}, Yamamoto, T.^{**}, Kaneko, J.^{**} and Lee, H.^{**})
- _____ (2018): Landscape change of Jemincheon and regional revitalization in Gongju City, South Korea. *Geographical Space*, **10**, 247-257. (J)
- _____ (2018): The characteristics of canal conservation policies and regional functions of canals in Kanazawa City. *Studies in Human Geography*, **38**, 1-12. (J)
- _____ (2018): Water resources problems due to uneven distribution of water supply and demand. In Yagasaki, N., Morishima, W. and Yokoyama, S. eds., *Topics on regional geography 3: Sustainability*. Asakura Publishing, Tokyo, 24-35. (J)
- [c] Spatial Information Science**
- Kusaka, H. (2017): Review of Downslope Windstorms in Japan. *Wind & Structures*, **24**(6), 637-656. (with Fudayasu, H.^{**})
- _____ (2017): Foehnlike wind with a traditional foehn effect plus dry-diabatic heating from the ground surface contributing to high temperatures at the end of a leeward area. *Journal of Applied Meteorology and Climatology*, **56**(7), 2067-2079. (with Takane, Y.^{***}, Kondo, H.^{**}, Katagi, J.^{**}, Nagafuchi, O.^{**}, Nakazawa, K.^{**}, Kaneyasu, N.^{**} and Miyakami, Y.^{**})
- _____ (2017): Observation for Temporal Open Burning Frequency and Estimation for Daily Emissions caused by Open Burning of Rice Residue. *Journal of Japan Society for Atmospheric Environment Taiki Kankyo Gakkaishi*, **52**(4), 105-117. (JE, with Tomiyama, H.^{***}, Tanabe, K.^{**}, Chatani, S.^{**}, Kobayashi, S.^{**}, Fujitani, Y.^{**}, Furuyama, A.^{**}, Sato, K.^{**}, Fushimi, A.^{**}, Kondo, Y.^{**}, Sugata, S.^{*}, Morino, Y.^{**}, Hayasaki, M.^{**}, Oguma, H.^{**}, Ide, R.^{**} and Takami, A.^{**})
- _____ (2017): Green Space and Deaths Attributable to the Urban Heat Island Effect in Ho Chi Minh City. *A Publication of the American Public Health Association*, (with Tran, N. D.^{***}, Doan, Q. V.^{**}, Xerxes, T. S.^{**} and Honda Y.^{**})
- _____ (2018): Characteristics of third typhoon category “high-temperature typhoons” - Comparisons with rain and wind typhoons -. *Bulletin of geo-environmental science*, **20**, 185-191. (J, with Suzuki-Parker A.^{***} and Watarai Y.^{**})
- Murayama, Y. (2018): Map and GIS for supporting the new geography education. *Science Journal KAGAKU*, **88**(2), 157-161. (J)
- _____ (2018): Internationalization of Japanese geography: Contribution to the world. *Trend in Sciences*, **23**(7), 48-53. (J)
- _____ (2018): Spatiotemporal simulation of future land use/cover change scenarios in the Tokyo metropolitan area. *Sustainability*, **10**(6), 1-18. (with Wang, R.^{***} and Derdouri, A.^{***})
- _____ (2018): Simultaneous comparison and assessment of eight remotely sensed maps of Philippine forests. *International Journal of Applied Earth Observation and Geoinformation*, **67**, 123-134. (with Estoque, R. C.^{***}, Pontius, R. G.^{**}, Hou, H.^{**}, Thapa, R. B.^{**}, Lasco, R. D.^{**} and Villar, M.^{**})
- _____ (2018): Spatial changes of urban heat island formation in the Colombo district, Sri Lanka: Implications for sustainability planning. *Sustainability*, **10**(5), 1367, 1-21. (with Ranagalage, M.^{***}, Estoque, R. C.^{**}, and Zhang, X.^{***})
- _____ (2018): Spatiotemporal patterns of urban land use change in the rapidly growing city of Lusaka, Zambia: Implications for sustainable urban development. *Sustainable Cities and Society*, **39**, 262-274. (with Simwanda, M.^{***})
- _____ (2018): Estimation of built-up and green volume using geospatial techniques: A case study of Surabaya, Indonesia. *Sustainable Cities and Society*, **37**, 581-593. (with Handayani, H. H.^{***}, and Estoque, R. C.^{**})
- _____ (2018): Relation between urban volume and land surface temperature: A comparative study of planned and traditional cities in Japan. *Sustainability*, **10**(7), 2366, 1-17. (with Ranagalage, M.^{***}, Estoque, R. C.^{**}, Handayani, H. H.^{***}, Zhang, X.^{***}, Morimoto, T. and Tadono, T.^{**})
- _____ (2017): Validating ALOS PRISM DSM-derived surface feature height: Implications for urban volume estimation. *Tsukuba Geoenvironmental Sciences*, **13**, 13-22. (with Estoque, R. C.^{***}, Ranagalage, M.^{***}, Hou, H.^{**}, Handayani, H. H.^{***} and Zhang X.^{***})
- _____ (2017): Monitoring surface urban heat island formation in a tropical mountain city using Landsat data (1987–2015). *ISPRS Journal of Photogrammetry and Remote Sensing*, **133**, 18-29. (with Estoque, R. C.^{***})
- _____ (2017): An internet-based GIS platform pro-

viding data for visualization and spatial analysis of urbanization in major Asian and African cities. *ISPRS International Journal of Geo-Information*, **6**(8), 257, 1-17. (with Gong, H.**** and Simwanda, M.***)

_____ (2017): Evaluating neighborhood environment and utilitarian walking behavior with big data: A case study in Tokyo Metropolitan Area. In Zhou, C., Su, F., Harvey, F., Xu, J. eds., *Spatial Data Handling in Big Data Era*. Springer, 75-91. (with Hou, H.***)

_____ (2017): Urban growth evaluation: A new approach using neighborhood characteristics of remotely sensed land use data. In Zhou, C., Su, F., Harvey, F., Xu, J. eds., *Spatial Data Handling in Big Data Era*. Springer, 181-196. (with Subasinghe, S.***)

[d] Hydrologic Sciences

Asanuma, J. (2017): Validation of SMAP surface soil moisture products with core validation sites. *Remote Sensing of Environment*, **191**, 215-231. (with Colliander, A.***, Jackson, T.** , Bindlish, R.** , Chan, S.** , Das, N.** , Kim, S.** , Cosh, M.** , Dunbar, R.** , Dang, L.** , Pashaian, L.** , Aida, K.* , Berg, A.** , Rowlandson, T.** , Bosch, D.** , Caldwell, T.** , Caylor, K.** , Goodrich, D.** , al Jassar, H.** , Lopez-Baeza, E.** , Martinez-Fernandez, J.** , Gonzalez-Zamora, A.** , Livingston, S.** , McNairn, H.** , Pacheco, A.** , Moghaddam, M.** , Montzka, C.** , Notarnicola, C.** , Niedrist, G.** , Pellarin, T.** , Prueger, J.** , Pulliainen, J.** , Rautiainen, K.** , Ramos, J.** , Seyfried, M.** , Starks, P.** , Su, Z.** , Zeng, Y.** , van der Velde, R.** , Thibeault, M.** , Dorigo, W.** , Vreugdenhil, M.** , Walker, J.** , Wu, X.** , Monerris, A.** , O'Neill, P.** , Entekhabi, D.** , Njoku, E.** and Yueh, S.**)

_____ (2018): GCOM-W AMSR2 soil moisture product validation using core validation sites. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **11**(1), 209-219. (with Bindlish, R.** , Cosh, M.** , Jackson, T.** , Koike, T.** , Fujii, H.** , Chan, S.** , Berg, A.** , Bosch, D.** , Caldwell, T.** , Collins, C.** , McNairn, H.** , Martinez-Fernandez, J.** , Prueger, J.** , Rowlandson, T.** , Seyfried, M.** , Starks, P.** , Thibeault, M.** , van der Velde, R.** , Walker, J.** and Coopersmith, E.**)

_____ (2018): Development and assessment of the SMAP enhanced passive soil moisture product. *Remote Sensing of Environment*. **204**, 931-941. (with Chan, S.*** , Bindlish, R.** , O'Neill, P.** , Jackson, T.** , Njoku, E.** , Dunbar, S.** , Chaubell, J.** , Piepmeier, J.** , Yueh, S.** , Entekhabi, D.** , Colliander, A.** , Chen, F.** , Cosh, M.** , Caldwell, T.** , Walker, J.** , Berg, A.** , McNairn, H.** , Thibeault, M.** , Martin-

ez-Fernandez, J.** , Uldall, F.** , Seyfried, M.** , Bosch, D.** , Starks, P.** , Collins, C. H.** , Prueger, J.** , van der Velde, R.** , Palecki, M.** , Small, E.** , Zreda, M.** , Calvet, J.** , Crow, W.** and Kerr, Y.**)

Sugita, M. (2017): Crop evapotranspiration in the Nile Delta under different irrigation methods. *Hydrological Sciences Journal*, **62**, 1618-1635. (with Matsuno, A.*** El-Kilani, R. M. M.** , Abdel-Fattah, A.** and Mahmoud, M. A.**)

_____ (2018): Do windbreaks reduce the water consumption of a crop field? *Agricultural and Forest Meteorology*, **250-251**, 330-342.

Tsujimura, M. (2018): Corroborating stable isotopic data with pumping test data to investigate recharge and groundwater flow processes in a fractured rock aquifer, Rivirivi Catchment, Malawi. *Environmental Earth Sciences*, **77**(6), DOI: <https://doi.org/10.1007/s12665-018-7403-9>. (with Kambuku, D.**** , Kagawa, S.** and Mdala, H.**)

_____ (2018): Tracking the direct impact of rainfall on groundwater at Mt. Fuji by multiple analyses including microbial DNA. *Biogeosciences*, **15**, 721-732. (with Sugiyama, A.**** , Masuda, S.** , Nagaosa, K.** and Kato, K.**)

_____ (2018): Groundwater recharge and flow processes as revealed by stable isotopes and geochemistry in fractured Hornblende-biotite-gneiss, Rivirivi Catchment, Malawi. *African Journal of Environmental Science and Technology*, **12**(1), 1-14. (with Kambuku, D.**** and Kagawa, S.**)

_____ (2017): Isotopic and Hydrogeochemical Signatures in Evaluating Groundwater Quality in the Coastal Area of the Mekong Delta, Vietnam. *Advances and Applications in Geospatial Technology and Earth Resources*, DOI: https://doi.org/10.1007/978-3-319-68240-2_18. (with An, T. D.**** , Phu, V. L.** , Ha, D. T.** and Hai, N. V.**)

_____ (2017): Quantitative Analysis of Transient Intertidal Submarine Groundwater Discharge in Coastal Aquifer of Western Japan. *Proceedings of the National Academy of Sciences, India Section A: Physical Sciences*, **87**, 423-432. (with Kumar, P.** , Saraswat, C.** , Srivastava, P.K.** , Kumar, M.** and Avtar, R.**)

_____ (2017): Vertical distribution and temporal dynamics of dissolved ¹³⁷Cs concentrations in soil water after the Fukushima Dai-ichi Nuclear Power Plant accident. *Environmental Pollution*, **230**, 1090-1098. (with Iwagami, S.*** , Onda, Y.* , Hada, M.** and Pun, I.**)

_____ (2017): Review and prospect of groundwater age dating using sulfur hexafluoride. *Journal*

- of *Groundwater Hydrology*, **59**, 87-103. (**JE** with Sakakibara, K.^{****} and Asai, K.^{**})
- Yamanaka, T. (2017): Regional assessment of recharge elevation of tap water sources using the isoscape approach. *Mountain Research and Development*, **37**, 198-205. (with Yamada, Y.^{***})
- _____ (2017): Comparing root water uptake profile estimations from an isotope-calibrated mechanistic model and a mixing model. *Hydrological Research Letters*, **11**, 161-167. (with Kimura, T.^{***}, Sun, X.^{**}, Kato, H.^{*} and Onda, Y.^{*})
- _____ (2017): Change in geographic names and lost history. *Chiri*, **62**(5), 4-9. (**J**)
- _____ (2017): Reconstructing changed geographic names and estimating their etymologies. *Chiri*, **62**(6), 58-62. (**J**)
- _____ (2017): Propagation of culture as viewed from geographic names. *Chiri*, **62**(7), 79-83. (**J**)
- _____ (2018): A multiple time scale modeling investigation of leaf water isotope enrichment in a temperate grassland ecosystem. *Ecological Research*, **33**, <https://doi.org/10.1007/s11284-018-1591-3>. (with Wang, P.^{**}, Li, X.-Y.^{**}, Wu, X.^{**}, Chen, B.^{**}, Liu, Y.^{**}, Wei, Z.^{**} and Ma, W.^{*})
- [e] Atmospheric Science**
- Tanaka, H. L. (2017): Atmospheric Science of the Earth. Introduction to Modern Earth Science Series 3. Kyoritsu Pub. 305p. (**J**)
- _____ (2017): Extreme Arctic cyclone in August 2016. *Atmospheric Science Letters*, DOI: 10.1002/asl.757. (with Yamagami, A.^{****} and Matsueda, M.^{*})
- _____ (2018): Multi-decadal variability in planetary albedo. *Abstract, Fifth International Symposium on Arctic Research*, January 15-18, 2018, Hitotsubashi Hall, Tokyo, Japan, S1-O04. (with Ito, K.^{***})
- _____ (2018): Analysis of cloud formation process for arctic cyclone in the non-hydrostatic icosahedral grid model. *Abstract, Fifth International Symposium on Arctic Research*, January 15-18, 2018, Hitotsubashi Hall, Tokyo, Japan, G01-O06. (with Kurihana, T.^{****})
- _____ (2018): Medium-range forecast skill for Arctic cyclone. *Abstract, Fifth International Symposium on Arctic Research*, January 15-18, 2018, Hitotsubashi Hall, Tokyo, Japan, S02-O10. (with Yamagami, A.^{****} and Matsueda, M.^{*})
- _____ (2018): On the natural component of climate change. *Abstract, Fifth International Symposium on Arctic Research*, January 15-18, 2018, Hitotsubashi Hall, Tokyo, Japan, S1-O01. (with Akasofu, S.^{***})
- Ueda, H. (2018): A unique feature of the Asian summer monsoon response to global warming: The role of different land– sea thermal contrast change between the lower and upper troposphere. *SOLA*, **14**, 57–63, doi:10.2151/sola.2018-010. (with Endo, H.^{****} and Kitoh, A.^{**})
- _____ (2017): Atmospheric rivers over the North-western Pacific: Climatology and interannual variability. *J. Climate*, **30**, 5605–5619, doi:10.1175/JCLI-D-16-0875.1. (with Kamae, Y.^{**}, Mei, W.^{**}, Xie, S.-P.^{**} and Naoi, M.^{***})
- _____ (2017): Seasonal modulation of the Asian summer monsoon between the Medieval Warm Period and Little Ice Age: a multi model study. *Prog. Earth Planet. Sci.*, **4**, 22. (with Kamae, Y.^{**}, Kawana, T.^{***} and Oshiro, M.^{***})
- _____ (2017): Atlantic effects on recent decadal trends in global monsoon. *Clim. Dyn.*, doi:10.1007/s00382-017-3522-3. (with Kamae, Y.^{**}, Li, X.^{**} and Xie, S.-P.^{**})
- _____ (2017): South-coast cyclone in Japan during El Nino-caused warm winters. *Asia-Pacific J. Atmos. Sci.*, doi:10.1007/s13143-017-0025-4. (with Amagai, Y.^{***} and Hayasaki, M.^{**})
- Ueno, K. (2017): Diurnal and seasonal variation of air temperature profile in the mountain forest at Sugadaira, central Japan. *Tsukuba Geoenvironmental Sciences*, **13**, 1-12. (with Ueda, S.^{***}, Kanai, R.^{*}, Masaki, D.^{*}, Sato, Y.^{*}, Rin, S.^{***} and Hirota, M.)^{*}
- _____ (2017): Mountains, *Science palette*, Maruzen, p176. (with Watanabe T.^{**})
- _____ (2017): Observing mountain weather variability in Japan. *International workshop on climate downscaling studies. Abstract*, P16, Oct. 2-4, Tsukuba, Japan.
- [f] Geomorphology**
- Hattanji, T. (2017): Factors controlling weathering rates of carbonate rocks in soil: An approach from a field weathering experiment. *J. Geogr.*, **126**, 355–367. (**JE**, with Matsukura, Y.^{*})
- _____ (2017): Subsurface hydrological processes in slope around shallow landslides induced by Typhoon 26 in Izu-Oshima Island. *Trans. Japanese Geomorph. Union*, **38**, 265–279. (**JE** with Takeda, N.^{****}, Matsushi, Y.^{**} and Terajima, T.^{**})
- _____ (2017): Topographic characteristics of rainfall-induced shallow landslides on granitic hillslopes: A case study in Hofu City, Yamaguchi Prefecture, Japan. *Tsukuba Geoenvironmental Sciences*, **13**, 23–29. (with Yamashita, K.^{****}, Tanaka, Y.^{**}, Doshida, S.^{**} and Matsushima, T.^{*})

- _____ (2017): Report on excursion of the academic meeting of the Association of Japanese Geographers, spring 2017: Landform evolution and natural disasters in Kinugawa and Kokaigawa lowlands. *E-journal Geo*, **12**, 181–183. (*J* with Koarai, M. **, Sato, H. P. ** and Izumida, A. **)
- Matsuoka, N. (2017): Soil physical and environmental conditions controlling patterned ground variability at a continuous permafrost site, Svalbard. *Permafrost Periglac. Process.*, **28**, 433–445. (with Watanabe, T. **, Christiansen, H. H. ** and Cable, S. **)
- _____ (2017): Physical rock weathering: Linking laboratory experiments, field observations, and natural features. *J. Geogr.*, **126**, 369–405. (*JE*, with Waragai, T. ** and Wakasa, S. **)
- _____ (2017): Overview of the special issue “Rock weathering from nanoscale to global scale: 1. Microscopic weathering and basic studies”. *J. Geogr.*, **126**, 263–265. (*JE*, with Oguchi, T. C. **, Fukushi, K. **, Matsushi, Y. ** and Yokoyama, T. **)
- _____ (2017): Overview of the special issue “Rock weathering from nanoscale to global scale: 2. Macroscopic weathering and applied studies”. *J. Geogr.*, **126**, 407–408. (*JE*, with Oguchi, T. C. **, Fukushi, K. **, Matsushi, Y. ** and Yokoyama, T. **)
- _____ (2017): Toward the establishment of mountain science: Multidisciplinary approach to the problems in mountain areas. *E-journal Geo*, **12**, 147–150. (*J*, with Watanabe, T. ** and Yokoyama, S. **)
- _____ (2018): Frost sorting on slopes by needle ice: A laboratory simulation on the effect of slope gradient. *Earth Surf. Process. Landf.*, **43**, 685–694. (with Li, A. ** and Niu, F. **)

