CURRICULUM VITAE

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1. Research Interests:

Terrestrial Hydrology
Global Water Resources Modeling and Assessment
Climate Change Impact & Adaptation
Land Surface and Hydrological Modeling
Land Surface and Hydrological Remote Sensing
Snow and Glacier Modelling
Detection and Attribution of Historical Hydrologic Change

2. Education:

- B.S., Department of Civil Engineering, Shibaura Institute of Technology (1999)
- M.S., Department of Civil Engineering, The University of Tokyo (2001)
- Ph.D., Department of Civil Engineering, The University of Tokyo (2004)

3. Job History:

- 2017: Associate Professor, Institute of Industrial Science, The University of Tokyo
- 2009-2017: Associate Professor, Institute of Engineering Innovation, Graduate School of Engineering, The University of Tokyo
- 2007-2009: Oversea Research Fellow, Japan society for the Promotion of Science (2-year visiting researcher at University of Frankfurt am Main)
- 2004-2009: Research Associate (or Assistant Professor), Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi

4. Major services and honors:

- Editorial Board Member (Advisory Board, 2014 Oct.-), Scientific Reports
- Editorial Board Member, Hydrological Research Letters (2014-)
- Best Paper Award, 2014, Japan Society of Civil Engineering (Envinronment)
- Best Paper Award, 2014, Japan Society of Hydrology and Water Resources
- Science Steering Group for the 4th PUB Biennium, 2009-2011, International Association of Hydrological Science (IAHS)
- Tison Award, 2009, International Association of Hydrological Sciences (IAHS)
- Best Paper Award, 2006, Japan Society of Civil Engineering (Hydraulic)

5. Researcher ID:

E-5628-2010

6. List of Publications:

1. Sasaki, O., O. Noguchi, Y. Zhang, Y. Hirabayashi and S. Kanae (2016): A global high-resolution map of debris on glaciers derived from multi-temporal ASTER images, The Cryosphere Discuss., doi:10.5194/tc-2016-222.
2. Kundzewicz, Z., V. Krysanova, R. Dankers, S. Kanae, Y. Hirabayashi, F. Hattermann, S. Huang, P.C.D. Milly, M. Stoffel, P. Driessen, P. Matczak, P. Quevauviller, J. Schellnhuber (2016): Differences in flood hazard projections in Europe – their causes and consequences for decision making, Hydrological Sciences Journal, 62, 1-14.
3. Trigg, M., C. Birch, J. Neal, P. Bates, A. Smith, C. Sampson, D. Yamazaki, Y. Hirabayashi, F. Pappenberger, E. Dutra, P. Ward, H. Winsemius, P. Salamon, F. Dottori, R. Rudari, M. Kappes, A. Simpson, G. Hadzilacos, T. Fewtrell, The credibility challenge for global fluvial flood risk analysis (2016): Environ. Res. Lett., 36201.
4. Hirabayashi, Y., K. Nakano, Y. Zhang, S. Watanabe, M. Tanoue, S. Kanae (2016): Estimating natural and anthropogenic contributions to negative mass change in global glaciers and quantifying their uncertainties, Scientific Reports, 20723.
5. Zhang, Y., H. Enomoto, T. Ohata, H. Kitabata, T. Kadota, Y. Hirabayashi (2016): Projections of glacier change in the Altai Mountains under twenty-first century climate scenarios, Climate Dynamics, 47, 2935-2953.
6. Ikeuchi, H., Y. Hirabayashi, D. Yamazaki, S. Koirala, M. Kiguchi, S. Kanae (2015): Future fluvial flood risk with the effect of sea level rise in the Ganges-Brahmaputra-Meghna Delta, Environ. Res. Lett., 10(12), 124011.
7. Zhang, Y., Y. Hirabayashi, K. Fujita, S. Liu, Q. Liu (2015): Heterogeneity in supraglacial debris thickness and its role in glacier mass changes of the Mount Gongga, Science China-Earth Sciences, 59, 170-184.
8. Zhang, Y., Y. Hirabayashi, Q. Liu, S. Liu (2015): Glacier runoff and its impact in a highly glacierized catchment in the southeastern Tibetan Plateau: past and future trends, Journal of Glaciology, 61, 713-730, doi:10.3189/2015JoG14J188.
9. Maheswor, S., T. Koike, Y. Hirabayashi, Y. Xue, L. Wang, G. Rasul, B. Ahmad (2015): Integrated simulation of snow and glacier melt in water and energy balance-based distributed hydrological modeling framework at Hunza River Basin of Pakistan KArakoram region Journal of Geophys. Res., 120 (10), 4889-4919.
10. Koirala, S., P.J.F. Yeh, Y. Hirabayashi, S. Kanae, T. Oki, (2014): Global-scale land surface hydrologic modeling with the representation of water table dynamics, J. Geophys. Res., 119, 75-89, doi:10.1002/2013JD020398.
11. Koirala, S., Y. Hirabayashi, R. Mahendran, S. Kanae, (2014): Global assessment of agreement among streamflow projections using CMIP5 model outputs, Environ. Res. Lett., 9, 064017, doi:10.1088/1748-9326/9/6/064017.
12. Yoshikawa, S., A. Yanagawa, Y. Iwasaki, P. Sui, S. Koirala, K. Hirano, A. Khajuria, R. Mahendran, Y. Hirabayashi, C. Yoshimura, S. Kanae, (2014): Illustrating a new global-scale approach to estimating potential reduction in fish species richness due to flow alteration, Hydrol. Earth Syst. Sci., 18, 621-630, doi:10.5194/hess-18-621-2014.
13. Maheswor, S., L. Wang, T. Koike, H. Tsutsui, Y. Xue and Y. Hirabayashi (2014): Correcting basin-scale snowfall in a mountainous basin using a distributed snowmelt model and remote-sensing data, Hydrol. Earth Syst. Sci., 18, 747-761, doi:10.5194/hess-18-747-2014.
14. Watanabe, S., Y. Hirabayashi, S. Kotsuki, N. Hanasaki, K. Tanaka, C.M.R. Mateo, M. Kiguchi, E. Ikoma, S. Kanae, T. Oki, (2014): Application of performance metrics to climate models for projecting future river discharge in the Chao Phraya River basin, Hydrol. Res. Lett., 8(1), 33-38,

10.3178/hrl.8.33.

15. Yamazaki, D., T. Sato, S. Kanae, Y. Hirabayashi, P.D. Bates, (2014): Regional flood dynamics in a bifurcating mega delta simulated in a global river model, Geophys. Res. Lett., 41(9), 3127-3135, 10.1002/2014GL059744.
16. Nakano, K., Y. Zhang, Y. Shibuo, H. Yabuki, Y. Hirabayashi (2013): Development of a monitoring system of mountain glaciers and ice caps from satellite data at 30 meter resolution, Hydrological Research Letters, 7(3), 73-78, doi:10.3178/hrl.7.73.
17. Hirabayashi, Y., Y. Zhang, S. Watanabe, S. Koirala, S. Kanae, (2013): Proection of glacier mass changes under a high-emission climate scenario using the global glacier model HYOGA2, Hydrological Research Letters, 7(1), 6-11. **【cited in IPCC AR5 WG1】**
18. Hirabayashi, Y., R. Mahendran, S. Koirala, L. Konoshima, D. Yamazaki, S. Watanabe, H. Kim, S. Kanae, (2013): Global flood risk under climate change, Nature Climate Change, 3, 816-821. **【cited in IPCC AR5 WG2】**
19. Watanabe, S., S. Kanae, S. Seto, P. J.-F. Yeh, Y. Hirabayashi, and T. Oki (2012): Intercomparison of bias-correction methods for monthly temperature and precipitation simulated by multiple climate models, J. Geophys. Res., 117, D23114, doi:10.1029/2012JD018192.
20. Zhang, Y., Y. Hirabayashi, S. Liu (2012): Catchment-scale reconstruction of glacier mass balance using observations and global climate data: case study of the Hailuogou catchment, south-eastern Tibetan Plateau, Journal of Hydrology, 444-445, 146-160.
21. Maheswor, S., L. Wang, T. Koike, Y. Xue, Y. Hirabayashi (2012): Modeling the spatial distribution of snow cover in the Dudhkoshi region of Nepal Himalaya, Journal of Hydrometeorology, 13, 204-222.
22. Yamada, T. J., S. Kanae and Y. Hirabayashi (2012): The onset of the West African monsoon simulated in a high-resolution atmospheric general circulation reanalyzed soil moisture fields, Atmospheric Sciences Letters, 13, 103-107, doi:10.1002/asl.367.
23. Maheswor, S., L. Wang, T. Koike, Y. Xue and Y. Hirabayashi (2012): Modeling the spatial distribution of snow cover in the Dudhkoshi region of Nepal Himalaya, Journal of Hydrometeorology, 13, 204-222.
24. He, B., S. Kanae, T. Oki, Y. Hirabayashi, Y. Yamashiki, K. Takara (2011): Assessment of global nitrogen pollution in rivers using an integrated biogeochemical modeling framework, Water Research, 45(8), 2573-2586, doi:10.1016/j.watres.2011.02.011.
25. Maheswor S., L. Wang, T. Koike, Y. Xue, Y. Hirabayashi (2010): Improving the snow physics of WEB-DHM and its point evaluation at the SnowMIP sites, Hydrology and Earth System Sciences, 14, 2577-2594, doi:10.5194/hess-14-2577-2010.
26. Hirabayashi Y., P. Doll, S. Kanae (2010): Global-scale modeling of glacier mass balances for water resources assessments: glacier mass changes between 1948 and 2006, J. Hydrology, 390, 245-256, doi:10.1016/j.jhydrol.2010.07.001.
27. Kundzewicz, Z.W., Y. Hirabayashi, S. Kanae (2010): River floods in the changing climate - observations and projections, Water Resources Management, 24, 2633-2646, doi: 10.1007/s11269-009-9571-6.
28. Kundzewicz, Z. W., N. Lugeri, R. Dankers, Y. Hirabayashi, P. Döll, I. Pinskwar, T. Dysarz, S. Hochrainer and P. Matczak (2010): Assessing river flood risk and adaptation in Europe - review of projections for the future, Mitigation and Adaptation Strategies for Global Change, 15(7), 641-656, doi:10.1007/s11027-010-9213-6.
29. Hirabayashi, Y., and S. Kanae, (2009): First estimate of the future global population at risk of flooding, Hydrological Research Letters, 3, 6-9.
30. Hirabayashi, Y., S. Kanae, K. Motoya, K. Masuda, P. Doell (2008): A 59-year (1948-2006) global near-surface meteorological data set for land surface models. Part II: Global snowfall estimation,

Hydrological Research Letters, 2, 65-69.

31. Rutter, N., R. Essery, J. Pomeroy, N. Altimir, K. Andreadis, I. Baker, A. Barr, P. Bartlett, A. Boone, H. Deng, H. Douville, E. Dutra, K. Elder, C. Ellis, X. Feng, A. Gelfan, A. Goodbody, Y. Gusev, D. Gustafsson, R., Y. Hirabayashi, T. Hirota, T. Jonas, V. Koren, A. Kuragina, D. Lettenmaier, LeWei-P. Li, C. Luce, E. Martin, O. Nasonova, J. Pumpanen, R. D. Pyles, P. Samuelsson, M. Sandells, G. Schädler, A. Shmakin, T.G. Smirnova, M. Stähli, R. Stöckli, U. Strasser, H. Su, K. Suzuki, K. Takata, K. Tanaka, E. Thompson, T. Vesala, P. Viterbo, A. Wiltshire, K. Xia, Y. Xue, T. Yamazaki (2009): Evaluation of forest snow processes models (SnowMIP2).Jounal of Geophysical Research,114, 10.1029/2008JD011063.
32. Hirabayashi, Y., S. Kanae, S. Emori, T. Oki, M. Kimoto (2008): Global projections of changing risks of floods and droughts in a changing climate, Hydrological Sciences Journal, 53, 754-772.
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33. Hirabayashi, Y., S. Kanae, K. Motoya, K. Masuda, P. Doell (2008): A 59-year (1948-2006) global near-surface meteorological data set for land surface models. Part I: Development of daily forcing and assessment of precipitation intensity, Hydrological Research Letters, 2, 36-40.
34. Kiem, A.S., H. Ishidaira, H.P. Hapuarachchi, M. C. Zhou, Y. Hirabayashi and K. Takeuchi (2008), Future hydroclimatology of the Mekong River basin simulated using the high-resolution Japan Meteeorological Agency (JMA) AGCM, Hydrological Processes, 22, 1382-1394.
35. Kanae, S., Y. Hirabayashi, T. Yamada and T. Oki (2006): Influence of "realistic" land-surface wetness on predictability of seasonal precipitation in boreal summer, J. Climate, 19, 1450-1460.
36. Hirabayashi, Y., S. Kanae, I. Struthers, T. Oki (2005): A 100-year (1901-2000) global retrospective estimation of the terrestrial water cycle, J. Geophys. Res., 110(D19), D19101, doi:10.1029/2004JD005492.