

Shuping Li

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EDUCATION

- **Department of Civil Engineering, The University of Tokyo, Tokyo, Japan**
2020.09 - 2024.09 Ph.D. Hillslope Hydrology
- **Rutgers University-New Brunswick, New Brunswick, New Jersey, US**
2023.03 Visiting scholar
- **School of Geography and Planning, Sun Yat-sen University (SYSU), Guangzhou, China**
2017.09 - 2019.07 M.E. Hydraulic Engineering
2013.09 - 2017.07 B.E. Hydrology and Water Resources Engineering

WORK EXPERIENCES

- **The University of Tokyo, Tokyo, Japan**
2024.10 - Present Project researcher
- **The University of Tokyo, Tokyo, Japan**
2023.10 - 2024.09 Research assistant
- **South China Institute of Environmental Sciences, Guangzhou, China**
2019.07 - 2020.08 Research intern

RESEARCH INTERESTS

- Hydrological modeling at hillslope scale in land surface model
- Impact of hillslope water dynamics on land cover heterogeneity
- Interaction between soil moisture and vegetation dynamics
- Land-atmosphere interaction
- Groundwater flooding impact assessment

RESEARCH EXPERIENCES

- ***Reveal sub-grid land surface process by representing horizontal hydrological process in land surface model***
The catchment-based strategy is implemented in land surface model MATSIRO to reproduce the horizontal hydrological process, which reveals some land surface processes that occur extensively at sub-grid scale.
- ***Hillslope water dynamics extensively control land cover heterogeneity***
A catchment-based strategy is proposed to concisely resolve the land cover heterogeneity, with which the globally extensive distribution of landscapes that controlled by hillslope water dynamics are delineated. Results underscore the importance of resolving the sub-grid heterogeneity in land surface modeling
- ***Soil moisture-vegetation interaction based on in-situ soil moisture measurement***
The in-situ SM dataset of the International Soil Moisture Network (ISMN) is employed to analyze the interaction between leaf area index (LAI) and SMs from different depths under different conditions of climates, land covers and plant rooting depths.

PUBLICATIONS

- **Li, S.***, Yamazaki, D., Zhou, X., Zhao, G. (2024). Where in the World Are Vegetation Patterns Controlled by Hillslope Water Dynamics? *Water Resources Research*, 60(4). <https://doi.org/10.1029/2023WR036214>
- **Li, S.***, & Sawada, Y. (2022). Soil moisture-vegetation interaction from near-global in-situ soil moisture measurements. *Environmental Research Letters*, 17(11). <https://doi.org/10.1088/1748-9326/ac9c1f>
- Li, W., Fang, H., Qin, G., Tan, X., Huang, Z., Zeng, F., Du, H.*, **Li, S.***. (2020). Concentration estimation of dissolved oxygen in Pearl River Basin using input variable selection and machine learning techniques. *Science of the Total Environment*, 731, 139099. <https://doi.org/10.1016/j.scitotenv.2020.139099>

- Tang, G*, **Li, S.**, Yang, M., Xu, Z., Liu, Y., & Gu, H. (2019). Streamflow response to snow regime shift associated with climate variability in four mountain watersheds in the US Great Basin. *Journal of Hydrology*, 573(March), 255–266. <https://doi.org/10.1016/j.jhydrol.2019.03.021>

TECHNICAL BOOKS

- MATSIRO6 document writing team, Guo, Q., Kino, K., **Li, S.**, Nitta, T., Takeshima, A., Suzuki, K. T., et al. (2021). Description of MATSIRO6. Runoff (Chapter 9) and Tile scheme (Chapter 13) <http://dx.doi.org/10.15083/0002000181>

CONFERENCE PRESENTATIONS

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|---|---------|-----------------------------------|-----------------------------|---------------|
| ● | 2024.12 | <i>AGU Fall meeting</i> | <i>Washington, D.C., US</i> | <i>Poster</i> |
| ● | 2024.09 | <i>JSHWR-JAHS-2024 conference</i> | <i>Tokyo, Japan</i> | <i>Oral</i> |
| ● | 2024.07 | <i>GEWEX Conference</i> | <i>Sapporo, Japan</i> | <i>Oral</i> |
| ● | 2022.12 | <i>AGU Fall meeting</i> | <i>Chicago, US</i> | <i>Oral</i> |
| ● | 2022.09 | <i>JSHWR-JAHS-2022 conference</i> | <i>Kyoto, Japan</i> | <i>Oral</i> |
| ● | 2022.05 | <i>JpGU Annual meeting</i> | <i>Chiba, Japan</i> | <i>Oral</i> |
| ● | 2021.12 | <i>AGU Fall meeting</i> | <i>New Orleans, US</i> | <i>Poster</i> |

INVITED TALKS

- Shuping Li: Resolving Hillslope Land Cover Heterogeneity Improves Simulation of Terrestrial Energy and Water Budgets, UKCEH-UTokyo Global Hydrology seminar series, Online, 2025.03
- Shuping Li: Soil moisture-vegetation correlation from 3239 in-situ soil moisture observations, The Undergraduate Forum of Global Water Issues, Dept. of Hydraulic Engineering, Tsinghua University, Online, 2022.01

MEDIA REPORTS

- Finding Where the Grass is Greener. Press release, Institute of Industrial Science, The University of Tokyo, 2024.05. <https://www.iis.u-tokyo.ac.jp/en/news/4529/>

AWARDS

- Best presentation in HSP2021, Hydrosphere Environmental Group of Civil Engineering Department of Graduate School of Engineering, The University of Tokyo, 2021.07.
- Outstanding award in national undergraduate training program for innovation, School of Geography and Planning, Sun Yat-sen University, 2015-2016

GRANTS

- Kurata Grant, The Hitachi Global Foundation, **1,000,000 JPY**, 2025.03-2026.03.
- Travel support for the 9th GEWEX Open Science Conference, **53,000 JPY**, 2024.07.
- Musha Shugyo travelling grant for academic visit, provided by the School of Engineering, The University of Tokyo, **450,000 JPY**, 2023.03.
- Grant for Dispatch to International Research Meetings, provided by Foundation for the Promotion of Industrial Science (FPIS), **361,000 JPY**, 2022.12.
- MEXT scholarship, provided by the Ministry of Education, Culture, Sports, Science and Technology of Japan, **148,000 JPY/Mon**, 2020.09 - 2023.09.

ACADEMIC SERVICE

- Reviewer of *Journal of Hydrology*, *Journal of Advances in Modeling Earth Systems (JAMES)*, *Scientific Reports*, *Environmental Monitoring and Assessment*.

SKILLS

- **Model:** MATSIRO (Land surface model) CaMa-Flood (Hydrodynamic model)
CHESS (Eco-hydrological model)
- **Coding:** Python R Fortran MATLAB
C++ Shell script Markdown
- **Software:** Microsoft Office ArcGIS Adobe Illustrator GIT
Google Earth Engine
- **Equipment:** PICARRO (Greenhouse gases analyzer) Dynamax sapflow system & weather station
- **Language:** English (TOFEL 98) Japanese (JLPT N1) Mandarin/Cantonese (native)