You Li, D.Eng.

Senior Researcher, Asia-Japan Research Institute, Ritsumeikan University, Japan

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Research Interests

- Solar Energy & Solar Radiation
- Peer-to-peer Energy Sharing
- Virtual Power Plant
- Energy Transition Analysis
- Building Energy System

Research & Education Experiences

- **Senior Researcher**   2023/4-present, **Ritsumeikan University (THE 201-300), Japan**
- **D.Eng. in Environmental Engineering**   2020/10-2023/4, **The University of Kitakyushu**
  (Advisor: Prof. Hiroatsu Fukuda & Weijun Gao)
- **M.Eng. in Environmental Engineering**   2018/10-2020/9, **The University of Kitakyushu**
  (Advisor: Prof. Hiroatsu Fukuda)
- **B.Eng. in Architecture**   2013/9-2018/6, **Zhejiang A&F University**

Honors & Awards

- **Highly Skilled Foreign Professionals (Academic)**   Ministry of Justice, Japan (2023)
- **Best Paper Award**   The 3rd International Conference of iSMART (2022)
- **Monbukagakusho Honors Scholarship**   Japan Student Services Organization (2019 & 2018)
- **Excellence Award**   Japan Institute of Architects, Japan-Korea joint workshop (2018)
- **FAW-Volkswagen My Land, My Hometown Charity Scholarship**   FAW-Volkswagen Charity funding (2018)
- **Third Prize**   The 3rd Zhejiang College Students' Rural Planning Creative Design Competition (2017)
- **Academic Scholarship**   Zhejiang A&F University (2017 & 2015)

Funded projects (PI)

1. **Research on a knowledge-based solar radiation prediction and resource spatiotemporal distribution.** Ritsumeikan University, 2024/4-2025/3, JPY 1,000,000.

2. **Solar Radiation Forecasting with Hybrid Deep Learning Framework integrating Feature Factorization.** Ritsumeikan University, Program to Support the Submission to High-Impact Journals, 2024/4-2025/3, JPY 824,000.

3. **Multi-scale carbon footprint analysis of zero-carbon campus and research on optimal decarbonization evolution path.** Hangzhou City University, 2023/8-2024/7, CNY 30,000.

4. **Comparative study on urban development and happiness evaluation indexes in China and Japan.** Ritsumeikan University, 2023/4-2024/3, JPY 580,000.

5. **Diffuse radiation-based thermal assessment and component optimization for university campuses considering weather stochasticity.** Ritsumeikan University, 2023/4-2024/3, JPY 198,000.

Selected Fundings (Participant)

1. **Research on Green Recovery and the Realization of Carbon Neutrality in East Asia.** Ritsumeikan University, 2022/4-2025/3, JPY 20,000,000.

2. **A comparative study of ecological design and implementation of zero-carbon campus in China and Japan.** Ritsumeikan University, 2022/4-2024/3, JPY 4,000,000.

First/ Corresponding Author Publications

*: Corresponding Author +: Co-corresponding Author.

1. Li, Y., Wang, Y.*, Zhou, R., Qian, H., Gao, W., & Zhou, W. (2024). **Energy transition roadmap towards net-zero communities: A case study in Japan.** *Sustainable Cities and Society*, 100, 105045. 🔗

2. Li, Y., Wang, Y.*, Yao, W., Gao, W., Fukuda, H., & Zhou, W. (2023). **Graphical decomposition model to estimate hourly global solar radiation considering weather stochasticity.** *Energy Conversion and Management*, 286, 116719. 🔗

3. Li, Y., Qian, F.*, Gao, W., Fukuda, H., & Wang, Y. (2022). **Techno-economic performance of battery energy storage system in an energy sharing community.** *Journal of Energy Storage*, 50, 104247. 🔗

4. Li, Y., Wang, Y.*, Qian, H., Gao, W., Fukuda, H., & Zhou, W. (2023). **Hourly global solar radiation prediction based on seasonal and stochastic feature.** *Heliyon*, 9(9). 🔗

5. Li, Y., Wang, Y.*, Fukuda, H., Gao, W., & Qian, F. (2022). **Analysis of energy sharing impacts in a commercial community: A case of battery energy storage system deployment for load leveling.** *Frontiers in Energy Research*, 10, 929693. 🔗

6. Wang, Y., Li, Y.*, Zheng, Y., Gao, W. (2024), **Solar Radiation Forecasting with Hybrid Deep Learning Framework integrating Feature Factorization.** *Human-centric Computing and Information Sciences*, Acceptance Notification.

7. Longfor, N. R., Hu, J., Li, Y.*, Qian, X., & Zhou, W. (2023). **Scientometric Trends and Knowledge Gaps of Zero-Emission Campuses.** *Sustainability*, 15(23), 16384. 🔗

8. Wang, Y., Gao, W.*, Li, Y.+, Qian, F., & Yao, W. (2023). **Techno-economic analysis of the transition toward the energy self-sufficiency community based on virtual power plant.** *Frontiers in Energy Research*, 11, 1010846. 🔗

9. Li, Y., Wang, Y.*, Zheng, Y., Qian, H., & Zhou, W. (2024). **Numerical Feature Preprocessing Method for Daily Solar Radiation Pattern Classification.** *Lecture Notes in Electrical Engineering*, In publication.

10. Wang, Y., Li, Y.*, & Gao, W. (2024). **Load Leveling Potential Evaluation of Virtual Power Plant based on Genetic Algorithm Optimization.** *Lecture Notes in Electrical Engineering,* In publication.

Collaborative Publications

1. Wang, Y., Gao, W.*, Qian, F., & Li, Y. (2021). **Evaluation of economic benefits of virtual power plant between demand and plant sides based on cooperative game theory.** *Energy Conversion and Management*, 238, 114180. 🔗

2. Yang, H., Xu, S., Gao, W., Wang, Y., Li, Y., & Wei, X*. (2024). **Mitigating long-term financial risk for large customers via a hybrid procurement strategy considering power purchase agreements.** *Energy*, 131038. 🔗

3. Yang, H., Gao, W., Wei, X.*, Wang, Y., & Li, Y. (2024). **Techno-economic comparative analysis of PV third–party ownership between customer and developer sides in Japan.** *Journal of Energy Storage*, 80, 110062. 🔗

4. Xu, T., Wang, X., Wang, Y., Li, Y., Xie, H., Yang, H., ... & Shi, C.* (2023). **Integration of sewage source heat pump and micro-cogeneration system based on domestic hot water demand characteristics: A feasibility study and economic analysis.** *Process Safety and Environmental Protection*, 179, 796-811. 🔗

5. Zhou, R., Fukuda, H., Li, Y., & Wang, Y. (2023). **Comparison of Willingness to Pay for Quality Air and Renewable Energy Considering Urban Living Experience.** *Energies*, 16(2), 992. 🔗

Oral Presentations

1. **Kyoto City Low Carbon Construction Level Index Evaluation Report (Keynote Speech).** *The 2nd Japan-China Decarbonized City Forum*, 2023/12, Hangzhou, China.

2. **Numerical Feature Preprocessing Method for Daily Solar Radiation Pattern Classification.** *The 15th International Conference on Computer Science and its Applications*, 2023/12, Nha Trang, Vietnam.

3. **Energy transition roadmap towards net-zero communities**, *Sino-Japanese Academic Symposium on Sustainable Development*, 2023/12, Huzhou, China.

4. **Graphical decomposition model to estimate hourly global solar radiation considering weather stochasticity.** *The 12th Congress of Asian Association of Environmental and Resource Economics*, 2023/08, Tokyo, Japan.

5. **Development of prediction models and research on regional energy sharing based on solar energy**. *2023 Hangzhou Sustainability Workshop*, 2023/09, Hangzhou, China.

6. **A multi-disciplinary collaborative framework towards a zero-carbon campus**. *Ritsumeikan university-Hangzhou City University Zero Carbon Campus Workshop*, 2023/05, Hangzhou, China.

7. **Optimum Sizing of Commercial Photovoltaic Battery System for Load Leveling.** *The 19th International symposium and conference of Asia Institute of Urban Environment*, 2022/12, Yokohama, Japan.

8. **The Sharing Potential of Battery Energy Storage System in a Community: A Review.** *The 3rd International Conference of iSMART*, 2022/3, Qingdao, China.

9. **The Benefit of Aggregated Control of Distributed Battery Energy Storage System.** *The 18th International symposium and conference of Asia Institute of Urban Environment*, 2021/12, Kitakyushu, Japan.

10. **The Sustainable Protection Mode of Historical Block: A Study of Historical Renewal in Hangzhou.** *The 3rd International Conference on Green Urbanism (GU)*, 2019/12, Roma, Italy.

Volunteering

- **Visiting Researcher** 2023/12-2026/11, **Hangzhou Dual-carbon Research Center**
- **Member** 2023/04- present, **Japan Society of Energy and Resources**
- **Member** 2024/04- present, **Architectural Institute of Japan**

Technical Strength

- **Languages**: Mandarin (Very fluent), Japanese (Fluent), English (Fluent).
- **Programming Languages**: MATLAB, R, Python.
- **Other Skills**: Sketchup, Photoshop, Illustrator.

Referrers

- **Professor Hiroatsu Fukuda**
  Ph.D. Advisor
  Professor, Faculty of Environmental Engineering, **The University of Kitakyushu**
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- **Professor Weijun Gao**
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  Professor, Faculty of Environmental Engineering, **The University of Kitakyushu**
  Foreign Fellow, **Engineering Academy of Japan**
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