

Andante Hadi Pandyaswargo

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Profile

Academic researcher specializing in environmental and energy systems, municipal waste management, smart technologies, sustainable mobility, renewable energy, and life cycle assessment. Research and teaching experience span Waseda University and Tokyo Institute of Technology, with additional policy and development exposure through appointments at IGES, ADB, UNU, and Bosch.

Research Interests

Social Aspects of Smart Technologies; Renewable Energy; Life Cycle Assessment; Biomass Energy Conversion; Municipal Waste Management; Electric Vehicle; Sustainable Development

Academic Appointments

Researcher (Associate Professor) <i>Environmental Research Institute, Waseda University</i>	Apr, 2023 – Present
Junior Researcher (Assistant Professor) <i>Environmental Research Institute, Waseda University</i>	Apr, 2020 – Mar, 2023
Assistant Professor (Lecturer) <i>Graduate School of Environment and Energy Engineering, Waseda University</i>	Apr, 2018 – Mar, 2020
Associate Professor (Lecturer) <i>Transdisciplinary Science and Engineering Department, Tokyo Institute of Technology</i>	Feb, 2015 – Mar, 2017
Assistant Professor <i>International Development Engineering Department, Tokyo Institute of Technology</i>	Aug, 2013 – Feb, 2015

Earlier Professional Experience

Intern <i>Kitakyushu Urban Center, Institute for Global Environmental Strategies (IGES)</i>	May, 2012 – Aug, 2012
Intern <i>South Asia Urban Development and Water Division, Asian Development Bank (ADB)</i>	Jun, 2011 – Aug, 2011
Intern <i>Institute for Advanced Studies, United Nations University (UNU)</i>	Dec, 2010 – Jun, 2011
Intern <i>Higashimatsuyama Plant, Robert Bosch GmbH.</i>	Apr, 2010 – Sep, 2010

Education

Doctoral Course in Graduate School of Environment and Energy Engineering, Department of Science and Engineering <i>Waseda University, Japan</i>	Sep, 2010 – Mar, 2013
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Degree: Doctor of Engineering (Mar, 2013)

Master's of Science Programme in International Cooperation Policy, Asia Pacific Studies
Oct, 2008 – Sep, 2010

Ritsumeikan Asia Pacific University, Japan

Master's of Engineering Programme in International Material Flow Management, Institute for Applied Material Flow Management
Oct, 2008 – Sep, 2010

Trier University of Applied Sciences, Germany

Bachelor in Social Science, Asia Pacific Studies
Apr, 2004 – Mar, 2008

Ritsumeikan Asia Pacific University, Japan

Selected Publications

Inclusivity assessment of digitalizing public transportation in the Jakarta Metropolitan Area

Andante Hadi Pandyaswargo, Vicka Kharisma, Meilinda Fitriani Nur Maghfiroh, Abdul Baits Dehana Padma Swastika, Almira Hanifa, Baihaqi Muhammad, Maya Larasati, Hiroshi Onoda

Journal of Public Transportation Apr 2026

Linking Food Waste Composition to Anaerobic Digestion Performance Using Integrated Kinetic Modeling, Statistical Assessment, and Metagenomic Analysis

Khairunnisa Nur Madani, Hanifrahmawan Sudibyoy, Ahmad Suparmin, Lisendra Marbelia, Jirasin Koonthongkaew, Bhumini Than-ardna, Apanee Luengnaruemitchai, Andante Hadi Pandyaswargo, W Budhijanto

Energy & Fuels Apr 2026

Development and Application of Breakdown T&BRL, a Novel Evaluation Framework for Social Implementation Assessment: A Case Study on Mobility Robot Devices

Gen Kudo, Andante Hadi Pandyaswargo, Hiroshi Onoda

International Journal of Automation Technology Jan 2026

Technology Readiness of Biomass Waste-to-Energy in Indonesia: A Multistakeholder Assessment of Anaerobic Digestion of Palm Oil Mill Effluent and Municipal Organic Waste

Nanda Asridinan Noor, Andante Hadi Pandyaswargo, Meita Rumbayan, Hiroshi Onoda

Energies Jan 2026

Research trends in the total cost of ownership for electric vehicles: A systematic literature review

Muhammad Indra al Irsyad, Ika Inayah, Reninta Dewi Nugraheni, Andante Hadi Pandyaswargo, Nina Konitat Supriatna, Alloysius Joko Purwanto, Arfie Ikhsan Firmansyah, V. Tri Frebrina Harisetyawan, Yohanes Gunawan, I. Gusti Ngurah Agung Surya Pradipta Negara, Fitria Astuti Firman

Energy for Sustainable Development, 87, 101746–101746 Aug 2025

A bottom-up approach for greenhouse gas emission estimation at the community level: A case study in Japan

Ruixi Zhao, Andante Hadi Pandyaswargo, Hiroshi Onoda

Energy Oct 2024

Redesigning Municipal Waste Collection for Aging and Shrinking Communities

- Andante Pandyaswargo, Chaoxia Shan, Akihisa Ogawa, Ryota Tsubouchi, Hiroshi Onoda
Smart Cities May 2024
- Japanese public perceptions on smart bin potential to support PAYT systems**
Chaoxia Shan, Andante Hadi Pandyaswargo, Akihisa Ogawa, Ryota Tsubouchi, Hiroshi Onoda
Waste Management, 177, 278–288 Apr 2024
- Exploring Japan’s older adults mobility challenges and the potential role of autonomous vehicles**
Andante Hadi Pandyaswargo, Tifani Husna Siregar, Hiroshi Onoda
Transportation Research Part A: Policy and Practice, 176, 103818–103818 Oct 2023
- Demonstration of a contactless waste collection system: A Japanese case study**
Akihisa Ogawa, Andante Hadi Pandyaswargo, Ryota Tsubouchi, Hiroshi Onoda
IET Smart Cities, 5(4), 303–316 Sep 2023
- Socio-techno-economic assessment to design an appropriate renewable energy system for remote agricultural communities in developing countries**
Andante Hadi Pandyaswargo, Alan Dwi Wibowo, Hiroshi Onoda
Sustainable Production and Consumption, 31, 492–511 2022

Selected Honors and Awards

- BEST PRESENTER, *Between Awareness and Action: Understanding Public Participation in Waste Sorting and Waste Bank Programs*, The 4th International Conference on Research Collaboration of Environmental Science (ICRC), May, 2025
- BEST PRESENTER, *Current Readiness of Automated Sorting Technologies for Municipal Solid Waste*, The 5th International Conference on Environmental and Sustainable Development (ICESD 2024), Sep, 2024
- Best Paper Award, *Readiness Status of Artificial Intelligence Application on Electric Vehicle: A mini global review and analysis using the J-TRA method*, International Conference on Engineering and Information Technology for Sustainable Industry 2022, Sep, 2022
- Best Presentation Award, *Reusing Solar Panels to Improve Access to Information and Communication in an Off-grid Village: A Financial Feasibility Assessment*, The 4th International Conference on Clean Energy and Electrical Systems, Apr, 2022

Teaching Experience

- Climate and Energy Transition: Overview on Southeast Asia, Jilin University, China, Jan, 2022
- Global Urban Transitions: Processes and Outcomes, Waseda University / Osaka University / Tsukuba University, Nov, 2019
- Environment and Energy Business Practical Lecture, Waseda University
- Environment and Energy Engineering A:Seminar/Environment and Energy A :Practice, Waseda University
- Introduction to International Development, Tokyo Institute of Technology

Research Project Grants

Toward Sustainable Systems for Organic Waste-to-Energy in Southeast Asia: A Spatial Socio-Techno-Economic Assessment Apr, 2026 – Mar, 2029

Japan Society for the Promotion of Science, Grant-in-Aid for Scientific Research (C)

Grant number: 26K15287

Improving the Sustainability of Resource Recovery from Wet Biomass Waste: Experimentally-Validated GIS-Based Integrated Biorefineries for Cleaner Mobility Apr, 2025 – Mar, 2028

e-ASIA Joint Research Program (e-ASIA JRP)

Core researcher; Acronym: BioMove: Sustainable Mobility from Biomass Waste; participating countries: Japan, Philippines, Indonesia, Thailand

Improving the social acceptance of smart technologies: A people-centric approach for sustainable smart waste management and smart mobility technologies Apr, 2023 – Mar, 2026

Japan Society for the Promotion of Science, Grant-in-Aid for Scientific Research (C)

Principal investigator; Grant number: 23K11548

Addressing the sustainability challenges of off-grid renewable energy systems: The smart community reverse innovation Apr, 2021 – Mar, 2023

Japan Society for the Promotion of Science, Grant-in-Aid for Early-Career Scientists

Principal investigator; Grant number: 21K17930

Feasibility Study on Social Implementation of Bioenergy in East Asia Apr, 2017 – Mar, 2020

e-ASIA Joint Research Program (e-ASIA JRP)

Core researcher; Japan Science and Technology Agency, Strategic International Collaborative Research Program (JST SICORP)