

# **CURRICULUM VITAE**

(Version: June 2025)

## **Dr. Bing-Chen Jhong**

Assistant Professor

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80424, Taiwan (R.O.C.)

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## **EDUCATION**

Sep 2008 – Jun 2015    **National Taiwan University (NTU)**

Ph.D., Department of Civil Engineering

Sep 2004 – Jun 2008    **National Cheng Kung University (NCKU)**

B.S., Department of Hydraulic and Ocean Engineering

## **PROFESSIONAL EXPERIENCE**

Feb 2024 –    **Assistant Professor**

Present

Department of Marine Environment and Engineering,

National Sun Yat-sen University, Taiwan

Feb 2020 –    **Project Assistant Professor**

Jan 2024

Department of Civil and Construction Engineering, National Taiwan University  
of Science and Technology, Taiwan

- Supporting a teaching project at Universidad Politécnica Taiwán Paraguay (UPTP), funded by the Ministry of Foreign Affairs (MOFA)
- Supporting EMI (i.e., English as a Medium of Instruction) Courses: (1) Engineering Dynamics; (2) Surveying; (3) Surveying Practice; (4) Engineering Statistics; (5) Introduction to Civil Engineering; (6) Fluid

Mechanics; (7) Civil Engineering Construction; (8) Hydraulic Engineering.

Mar 2019 – **Post-doctoral Researcher**

Feb 2020

Department of Civil and Earth Resources Engineering, Graduate School of Engineering, Kyoto University, Japan

- As a recipient of the Postdoctoral Research Abroad Program sponsored by Ministry of Science and Technology and awarded a grant for one year
- Project: Study on Interdisciplinary Assessment of Climate Risk and Adaptation Based on the Change of Extreme Precipitation under Climate Change (MOST-108-2917-I-564-020)

Aug 2017 – **Post-doctoral Researcher**

Feb 2019

Dept. of Bioenvironmental Systems Engineering, National Taiwan University, Taiwan

Oct 2015 – **Post-doctoral Researcher**

Jul 2017

Dept. of Civil Engineering, National Taiwan University, Taiwan

## **HONORS AND AWARDS**

Feb 2025 – Jan 2026 Recipient of the New Faculty Award

2024–2025 Recipient of the New Faculty Award

Sep-Dec 2024 Outstanding Teaching Award for the course for "Surveying Laboratory"

Mar-Jun 2024 Outstanding Teaching Award for the course "Water Supply and Drainage Engineering"

Mar 2020 – Jan 2024 Supporting a teaching project at Universidad Politécnica Taiwán Paraguay (UPTP), which is funded by the Ministry of Foreign Affairs (MOFA)

Mar 2019 – Jan 2020 Postdoctoral Research Abroad Program Scholarship for Taiwanese Postdoctoral Researchers (sponsored by Ministry of Science and Technology, Taiwan)

May 2017 Certificate of 47<sup>th</sup> session Research & Development alternative service

(Excellent performance during the service period)

## **PROFESSIONAL ACTIVITIES**

- **Chairperson:** The 26<sup>th</sup> Hydraulic Engineering Conference (HEC), 2023, Taichung, Taiwan.
- **Chairperson:** International Society of Paddy and Water Environment Engineering (PAWEES) 2021 International Conference (Online), Taipei, Taiwan.
- **Chairperson:** Proceedings of the 2018 Annual Conference of the Taiwan Agricultural Engineers Society (TAES), 2018, Kaohsiung, Taiwan.
- **Convener:** The 14th Annual Meeting of the Asia Oceania Geosciences Society (AOGS), 2017, Singapore.
- **Convener:** The 13th Annual Meeting of the Asia Oceania Geosciences Society (AOGS), 2016, Beijing, China.

## **RESEARCH INTERESTS**

- Real-time forecast of water-related disasters
- Artificial intelligence and machine learning
- Optimization algorithm and application
- Climate risk assessment and adaptation
- Spatial informatics

## **PROPOSED RESEARCH THEMES FOR THE NEXT FIVE YEARS**

- AI-based forecasting and optimization for marine environmental disasters
- Artificial intelligence for marine safety and marine debris image recognition
- Application of AI forecasting for real-time flood risk assessment during typhoons
- Development of intelligent low-carbon disaster mitigation forecasting technologies and adaptive strategy pathway analysis
- Climate change risk assessment and development of adaptation action plans

## **RESEARCH PROJECTS**

- 2024 – 2025, Research on real-time dynamic inundation risk assessment during typhoons and intelligent low-carbon adaptation strategy pathways, National Science and Technology Council (NSTC)
- 2023 – 2024, Research on Regional Real-Time Inundation Forecasting and Dynamic Risk Assessment in Metropolitan Areas Based on Deep Learning Technology Integrated with Surface Inundation and Sewer Stage Data, National Science and Technology Council (NSTC)
- 2019 – 2020, Study on Interdisciplinary Assessment of Climate Risk and Adaptation Based on the Change of Extreme Precipitation under Climate Change, Ministry of Science and Technology (MOST)

## **PROFESSIONAL SERVICE**

- **Journal Reviewer:** Water Research, Journal of Hydrology, Journal of Hydrology-Regional Study, Water Resources Management, Natural Hazards, Paddy and Water Environment, Journal of Hydro-environment Research, Journal of Hydroinformatics, Infrastructures, Water, Sustainability, Energies

## **INVITED SPEECH**

- **Invited Lecture:** 颱風期間農作物即時動態風險評估：基於數值模擬資訊之人工智慧小時淹水預報模式, Course in the Bachelor Degree Program in Ocean Engineering and Technology, National Taiwan Ocean University, 2024, Matsu, Taiwan.
- **Invited Lecture:** *Real-Time Risk Assessment Based on Typhoon-Induced Inundation Forecasts: A Case Study of Paddy Fields*, International Commission on Irrigation and Drainage (ICID), 2024, Webinar.
- **Invited Lecture:** *Real-Time Typhoon Inundation Forecasting through Physics-Informed Machine Learning Models*, “Machine Learning and Environmental Data Analysis” Course in the Department of Bioenvironmental Systems Engineering, National Taiwan University, 2022, Taipei, Taiwan.
- **Invited Lecture:** *How Can We Assess Climate Risk and Adaptation Options by A Generalized Assessment Framework? Systematically and Interdisciplinarily*, National Congress of Civil Engineering Students - Virtual edition (CONEIC 2020), 2020, Asuncion, Paraguay.

- **Invited Lecture:** *Improving the Long Lead-Time Inundation Forecasts Using Effective Typhoon Characteristics*, Seminar in Department of Civil and Earth Resources Engineering, Graduate School of Engineering, Kyoto University, 2019, Kyoto, Japan.
- **Invited Lecture:** *Study on Interdisciplinary Assessment of Climate Risk and Adaptation Based on the Change of Extreme Precipitation under Climate Change*, Seminar in Department of Civil and Earth Resources Engineering, Graduate School of Engineering, Kyoto University, 2019, Kyoto, Japan.
- **Invited Lecture:** *Interdisciplinary Assessment of Climate Risk for Water Resources and Agriculture and Flood Disaster*, PAWEES-INWEPF 2018 International Conference, 2018, Nara, Japan.
- **Invited Lecture:** *Climate Risk Assessment and Adaptation: Future Long-Term Planning and Real-Time Disaster Prevention*, Course in Department of International Program on Urban Governance at National Taipei University, 2018, Sanxia, Taiwan.
- **Invited Lecture:** *Climate Risk Assessment and Adaptation: Future Long-Term Planning and Real-Time Disaster Prevention*, Seminar in Graduate Institute of Hydrological and Ocean Sciences, National Central University, 2018, Taoyuan, Taiwan.
- **Invited Lecture:** *Facing the challenge of climate change: Climate risk and climate adaptation 6-steps*, Educational Training Course of Central Environmental Education Counseling Program, Ministry of Education, 2018, Taichung, Taiwan.
- **Invited Lecture:** *Effective inundation forecasting during typhoons and facing the challenge of climate change*, Seminar in Department of Civil Engineering at National Central University (NCUCE), 2018, Taoyuan, Taiwan.
- **Invited Lecture:** *Effect of climate change on future joint probability of precipitation extremes: a case study in Taiwan*, TCCIP 2017 International Conference, 2017, Taipei, Taiwan.
- **Invited Lecture:** *Effective typhoon characteristics and their effects on hourly inundation forecasting during typhoons*, The 4th International Symposium on Water Environment Systems - with Perspective of Global Safety, 2016, Sendai, Japan.