

CURRICULUM VITAE



A. PERSONAL DETAILS

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B. ACADEMIC QUALIFICATIONS

1. Postgraduate Diploma in Tertiary Teaching, UCSI University, Malaysia (2020)
2. Ph.D in Water Resources Engineering, Universiti Putra Malaysia (UPM), Malaysia (2018)
3. BEng. Biological and Agricultural Engineering, Universiti Putra Malaysia (UPM), Malaysia (2013)

C. WORKING EXPERIENCE

2023 – Present : Senior Lecturer, UiTM Shah Alam
2018 – 2023 : Assistant Professor, UCSI University

D. PROFESSIONAL QUALIFICATIONS

1. Professional Engineer (PE), Board of Engineers Malaysia (BEM)
2. Chartered Engineer (CEng), Institution of Engineering and Technology (IET)
3. Professional Technologist (Ts), Malaysia Board of Technologists (MBOT)
4. Graduate Engineer (GE), Board of Engineers Malaysia (BEM)
5. Member MIET, Institution of Engineering and Technology (IET)
6. Graduate Technologist, Malaysia Board of Technologists (MBOT)

E. RESEARCH INTERESTS

1. Water Resources Engineering
2. Climate Change/ Meteorology
3. Hydrological Modelling
4. Artificial Intelligence
5. Drought Forecasting
6. Uncertainty Assessment of Hydrological Models

F. PUBLICATIONS

Journals & Proceedings

1. Tan, Y. X., **Ng, J. L.**, & Huang, Y. F. (2023). Quantitative analysis of input data uncertainty for SPI and SPEI in Peninsular Malaysia based on the bootstrap method. *Hydrological Sciences Journal*
2. Jumari, N. A. S. B. K., Ahmed, A. N., Huang, Y. F., **Ng, J. L.**, Koo, C. H., Chong, K. L., & Elshafie, A. (2023). Analysis of urban heat islands with landsat satellite images and GIS in Kuala Lumpur Metropolitan City. *Heliyon*.
3. Yong, S. L. S., **Ng, J. L.**, Huang, Y. F., & Ang, C. K. (2023). Estimation of Reference Crop Evapotranspiration with Three Different Machine Learning Models and Limited Meteorological Variables. *Agronomy*, 13(4), 1048.
4. Yong, S. L. S., **Ng, J. L.**, Huang, Y. F., Ang, C. K., Mirzaei, M., & Ahmed, A. N. (2023). Local and global sensitivity analysis and its contributing factors in reference crop evapotranspiration. *Water Supply*, 23(4), 1672-1683.

5. Gao, M., Noh, N. I. F. M., & **Lin, N. J.** (2023). Study on Carbon Emission Strategies of Rural Land Consolidation from the Perspective of Sustainable Energy Development. *Educational Administration: Theory and Practice*, 29(1), 269-276.
6. Hazrin, N. A., Chong, K. L., Huang, Y. F., Ahmed, A. N., **Ng, J. L.**, Koo, C. H., & El-Shafie, A. (2023). Predicting sea levels using ML algorithms in selected locations along coastal Malaysia. *Heliyon*.
7. Dehghani, A., Moazam, H. M. Z. H., Mortazavizadeh, F., Ranjbar, V., Mirzaei, M., Mortezaei, S., **Ng, J. L.**, & Dehghani, A. (2023). Comparative evaluation of LSTM, CNN, and ConvLSTM for hourly short-term streamflow forecasting using deep learning approaches. *Ecological Informatics*, 75, 102119.
8. Bahari, N. A. A. B. S., Ahmed, A. N., Chong, K. L., Lai, V., Huang, Y. F., Koo, C. H., **Ng, J. L.**, & El-Shafie, A. (2023). Predicting Sea Level Rise Using Artificial Intelligence: A Review. *Archives of Computational Methods in Engineering*, 1-18.
9. Hong, X., Lee, J. C., **Ng, J. L.**, Abdulkareem, M., Yusof, Z. M., Li, Q., & He, Q. (2023). Prediction Model and Mechanism for Drying Shrinkage of High-Strength Lightweight Concrete with Graphene Oxide. *Nanomaterials*, 13(8), 1405.
10. Hong, X., Lee, J. C., **Ng, J. L.**, Md Yusof, Z., He, Q., & Li, Q. (2023). Effect of Graphene Oxide on the Mechanical Properties and Durability of High-Strength Lightweight Concrete Containing Shale Ceramsite. *Materials*, 16(7), 2756.
11. Tan, Y. X., **Ng, J. L.**, & Huang, Y. F. (2023). Spatiotemporal variability assessment and accuracy evaluation of standardized precipitation index and standardized precipitation evapotranspiration index in Malaysia. *Earth Science Informatics*, 16(1), 67-89.
12. Gao, M., Noh, N. I. F. M., & **Lin, N. J.** (2023). Study on Carbon Emission Strategies of Rural Land Consolidation from the Perspective of Sustainable Energy Development. *Educational Administration: Theory and Practice*, 29(1), 269-276.
13. **Ng, J. L.**, Huang, Y. F., Yong, S. L. S., & Tan, J. W. (2022). Comparative assessment of reference crop evapotranspiration models and its sensitivity to meteorological variables in Peninsular Malaysia. *Stochastic Environmental Research and Risk Assessment*, 1-19.
14. Tan, Y. X., **Ng, J. L.**, & Huang, Y. F. (2022). A Review on Drought Index Forecasting and Their Modelling Approaches. *Archives of Computational Methods in Engineering*, 1-19.

15. Essam, Y., Huang, Y. F., **Ng, J. L.**, Birima, A. H., Ahmed, A. N., & El-Shafie, A. (2022). Predicting streamflow in Peninsular Malaysia using support vector machine and deep learning algorithms. *Scientific Reports*, 12(1), 1-26.
16. Chia, M. Y., Huang, Y. F., Koo, C. H., **Ng, J. L.**, Ahmed, A. N., & El-Shafie, A. (2022). Long-term forecasting of monthly mean reference evapotranspiration using deep neural network: A comparison of training strategies and approaches. *Applied Soft Computing*, 109221.
17. Yong, S. L. S., **Ng, J. L.**, Huang, Y. F., & Ang, C. K. (2022). Innovative Trend Analysis of Reference Crop Evapotranspiration in Peninsular Malaysia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1022, No. 1, p. 012071). IOP Publishing.
18. **Ng, J. L.**, Chan, K. H., Noh, N. M., Razman, R., Surol, S., Lee, J. C., & Al-Mansob, R. A. (2022, May). Statistical modelling of extreme temperature in Peninsular Malaysia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1022, No. 1, p. 012072). IOP Publishing.
19. Fung, K. F., Chew, K. S., Huang, Y. F., Ahmed, A. N., Teo, F. Y., **Ng, J. L.**, & El Shafie, A. (2022). Evaluation of spatial interpolation methods and spatiotemporal modeling of rainfall distribution in Peninsular Malaysia. *Ain Shams Engineering Journal*.
20. Gao, M., Noh, N. I. F. M., & **Lin, N. J.** (2022). Assessment and analysis model design for energy saving and carbon reduction of farmland arrangement project. In *International Conference on Agri-Photonics and Smart Agricultural Sensing Technologies (ICASAST 2022)* (Vol. 12349, pp. 208-213). SPIE.
21. He, Q., **Ng, J. L.**, & Noh, N. I. F. M. (2022). Plant Landscape Configuration Method of Regional Characteristic Rainwater Garden Based on Deep Learning. In *International Conference on Multimedia Technology and Enhanced Learning* (pp. 354-367). Springer, Cham.
22. Huang, Y. F., Ahmed, A. N., **Ng, J. L.**, Tan, K. W., Kumar, P., & El-Shafie, A. (2022). Rainfall Variability Index (RVI) analysis of dry spells in Malaysia. *Natural Hazards*, 1-53.
23. Fung, K. F., Chew, K. S., Huang, Y. F., Ahmed, A. N., Teo, F. Y., **Ng, J. L.**, & Elshafie, A. (2021). Evaluation of spatial interpolation methods and spatiotemporal modeling of rainfall distribution in Peninsular Malaysia. *Ain Shams Engineering Journal*.
24. Woo, H. V., **Ng, J. L.**, Huang, Y. F., Chong, C., & Lee, J. C. (2021). Spatiotemporal analysis of temperature data trends in Peninsular Malaysia. *Arabian Journal of Geosciences*, 14(16), 1-12.

25. Tiu, E. S. K., Huang, Y. F., **Ng, J. L.**, AlDahoul, N., Ahmed, A. N., & Elshafie, A. (2021). An evaluation of various data pre-processing techniques with machine learning models for water level prediction. *Natural Hazards*, 1-33.
26. Hang, G. E., **Ng, J. L.**, Huang, Y. F., & Yong, S. L. S. (2021). Performance of potential evapotranspiration models in Peninsular Malaysia. *Journal of Water and Climate Change*.
27. Tiu, E. S. K., Huang, Y. F., **Ng, J. L.**, AlDahoul, N., Ahmed, A. N., & Elshafie, A. (2021). An evaluation of various data pre-processing techniques with machine learning models for water level prediction. *Natural Hazards*, 1-33.
28. **Ng, J. L.**, Tiang, S. K., Huang, Y. F., Noh, N. I. F. M., & Al-Mansob, R. A. (2021). Analysis of annual maximum and partial duration rainfall series. In *IOP Conference Series: Earth and Environmental Science* (Vol. 646, No. 1, p. 012039). IOP Publishing.
29. Yong, S. L. S., **Ng, J. L.**, Huang, Y. F., & Ang, C. K. (2021). Trend analysis of potential evapotranspiration in peninsular Malaysia. In *IOP Conference Series: Materials Science and Engineering* (Vol. 1101, No. 1, p. 012008). IOP Publishing.
30. Yong, S. L. S., **Ng, J. L.**, Huang, Y. F., & Ang, C. K. (2021). Assessment of The Best Probability Distribution Method In Rainfall Frequency Analysis For A Tropical Region. *Malaysian Journal of Civil Engineering*, 33(1).
31. Kim, T. K., Noh, N. I. F. M., Bhkari, N. M., Ahmad, Z., Chen, L. W., Harun, M. S., & **Lin, N. J.** (2021, February). Static Bending Performance of Mengkulang and Kasai LVL Beam in Structural Size. In *Journal of Physics: Conference Series* (Vol. 1793, No. 1, p. 012062). IOP Publishing.
32. Ng, C.K., **Ng, J. L.**, Huang, Y.F., Tan, Y.X., Mirzaei, M. (2020). Tropical Rainfall Trend and Stationarity Analysis. *Water Supply*.
33. Tan, Y.X., **Ng, J. L.**, Huang, Y.F. (2020). Estimation of missing daily rainfall during monsoon seasons for tropical region: A comparison between ann and conventional methods. *Carpathian J. Earth Environ. Sci.* 15.
34. **Ng, J. L.**, Abd Aziz, S., Huang, Y. F., Mirzaei, M., Wayayok, A., & Rowshon, M. K. (2019). Uncertainty analysis of rainfall depth duration frequency curves using bootstrap resampling technique. *Journal of Earth System Science*, 128(5), 113.
35. Chau, Y.L., Huang, Y.F., **Ng, J.L.**, Mirzaei, M., Koo, C.H., & Tan, K.W. (2019). A proposed hybrid rainfall simulation model: Bootstrap

Aggregated Classification Tree-Artificial Neural Network (BACT-ANN) for the Langat River Basin, Malaysia. *Journal of Water and Climate Change*.

36. **Ng, J. L.**, Abd Aziz, S., Huang, Y. F., Wayayok, A., & Rowshon, M. K. (2017). Generation of stochastic precipitation model for tropical climate. *Theoretical and Applied Climatology*, 1–21.
37. **Ng, J. L.**, Abd Aziz, S., Huang, Y. F., Wayayok, A., & Rowshon, M. K. (2016). Stochastic modelling of seasonal and yearly rainfalls with low-frequency variability. *Stochastic Environmental Research and Risk Assessment*, 1–19.
38. **Ng, J. L.**, Abd Aziz, S., Huang, Y. F., Wayayok, A., & Rowshon, M. D. (2015). Homogeneity analysis of rainfall in Kelantan, Malaysia. *Jurnal Teknologi*, 76(15), 1–6.

Reports/ Press

1. **Ng, J. L.**, Shafiq, M. S., Chiong, M. C. (2022). Civil Engineering Research. *UCSI Press*, 2, 1-83.
2. Thung, W. E., **Ng, J. L.** (2021). Research Report in FETBE. *UCSI Press*, 2, 1-69.

G. RESEARCH GRANTS

No	Title	Grant Name	Role	Grant Amount (RM)	Period (year)	Status
1	Two-dimensional deep learning long-term reservoir inflow forecasting considering the vagaries of climate change	Fundamental Research Grant Scheme (FRGS)	Member	104,000	2022 – 2025	On-going
2	Evaluation on Engineering Properties of High Strength Concrete Incorporating Nanoparticles	UCSI Research Excellence & Innovative Grant (REIG)	Co-PI	48,881	2022 – 2024	On-going
3	Elucidating the underlying role of input data uncertainty on the accuracy of drought forecasting models	Fundamental Research Grant Scheme (FRGS)	Principle Investigator (PI)	76,900	2021 – 2023	Completed

4	Elucidating the Physical-Chemical Characteristics of Silver Nanoparticles Adsorption Behavior onto Different Activated Carbon Adsorbents	UCSI Research Excellence & Innovative Grant (REIG)	Principle Investigator (PI)	48,200	2020 – 2022	Completed
5	Statistical analysis of potential evapotranspiration in Malaysia	Pioneer Scientist Incentive Fund (PSIF)	Principle Investigator (PI)	49,720	2019 – 2021	Completed
6	Study on the engineering properties of high strength lightweight concrete incorporating agricultural waste	Pioneer Scientist Incentive Fund (PSIF)	Co-PI	49,900	2019 – 2021	Completed

H. STUDENT SUPERVISION

PhD Students

No	Name	Title	Status
1	Stephen Yong Luo Sheng	Comparative Study of Potential Evapotranspiration (PET) Models and its Uncertainty Quantification in Tropical Region	On-Going
2	He Qian	Study on rainwater system of low impact development in buildings and communities	On-Going
3	Tan Yi Xun	Comparison of Drought Indices and Their Uncertainty Quantification	On-Going
4	Gao Meng Hui	Analysis of the status quo of engineering project management and discussion of its development trend	On-Going

Master Student

No	Name	Title	Status
1	Chong Aik Hang	Uncertainty Assessment of various drought indices in Peninsular Malaysia	On-Going

FYP Students

No	Name	Title	Status
1	Yap Soon Yi	Investigation of the best fit probability distribution for annual maximum rainfall	Completed
2	Wong Cheah Yang	Homogeneity analysis of monthly, seasonal and yearly rainfall series	Completed
3	Tan Yi Xun	Investigation of the best method in estimating missing rainfall data	Completed
4	Stephen Yong Luo Sheng	Development of rainfall Intensity Duration Frequency (IDF) curve relationship for Kelantan River Basin	Completed

5	Ng Chun Kang	Analysis of rainfall trends in Kelantan River Basin	Completed
6	Tiang Soon Kim	Analysis of annual maximum and partial duration rainfall series	Completed
7	Goh Ee Hang	Comparison of potential evapotranspiration models	Completed
8	Hue Hui Theng	Trend analysis of potential evapotranspiration	Completed
9	Woo Hun Vui	Trend analysis of monthly temperature	Completed
10	Chan Kian He	Investigating the best fit distribution for maximum temperature	Completed
11	Tan Jia Wen	Sensitivity analysis of potential evapotranspiration	Completed
16	Brenda Loh Sze Quan	Causes And Effects of Poor Communication in The Construction Industry in Klang Valley	Completed
17	Tharshiny Sivanathan	Analysis of daily rainfall concentration in Peninsular Malaysia	Completed
18	Matthew Lim Yun Chin	Comparative study of different drought indices in Peninsular Malaysia	Completed
19	Tan Sheng Kwan	Analysis of different parameter estimation methods for extreme rainfall in Kelantan River Basin	Completed
20	Tiou Wen Kai	Investigation of seasonal streamflow variations in Kelantan River Basin	Completed
21	Hu Xue Long	Trend analysis of streamflow in Kelantan River Basin	Completed
22	Khoo Wei Jun	Estimation of missing streamflow data using Artificial Intelligence methods	Completed
23	Phoon Jian Wen	Estimation of missing streamflow data using machine learning models	Completed
24	Siah Jun Yang	Investigation of the most suitable probability distribution models for streamflow	Completed
25	Yeoh Zhi Lam	Non-stationary analysis of streamflow in East Malaysia	Completed

I. MANUSCRIPT REVIEWER

1. Hydrological Sciences Journal
2. International Journal of Climatology
3. SAGE Open
4. Brazilian Journal of Water Resources
5. SN Applied Sciences
6. Climate Research
7. Journal of Engineering and Technological Sciences
8. Theoretical and Applied Climatology
9. Journal of Integrative Agriculture
10. Environmental Engineering and Management Journal
11. Stochastic Environmental Research and Risk Assessment
12. Scientific Reports
13. Global NEST Journal

J. HONORS/ AWARDS

1. **Gold Award** in Final Year Project & Postgraduate: Research & Innovation Poster Competition (RIPC) Series 1/2023 (2023)
2. **First Prize** in International Competition and Seminar on Water Resources & Electric Power, Guangdong Polytechnic of Water Resources and Electric Engineering, China (2022)
3. **Silver Award** in International Innovation Competition (INNOCOM III) Sciences & Technology Poster Presentation, AID Academy Malaysia & Universitas Gunadarma, Jakarta (2022)
4. **Best Young Researcher** by Faculty of Engineering, Technology and Built Environment, UCSI University (2021)
5. **Best Coordinator** by Faculty of Engineering, Technology and Built Environment, UCSI University (2021)
6. **Best Paper Award** in 6th International Conference on Civil and Environmental Engineering for Sustainability (ICONCEES 2021)
7. **Best New Lecturer** by T.E.A.C.H Award 2018, UCSI University (2018)
8. **Best Academic Award** for Bachelor of Biological and Agricultural Engineering (2013)
9. **Best FELCRA award** for Bachelor of Biological and Agricultural Engineering (2013)
10. **Best Final Year Project Award** for Infrastructure and Resources Conservation Specialization (2013)

K. COMMUNITY SERVICES/ PROFESSIONAL ACTIVITIES

1. **Technical Committee** for 6th International Conference on Molecular Biology & Biotechnology (ICMBB 2023)
2. **Invited Speaker** – Environmental Engineering School Talk: The Planet's Future = Our Future (2022)
3. **Invited Speaker** – Webinar, UCSI University: Integrated Technologies in Civil Engineering (2021)
4. **Invited Speaker** – Webinar, Universiti Putra Malaysia: Recent Advances of Hydrological Analysis in Agricultural Field (2021)
5. **Invited Speaker** – Environmental Engineering School Talk at SMK Mutiara (2021)
6. **Program Course Review Committee (PCRC)**, Department of Civil Engineering, UCSI University (2018-2022)
7. **Faculty Board Research and Scholarly Activity (FBRSA) Committee**, UCSI University (2018-2022)
8. **Logistic/ Programme Committee** for the APEC Coastal Cities Symposium (2021)
9. **Facilitator** – Science & Technology towards Industry 4.0 Expo, STEM International Conference for Excellent Schools (PASKTM) 2018