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Hydroinformatics, Artificial Intelligence, Risk Analysis, Rainfall and
Runoff Forecasting, Computational Hydraulics

A. Articles in Refereed Journals (*Corresponding author)

1. Yang TH, Yang SC, Ho JY, Lin GF*, Hwang GD, Lee CS, 2015, Flash flood warnings using the ensemble precipitation forecasting technique: A case study on forecasting floods in Taiwan caused by typhoons, *Journal of Hydrology*, Vol. 520, pp. 367–378. (SCI) <https://doi.org/10.1016/j.jhydrol.2014.11.028>
2. Wang CM, Lin GF*, 2015, A novel method for flood forecasting based on the nonlinear computational units cascaded model, *Paddy and Water Environment*. Vol. 13, Issue 1, pp. 115-123. (SCI) <https://doi.org/10.1007/s10333-013-0413-z>
3. Lin GF*, Jhong BC, 2015, A real-time forecasting model for the spatial distribution of typhoon rainfall, *Journal of Hydrology*, Vol. 521, pp. 302-313. (SCI) <https://doi.org/10.1016/j.jhydrol.2014.12.009>
4. Wu MC, Ho JY, Lee KT, Lin GF, Liu WC, 2015, Development of Real-time Rainfall and Runoff Forecasting Techniques, *Taiwan Water Conservancy*, Vol. 63, No. 1, PP. 14-25. (EI)
5. Chen CC, Lai JS, Lee FZ, Tsung SC, Huang CC, Lin GF, 2015, Study of refractive deviation by image analysis in dam break experiments, *Taiwan Water Conservancy*, Vol. 63, No. 2, pp. 79-90. (EI)
6. Wu MC, Lin GF*, 2015, An hourly streamflow forecasting model coupled with an enforced learning strategy, *Water*, Vol. 7, Issue 11, pp. 5876-5895. (SCI) <https://doi.org/10.3390/w7115876>
7. Lin GF, Wang TC, Chen LH, 2016, A forecasting approach combining self-organizing map with support vector regression for reservoir inflow during typhoon periods, *Advances in Meteorology*, Volume 2016 (2016), Article ID 7575126. (SCI) <https://doi.org/10.1155/2016/7575126>
8. Huang YC, Lin GF*, Chang MJ, Ho JY, 2016, Rainfall induced-landslide susceptibility analysis using support vector machine, *Journal of the Chinese*

Institute of Civil and Hydraulic Engineering, Vol. 28, No. 1, pp. 57-66. (EI)

9. Jhong BC, Wang JH, Lin GF*, 2016, Improving the long lead-time inundation forecasts using effective typhoon characteristics, *Water Resources Management*, Vol. 30, Issue 12, pp. 4247-4271. (SCI) <https://doi.org/10.1007/s11269-016-1418-3>
10. Wang JH, Jhong BC, Lin GF, 2016, Effective real-time forecasting of inundation maps during typhoons, *Journal of Taiwan Agricultural Engineering*, Vol. 62, No. 4, pp. 69-86. (in Chinese) (EI)
11. Wu MC, Lin GF, Hwang LR, Chen DYC, Chiang CC, Wang YC, 2016, Optimal integration of the ensemble forecasts from an ensemble quantitative precipitation forecast experiment, *Procedia Engineering*, Vol. 154, pp. 1291-1297. (EI) <https://doi.org/10.1016/j.proeng.2016.07.465>
12. Lin GF*, Chang MJ, Wu JT, 2017, A hybrid statistical downscaling method based on the classification of rainfall patterns, *Water Resources Management*, Vol. 31, Issue 1, pp. 377-401. (SCI) <https://doi.org/10.1007/s11269-016-1532-2>
13. Wu MC, Lin GF, 2017, The very short-term rainfall forecasting for a mountainous watershed by means of an ensemble numerical weather prediction system in Taiwan, *Journal of Hydrology*, Vol. 546, pp. 60-70. (SCI) <https://doi.org/10.1016/j.jhydrol.2017.01.012>
14. Jhong BC, Wang JH, Lin GF*, 2017, An integrated two-stage support vector machine approach to forecast inundation maps during typhoons, *Journal of Hydrology*, Vol. 547, pp. 236-252. (SCI) <https://doi.org/10.1016/j.jhydrol.2017.01.057>
15. Lin GF*, Chang MJ, Huang YC, Ho JY, 2017, Assessment of susceptibility to rainfall-induced landslides using improved self-organizing linear output map, support vector machine, and logistic regression, *Engineering Geology*. Vol. 224, 62–74. (SCI) <https://doi.org/10.1016/j.enggeo.2017.05.009>
16. Lin GF*, Chang MJ, Wang CF, 2017, A novel spatiotemporal statistical downscaling method for hourly rainfall, *Water Resources Management*. Vol. 31, Issue 11, pp. 3465-3489 (SCI) <https://doi.org/10.1007/s11269-017-1679-5>
17. Wang JH, Lin GF*, Jhong BC, 2018, Effective real-time forecasting of inundation maps for early warning systems during typhoons, *MATEC Web of Conferences*, Vol. 147, Article No. 03014. (EI) <https://doi.org/10.1051/mateconf/201814703014>
18. Chang MJ, Chang HK, Chen YC, Lin GF*, Chen PA, Lai JS, Tan YC, 2018, A

support vector machine forecasting model for typhoon flood inundation mapping and early flood warning systems, *Water*, Volume 10, Issue 12, 1734. (SCI) <https://doi.org/10.3390/w10121734>

19. Lee KT, Ho JY, Kao HM, Lin GF*, Yang TH, 2019, Using ensemble precipitation forecasts and a rainfall-runoff model for hourly reservoir inflow forecasting during typhoon periods, *Journal of Hydro-environment Research*, Vol. 22, pp. 29-37 (SCI) <https://doi.org/10.1016/j.jher.2018.05.002>
20. Wang HW, Lin GF, Tfwala SS, Hong JH, 2019, Filtering continuous river surface velocity radar data, *Water*, Volume 11, Issue 4, 764. (SCI) <https://doi.org/10.3390/w11040764>
21. Wang JH, Lin GF*, Chang MJ, Huang IH, Chen YR, 2019, Real-time water-level forecasting using dilated causal convolutional neural networks, *Water Resources Management*, Vol. 33, Issue 11, pp. 3759–3780. (SCI) <https://doi.org/10.1007/s11269-019-02342-4>
22. Lee FZ, Lai JS, Tang YC, Chang MJ, Chen PA, Lin GF, 2019, Turbidity Current Plunge Mechanism Analysis and Simulation System Application, *Taiwan Water Conservancy*, Vol. 67, No. 4, pp. 1-15. (EI)
23. Chang MJ, Lin GF*, Lee FZ, Chen PA, Lai JS, 2020, A real-time forecasting model for turbidity current arrival time in a reservoir. *Hydrological Sciences Journal*, Vol. 65, No. 6, pp. 1022-1035. (SCI) <https://doi.org/10.1080/02626667.2020.1714628>
24. Chang MJ, Lin GF*, Lee FZ, Wang YC, Chen PA, Wu MC, Lai JS, 2020, Outflow sediment concentration forecasting by integrating machine learning approaches and time series analysis in reservoir desilting operation, *Stochastic Environmental Research and Risk Assessment*, doi: 10.1007/s00477-020-01802-3 (SCI) <https://doi.org/10.1007/s00477-020-01802-3>

B. Conference Papers

1. Ho JY, Lee KT, Chen YC, Hwang GD, Yang TH, Lin GF, 2015, Evaluating the long-term performance for rainfall-induced shallow landslides prediction using a physically-based model in Taiwan, European Geosciences Union General Assembly, Vienna, Austria.
2. Lin GF, 2015, Real-time urban flood forecasting during typhoons, The 7th World Water Forum, Science and Technology Process Session 3.3: Flood Damage Reduction in Urban Area by Improvement of Flood Forecasting, Daegu, Korea. (Invited Lecture)

3. Chang MJ, Lin GF, Wu JT, 2015, Effects of climate change on daily rainfall in the Taiwan: a new statistical downscaling method, The 2015 International Workshop on Typhoon and Flood – APEC Experience Sharing on Hazardous Weather Events and Risk Management, Taipei, Taiwan. (Student Poster Competition: Third Place, Hydrological Science-PhD Students Division)
4. Huang YC, Lin GF, Chang MJ, 2015, Landslide susceptibility mapping methodologies for Kaoping river basin, Taiwan, The 2015 International Workshop on Typhoon and Flood – APEC Experience Sharing on Hazardous Weather Events and Risk Management, Taipei, Taiwan. (Student Poster Competition: Third Place, Hydrological Science-Master's Students Division)
5. Wang JH, Lin GF, Jhong BC, 2015, Effective real-time inundation depth forecasting during typhoon periods, The 2015 International Workshop on Typhoon and Flood – APEC Experience Sharing on Hazardous Weather Events and Risk Management, Taipei, Taiwan.
6. Huang CC, Lai JS, Lee FZ, Lin GF, Qiu MQ, Hsieh HM, Kang SY, 2015, Water quality management of solid suspension at the Yuanshan water intake affected by reservoir desiltation operation, The 12th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2015), Singapore.
7. Lai JS, Lin GF, Huang CC, Lai YG, Lee FZ, Lu PK, Yen CY, 2015, Simulation of turbidity current movement in reservoir desilting operation, The 12th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2015), Singapore.
8. Wang JH, Lin GF, Jhong BC, 2015, Effective forecasting for real-time inundation during typhoon periods, Proceedings of the 2015 Annual Conference of the Taiwan Agricultural Engineers Society, pp. 444-464. (in Chinese) (Student Paper Competition: Excellent Award)
9. Lin GF, 2015, The use of ensemble precipitation forecasts and a rainfall-runoff model for hourly reservoir inflow forecasting during typhoon periods, International Conference on Sustainable Utilization and Protection of Water Resources under Changing Environment, Guangzhou, China. (Keynote Lecture)
10. Lin GF, 2015, Development of a real-time typhoon flood forecasting model, 2015 CHES Annual Conference: International Session, Nanjing, China. (Keynote Lecture)
11. Lin JT, Lin GF, Lai JS, Huang CH, Lee FZ, Huang CC, Huang GW, 2015, The field measurement of 52-Jia Wetland during a tide cycle using ADCP, The 19th Cross-Strait Symposium on Hydraulic Technology Exchange, Shanghai, China. (in Chinese)

12. Lin GF, 2015, The short-term real-time typhoon flood forecasting, The 2015 APEC Typhoon Symposium, Manila, Philippines. (Keynote Lecture)
13. Lin GF, Wang JH, Chang MJ, 2015, Assessing the impact of climate change on rainfall in Taiwan, Proceedings of the 2015 Symposium of the Agricultural Environment Technology Projects, Council of Agriculture. (in Chinese)
14. Lin GF, 2016, Effective real-time forecasting of inundation maps during typhoons, The 2nd International Symposium of Graduate School of Water Resources: Science and Technology for Water Resources under Changing Environment, Sungkyunkwan University, Suwon, Korea. (Keynote Lecture)
15. Chen PA, Lin GF, Lai JS, Chang MJ, Lee FZ, Jhong BC, 2016, Suspended sediment load prediction using multi-objective genetic algorithm and the improved self-organizing linear output model, The 2016 International Workshop on Typhoon and Flood, Taipei, Taiwan. (Student Poster Competition: Second Place, Hydrological Science-Master's Students Division)
16. Wang CF, Ling GF, Chang MJ, 2016, A two-stage spatiotemporal statistical downscaling method for hourly rainfall, The 2016 International Workshop on Typhoon and Flood, Taipei, Taiwan. (Student Poster Competition: Excellent Work, Hydrological Science-Master's Students Division)
17. Wang JH, Lin GF, Jhong BC, 2016, Long lead-time forecasting of inundation maps during typhoons, The 2016 International Workshop on Typhoon and Flood, Taipei, Taiwan.
18. Wang JH, Jhong BC, Lin GF, 2016, A novel approach using ensemble forecasts for improving rainfall forecasting during typhoons, The 13th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2016), Beijing, China.
19. Chen CL, Wang JH, Jhong BC, Lin GF, 2016, Flood susceptibility assessment using a data-driven approach, The 13th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2016), Beijing, China.
20. Huang YC, Lin GF, Chang MJ, Ho JY, 2016, Rainfall induced-landslide susceptibility analysis using self-organizing linear output map, The 13th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2016), Beijing, China.
21. Jhong BC, Wang JH, Lin GF, 2016, 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, Sendai, Japan.
22. Lin GF, Wang JH, Chang MJ, 2016, Assessing the impact of climate change on

- rainfall patterns in Taiwan, Proceedings of the 2016 Symposium of the Agricultural Technology Projects, Council of Agriculture. (in Chinese)
23. Chen CL, Lin GF, 2017, Spatial prediction of flood hazard risk using a novel machine learning approach, The 2017 APEC Typhoon Symposium, Taipei, Taiwan. (Student Poster Competition: First Place, Hydrological Science-Master's Students Division)
 24. Kuo SA, Lin GF, Chen YT, Chang MJ, Wu MC, 2017, A novel spatio-temporal statistical downscaling method for hourly temperature, The 2017 APEC Typhoon Symposium, Taipei, Taiwan.
 25. Chen CL, Lin GF, 2017, Flood hazard risk analysis using GIS and a novel machine learning algorithm, The 2017 Joint Assembly of Taichung Forum on Smart City & Risk Governance and the Annual Meeting of the Taiwan Chapter of Society for Risk Analysis, Taichung, Taiwan. (Excellent Student Poster Award)
 26. Ho JY, Lee KT, Hwang XM, Lin YF, Lin GF, 2017, Simulation and disaster management for suburban landslide under extreme weather conditions, The 14th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2017), Singapore.
 27. Chen PA, Lin GF, Lai JS, Chang MJ, Lee FJ, 2017, Turbidity-current arrival-time forecasting by integrating turbidity-current arrival-time model and machine learning, Proceedings of the 23rd Hydraulic Engineering Conference. (in Chinese) (Student Paper Competition: Second Place)
 28. Wang JH, Lin GF, Jhong BC, 2017, Effective real-time forecasting of inundation maps for early warning systems during typhoons, The Third International Conference on Sustainable Infrastructure and Built Environment (SIBE-2017), Bandung, Indonesia.
 29. Lin GF, 2017, The short-time inundation forecasting during typhoons, The 2017 ACTS Workshop on Extreme Weather Forecast and Water Resources Management, Hanoi, Vietnam. (Keynote Lecture)
 30. Chang MJ, Lai JS, Lin GF, Jou BJD and Liang BC, 2017, A data assimilation method based on artificial neural network for hourly rainfall estimation, The Conference of International Conference on Mesoscale Convective Systems and High-Impact Weather in East Asia (ICMCS-XII), Taipei, Taiwan.
 31. Lin GF, Wang JH, Chang MJ, 2017, Assessing the impact of climate change on rainfall in the Shihmen Reservoir watershed, Proceedings of the 2017

Symposium of the Agricultural Water Resources Management Projects, Council of Agriculture. (in Chinese)

32. Wang YC, Lin GF, Lai JS, Chang MJ, Lee FZ, 2018, Outflow sediment concentration forecasting using integrated machine learning approach and time series analysis, The 2018 APEC Typhoon Symposium, Taipei, Taiwan. (Student Poster Competition: First Place, Hydrological Science-Master's Students Division)
33. Wang JH, Lin GF, Chen CL, 2018, A novel machine learning approach for flood susceptibility assessment, The 15th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2018), Honolulu, Hawaii.
34. Chen YU, Lin GF, Wang JH, 2018, Deep learning techniques for hourly water level forecasting during typhoons, The 15th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2018), Honolulu, Hawaii.
35. Huang YR, Lin GF, Wang JH, Ho JY, 2018, Rainfall induced-landslide susceptibility analysis using GIS and machine learning, The 15th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2018), Honolulu, Hawaii.
36. Huang IH, Lin GF, Chang MJ, Wang JH, Wu MC, 2018, Hourly rainfall forecasting using ensemble precipitation forecasts through support vector machine and random forest, The 15th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2018), Honolulu, Hawaii.
37. Liao HY, Chang MJ, Lee FZ, Lai JS, Lin GF, 2019, Suspended sediment concentration forecasting using integrated artificial intelligence and reservoir desilting operation, The 3rd International Workshop on Sediment Bypass Tunnels (IWSBT 2019), Taipei, Taiwan.
38. Lin GF, 2019, Real time forecasting of turbidity current arrival time in reservoirs, The Fourth International Conference on Computational Science and Engineering (ICCSE-4), Ho Chi Minh City, Vietnam. (Invited Lecture)
39. Shih KC, Chang MJ, Chen PA, Lin GF, 2019, Comparison of machine learning methodologies for hourly reservoir inflow forecasting, The 16th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2019), Singapore.
40. Chou CY, Chang MJ, Huang IH, Lin GF, 2019, Real-time correction of ensemble numerical weather predictions using machine learning, The 16th Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2019), Singapore.

41. Lin, GF, 2019, Assessment of flood hazard zoning for disaster mitigation, Proceedings of Korea International Water Week 2019, TIP Platform: New Strategies on Urban Flood Management under Climate Change, Daegu, Korea, pp. 1-26. (Invited Lecture)
42. Wu CW, Chang MJ, Pi LC, Hsu CC, Tsai CM, Chou NF, Lin GF, 2019, Preliminary study of reservoir operation strategy of flood control for rainfall forecasting uncertainty, Proceedings of the 24th Hydraulic Engineering Conference, Taipei, pp. 44-52. (in Chinese)
43. Shih KC, Lin GF, Chang MJ, Huang IH, 2019, Reservoir inflow forecasting for Shihmen reservoir using deep learning techniques. Proceedings of the 24th Hydraulic Engineering Conference, Taipei, pp. 298-306.
44. Lin GF, 2019, Effects of groundwater recharge on saline water intrusion in coastal areas, The symposium on the prospects of irrigation enterprise, Taipei. (in Chinese)
45. Lin GF, 2019, The short-term real-time rainfall and flood forecasting, The Second International Forum on Green Development and Engineering Innovation, Tianjin, China. (Keynote Lecture)