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Hydroinformatics, Artificial Intelligence, Stochastic Hydrology and Hydraulics, Risk and Reliability Analysis, Rainfall-Inundation Forecasting, Computational Hydraulics

期刊論文 (Journal Papers)

1. 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)
2. 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)
3. 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)
4. 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)
5. 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)
2. 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)
3. 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)
4. 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)
5. Wang HW, Lin GF, Tfwala SS, Hong JH, 2019, Filtering continuous river surface velocity radar data, *Water*, Volume 11, Issue 4, 764. (SCI)
6. 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)

7. 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)
8. 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)
9. 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, Vol. 34, No. 6, pp. 849–866. (SCI)
10. Huang CC, Chang MJ, Lin GF*, Wu MC, Wang PH, 2021, Real-time forecasting of suspended sediment concentrations reservoirs by the optimal integration of multiple machine learning techniques, Journal of Hydrology: Regional Studies, Vol. 34, Article 100804. (SCI)
11. Liang SY, Lin WS, Lin GF, Liu CW, Fan CH, 2021, The effect of porosity change in bentonite caused by decay heat on radionuclide transport through buffer material, Applied Sciences, Vol. 11, Issue 17, Article 7933. (SCI)
12. Huang IH, Chang MJ, Lin GF*, 2021, An optimal integration of multiple machine learning techniques to real-time reservoir inflow forecasting, Stochastic Environmental Research and Risk Assessment. (SCI) <https://doi.org/10.1007/s00477-021-02085-y>

研討會論文 (Conference Papers)

1. 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)
2. 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.
3. 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)
4. 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.
5. 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, Taiwan. (Student Paper Competition: Second Place)
6. 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.
7. 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)

8. 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.
9. 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, Taiwan.
10. 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)
11. 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, USA.
12. 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, USA.
13. 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, USA.
14. 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, USA.
15. 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.
16. 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)
17. 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.
18. 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.
19. 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)
20. 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, Taiwan, pp. 44-52.
21. 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, Taiwan, pp. 298-306.

22. Lin GF, 2019, Effects of groundwater recharge on saline water intrusion in coastal areas, The Symposium on the Prospects of Irrigation Enterprise, Taipei, Taiwan.
23. 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)
24. Lee FJ, Imtiyaz N, Lai JS, Lin GF, Liu CC, 2020, Flow field analysis of bottom outlet for reservoir desiltation, Proceedings of the 2020 Annual Conference of the Taiwan Agricultural Engineers Society, Taipei, Taiwan
25. Imtiyaz N, Lee FJ, Lai JS, Lin GF, 2020, Desilting efficiency and concentration distribution of elephant-trunk desilting tunnel, Proceedings of the 2020 Annual Conference of the Taiwan Agricultural Engineers Society, Taipei, Taiwan.
26. Wang CA, Lin GF, Chang MJ, Zeng YF, 2021, Application of genetic algorithm in optimizing operation for a multi-reservoir system, Proceedings of the 25th Hydraulic Engineering Conference, Tainan.
27. Wu WC, Lee FC, Lin GF, 2021, Water act and water resource management strategies: A case study of Israel, Proceedings of the 25th Hydraulic Engineering Conference, Tainan.
28. Chang CY, Lin GF, Zeng YF, Chang MJ, 2021, Rainfall-induced landslide susceptibility analysis with extreme gradient boosting, Proceedings of the 25th Hydraulic Engineering Conference, Tainan.

技術報告及其他

1. 林國峰, 2017, 聯合機率分析方法在流域洪災管理之研發與應用—子計畫:聯合機率分析方法應用於流域洪災致災因子之研究, 科技部研究計畫進度報告, 國立台灣大學土木工程學系. MOST 105-2625-M-002-011-MY2
2. 林國峰, 2017, 水稻節水技術應用推廣及農業水資源管理之研究—氣候變遷對石門水庫集水區降雨之衝擊評估, 農委會研究計畫報告, 國立台灣大學土木工程學系.
3. 林國峰, 2018, 聯合機率分析方法在流域洪災管理之研發與應用—子計畫:聯合機率分析方法應用於流域洪災致災因子之研究, 科技部研究計畫報告, 國立台灣大學土木工程學系. MOST 105-2625-M-002-011-MY2
4. 林國峰, 2018, 農業水資源智慧調配及水稻節水與灌溉管理技術研究與推廣—氣候變遷對水庫集水區未來降雨之衝擊評估(I), 農委會研究計畫報告, 國立台灣大學土木工程學系.
5. 林國峰, 2019 劇烈天氣引致都市與鄰近地區複合型災害之情境模擬與災害管理-子計畫:結合系集定量降雨資訊及降雨逕流模式於劇烈天氣之入庫流量預報(I), 科技部研究計畫報告, 國立台灣大學土木工程學系. MOST 107-2625-M-002-019
6. 林國峰, 2019, 重現跨日關係和日夜循環的空間-時間降尺度方法於氣候變遷衝擊之研究, 科技部研究計畫報告, 國立台灣大學土木工程學系. MOST 107-2221-E-002-030
7. 林國峰, 2019, 農業水資源智慧調配及水稻節水與灌溉管理技術研究與推廣—氣候變遷對水庫集水區未來降雨之衝擊評估(II), 農委會研究計畫報告, 國立台灣大學土木工程學系.
8. 林國峰, 2020, 頭前河流域洪水機率預報與洪災管理之研究—子計畫:人工智慧颱風定量降雨預報應用於洪水機率預報(I), 科技部研究計畫報告, 國立台灣大學土木工程學系. MOST 108-2625-M-002-014

9. 林國峰, 2020, 重現跨日關係和日夜循環的空間-時間降尺度方法於氣候變遷衝擊之研究(2/3), 科技部研究計畫報告, 國立台灣大學土木工程學系. MOST 108-2221-E-002-008
10. 林國峰, 2020, 農業水資源智慧調配及水稻節水與灌溉管理技術研究與推廣-氣候變遷對水庫集水區未來降雨之衝擊評估(III), 農委會研究計畫報告, 國立台灣大學土木工程學系.
11. 林國峰, 2021, 頭前河流域洪水機率預報與洪災管理之研究-人工智慧颱風定量降雨預報應用於洪水機率預報(子計畫三), 科技部研究計畫進度報告, 國立台灣大學土木工程學系. MOST 109-2625-M-002-014-MY2
12. 林國峰, 2021, 推動多元農業灌溉技術-智慧地下水水情之研究, 農委會農田水利署研究計畫報告, 國立台灣大學土木工程學系.