


导师简介

姓名	许红师	性别	男	出生年月	1992年12月	
职称	副教授	民族	汉	籍贯	安徽阜阳	
电子邮箱	xhstju@163.com/13920618075		最终学位	工学博士		
学术头衔/兼职	中国大坝工程学会流域水循环与调度专业委员会委员；Atmosphere 期刊客座编辑；Journal of Hydrology、Science of the Total Environment、水资源保护等期刊审稿人。					
招生专业	水文学及水资源（学硕）、土木水利（专硕）					
研究方向	水文学及水资源；洪涝智能预报、评估与调控；智慧水务与海绵城市					
主要学习科研和工作经历	2023.03-至今，郑州大学，副教授 2020.11-2023.03，郑州大学，讲师 2019.02-2020.10，长江设计集团研发中心 2013.09-2019.01，天津大学，水利工程，博士 2009.09-2013.07，天津大学，水利水电工程，学士					
代表性科研成果	<p>一、科研项目</p> [1] 项目负责人，国家自然科学基金青年项目，基于粒子示踪的滨海城市暴雨-潮位联合致涝机制及调控阈值研究（52109040） [2] 项目负责人，中国博士后科学基金面上项目二等，城市内涝致灾机理研究（2021M702950） [3] 项目负责人，河南省科技攻关项目，基于水质示踪的城市内涝积水溯源与精细调控关键技术研究（222102320025） [4] 项目负责人，河南省高等学校重点科研项目，城市内涝风险评价和减灾调控研究（22B570003） [5] 项目负责人，国家重点实验室开放创新基金，沿海城市降雨-潮位复合致涝效应及调控方法研究（HESS-2106） [6] 项目负责人，长江设计集团开放创新基金，基于深度学习的城市洪涝积水过程预报预警研究（CX2021K09） [7] 课题联系人，国家重点研发计划课题，特大干旱条件下区域抗旱水源配置与用水极限控制研究（2021YFC3000204） <p>二、论文论著</p> [1] Xu H. , Ma C., Lian J. et al. Urban flooding risk assessment based on an integrated					

K-means cluster algorithm and improved entropy weight method in the region of Haikou, China. *Journal of Hydrology*, 2018, 563: 975-86. (中科院一区, **ESI** 高被引论文)

- [2] Guan X., Xia C., **Xu H.***, et al. Flood risk analysis integrating of Bayesian-based time-varying model and expected annual damage considering non-stationarity and uncertainty in the coastal city. *Journal of Hydrology*, 2023, 617: 129038. (中科院一区)
- [3] **Xu H.**, Ma C., Xu K. et al. Staged optimization of urban drainage systems considering climate change and hydrological model uncertainty. *Journal of Hydrology*, 2020, 587: 124959. (中科院一区)
- [4] Wang T., Wang P.*, Wu Z., Yu J., Pozdniakov S.P., Guan X., Wang H., **Xu H.***, Yan D. Modeling revealed the effect of root dynamics on the water adaptability of phreatophytes. *Agricultural and Forest Meteorology*, 2022, 320:108959. (中科院一区)
- [5] **Xu H.**, Zhang X. et al. Amplification of flood risks by the compound effects of precipitation and storm tides under the nonstationary scenario in the coastal city of Haikou, China. *Int J Disaster Risk Sci*, 2022, 13: 602–620. (中科院二区)
- [6] Wu Z., Xue W., **Xu H.***, et al. Urban flood risk assessment in Zhengzhou, China, based on a D-number-improved analytic hierarchy process and a self-organizing map algorithm. *Remote Sensing*, 2022, 14(19):4777. (中科院二区)
- [7] Xu K., Han Z., **Xu H.***, et al. Rapid Prediction Model for Urban Floods Based on a Light Gradient Boosting Machine Approach and Hydrological-Hydraulic Model. *International Journal of Disaster Risk Science*, 2023, 14: 79-97. (中科院二区)
- [8] **Xu H.**, Xu K., Lian J. et al. Compound effects of rainfall and storm tides on coastal flooding risk. *Stochastic Environmental Research and Risk Assessment*, 2019, 33(7): 1249-1261. (中科院二区)
- [9] **Xu H.**, Xu K., Wang T. et al. Investigating flood risks of rainfall and storm tides affected by the parameter estimation coupling bivariate statistics and hydrodynamic models in the coastal city. *Int. J. Environ. Res. Public Health* 2022, 19, 12592. (中科院三区)
- [10] **Xu H.**, Xu K., Bin L.*, et al. Joint risk of rainfall and storm surges during typhoons in a coastal city of Haidian Island, China. *International Journal of Environmental Research and Public Health*, 2018, 15(7): 1377. (中科院三区)
- [11] Lian J., **Xu H.**, Xu K. et al. Optimal management of the flooding risk caused by the joint occurrence of extreme rainfall and high tide level in a coastal city. *Natural*

Hazards, 2017, 89 (1): 183-200. (中科院三区)

[12] Qi W., Ma C., **Xu H.** et al. Urban flood response analysis for designed rainstorms with different characteristics based on a tracer-aided modeling simulation. Journal of Cleaner Production, 2022, 355, 131797. (中科院一区)

[13] Qi W., Ma C., **Xu H.** et al. A comprehensive analysis method of spatial prioritization for urban flood management based on source tracking. Ecological Indicators, 2022, 135, 108565. (中科院二区)

[14] Qi W., Ma C., **Xu H.** et al. Low impact development measures spatial arrangement for urban flood mitigation: an exploratory optimal framework based on source tracking. Water Resources Management, 2021, 35, 3755-3770. (中科院二区)

[15] Ma C., Qi W., **Xu H.** et al. An integrated quantitative framework to assess the impacts of disaster-inducing factors on causing urban flood. Natural Hazards, 2022, <https://doi.org/10.1007/s11069-022-05375-y>. (中科院三区)

[16] Qi W., Ma C., **Xu H.** et al. A review on applications of urban flood models in flood mitigation strategies, Natural Hazards, 2021, 108: 31-62. (中科院三区)

[17] 许红师, 练继建, 宾零陵, 等. 台风灾害多元致灾因子联合分布研究. 地理科学, 2018, 38 (12): 2118-2124.

[18] 赵佳慧, 许红师*, 王田野, 等. 基于改进熵权-TOPSIS-灰色关联方法的城市洪涝风险评估, 水利水电技术, 2022.

三、发明专利

[1] 颜东谊, 马超, 刘青青, 许红师. 一种基于特征因子的热带气旋客观分类方法, 国家发明专利, CN201610599419.2。(已授权)

[2] 基于贝叶斯时变模型和期望年损失的沿海城市洪水风险分析方法, 国家发明专利, CN202211658393.6。(实审)

[3] 基于 LightGBM 和水文水动力模型的滨海城市洪涝快速预测方法, CN202310000088.6。(实审)

[4] 沿海城市洪涝致灾因子作用度量化及区划方法, 国家发明专利, CN201910572055.2。(实审)

[5] 一种耦合熵权-模糊聚类算法的城市洪涝风险评估方法, 国家发明专利, CN201910554191.9。(实审)

四、奖励荣誉

[1] 2022 年获河南省教育厅科技成果一等奖;

[2] 2022 年获郑州大学优秀班主任;

[3]2021 年获郑州大学大学生社会实践活动先进工作者;

[4]指导本科生获国家级大学生创新创业训练计划项目;

[5]指导本科生参加美国、亚太地区、数维杯等大学生数学建模比赛, 获二等奖、
H 奖等;

[6]指导本科生多次在中科院二区 SCI 及中文核心期刊发表学术论文;

[7]2020 年获武汉黄鹤英才优秀青年人才。