导师简介

<table>
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<tr><td>职称</td><td>副教授</td><td>民族</td><td>汉</td><td>籍　贯</td><td>河南新乡</td></tr>
<tr><td>电子邮箱</td><td colspan="3">sunbin@zzu.edu.cn</td><td>最终学位</td><td>工学博士</td></tr>
<tr><td>学术头衔/兼职</td><td colspan="5">兼任河南省水力发电学会泥沙专业委员会副秘书长、河南省水利学会泥沙和水动力学分会副秘书长</td><td></td></tr>
<tr><td>研究方向</td><td colspan="6">明渠非恒定流水力特性、市政管网过流淤积与冲蚀机理、近海消波防浪机理</td></tr>
<tr><td>主要学习、科研和工作经历</td><td colspan="6">2003.09-2007.06 西北农林科技大学 水利与建筑工程学院 水利水电工程 工学学士
2007.09-2010.06 西北农林科技大学 水利与建筑工程学院 农业水土工程 工学硕士
2010.09-2013.12 西北农林科技大学 水利与建筑工程学院 水利水电工程 工学博士
2013.12- 今 郑州大学 水利与交通学院（原水利与环境学院）历任教学秘书、实验中心主任等职</td></tr>
<tr><td>代表性教学成果与荣誉</td><td colspan="6">先后多次被评为郑州大学优秀共产党员、“三育人”先进个人、平安校园建设工作先进个人、大学生社会实践活动先进工作者等称号，指导本科生和研究生获得多项省级及以上创新奖励成果。
2015.07 指导学生获得第四届全国大学生水利创新设计大赛二等奖
2019.07 指导学生获得第六届全国大学生水利创新设计大赛特等奖
2021.07 指导学生获第七届全国大学生水利创新设计大赛特等奖
2021.08 指导学生获华维杯第二届全国大学生农业水利工程及相关专业创新设计大赛二等奖
2022.08 指导学生获 2022 年河南省“互联网+”大学生创新创业大赛暨第八届中国国际“互联网+”大学生创新创业大赛河南赛区选拔赛一等奖
2022.09 指导学生获 2022 年“挑战杯”河南省大学生创业计划特等奖
2023.08 指导学生获 2023 年河南省“互联网+”大学生创新创业大赛暨第九届中国国际“互联网+”大学生创新创业大赛河南赛区选拔赛一等奖
2023.08 指导学生获 2023 年 “挑战杯”河南省大学生创业计划竞赛活动一等奖</td></tr>
</table>

	2023.11 指导学生获第十八届“挑战杯”全国大学生课外学术科技作品竞赛特等奖
代表性科研成果	一、近 5 年部分科研项目 [1]农业农村部节水灌溉工程重点实验室开放项目，现代节水型灌区新型量水设施测流特性与水力优化研究，主持 [2] 河南省高等学校重点科研项目,河南省教育厅，基于MIGA的引黄灌区翼型量水设施水力优化与应用研究，主持 [3] 河南省自然科学基金面上项目，河南省科技厅，灌区挟沙明渠翼型堰槽式测控一体闸量控机理与水力优化研究，主持 [4] 中国博士后科学基金面上项目，中国博士后科学基金会，基于组策略的多沙灌区翼型量水设施测控机理与协同布局模式研究，主持 [5] 国家重点研发计划子课题，科技部，非满水状态下城市排水管道全工况无损检测装备，主持 二、近 5 年部分论文论著 [1] H. Fang, Z. Zhang, D. Di, J. Zhang, **B. Sun**, N. Wang, B. Li. Integrating fluid-solid coupling domain knowledge with deep learning models: An automatic and interpretable diagnostic system for the silting disease of drainage pipelines. Tunnelling and Underground Space Technology,142 (2023) 105386. [2] Z. Li, X. Wang, F. Wang, **B. Sun**, S. Chen. Flow structure of the confluence between an open channel and a pipe. Water Science and Technology, 88(10) (2023) 2646–2660 [3] **B. Sun**, L. Feng, Z. Li, Z. Song, C. Li.3D numerical simulation of the separation zone at the channel–pipe junction. Water Science and Technology, 88 (6) (2023) 1358-1373. [4] **B. Sun**, W. Zheng, A. Tong, D. Di, Z. Li. "Prediction of the Roughness Coefficient for Drainage Pipelines with Sediments Using GA-BPNN." Water Science and Technology 88.4 (2023) 1111-130. [5] **B. Sun**, W. Ma, Q. Peng, Z. Li, W. Zheng, T. Ren. Diffusion of point source pollutants in the tee structure, Water Supply. 23.7 (2023) 2865-880. [6] Z. Song, L. Yang, Z. Li, **B. Sun**. Hydraulic characteristics optimization of an airfoil pillar-shaped flume based on the Hicks–Henne function and NSGA-II algorithm. Journal of Hydroinformatics, 25(3) (2023), 867-880.

[7] H. Zhang, **B. Sun**, Z. Li, F. Wang. Wave attenuation and motion response of floating breakwater with sponge material, Ocean Engineering, 277 (2023) 114325.

[8] **B. Sun**, Q. F. Peng, W. J. Ma, Z. W. Li, Z. Q. Song, A. Tong. Diffusion of point source pollution at the cross joint, Water Supply, 23.1 (2023): 428-46.

[9] **B. Sun**, R. Yang, A. Tong, S. Chen, Z. Li. The changing rules of the composite roughness in drainage pipelines with sediments. Water Supply, 23.3 (2023) 975–995.

[10] **B. Sun**, H. Zhang, C. Li, Z. Li. Research progress and prospect of wave attenuation performance and integration of wave energy converter of floating breakwater, Journal of Environmental Engineering, 149(4) (2023) 03123001.

[11] **B. Sun**, Z. Song, L. Yang, C. Li, Z. Li. Experimental study and numerical simulation of flow over the inclined airfoil-shaped weir in rectangular channel, Flow Measurement and Instrumentation, 88 (2022) 102256.

[12] **B. Sun**, C. Li, S. Yang, H. Zhang, Z. Song. Experimental and numerical study on the wave attenuation performance and dynamic response of kelp-box type floating breakwater, Ocean Engineering, 263 (2022) 112374.

[13] **B. Sun**, H. Zhang, C. Li, Z. Li. Wave-attenuation performance and hydrodynamic characteristics of a plant ecological floating breakwater, Ships and Offshore Structures, (2022).

[14] S. Chen, **B. Sun**, H. Fang, Z. Li, A. Tong. Analysis of the Roughness Coefficient of Overflow in a Drainage Pipeline with Sedimentation, Journal of Pipeline Systems Engineering and Practice, 13(4) (2022) 04022030.

[15] **B. Sun**, A. Tong, R. Yang, S. Chen, Z. Li. Effect of blocked sediments on flow characteristics and associated backwater effect in drainage pipes, Water Science & Technology, 85 (12) (2022) 3465-3478.

[16] C. Li, H. Zhang, H. Zhang, **B. Sun**, S. Yang. Wave-attenuation and hydrodynamic properties of twin pontoon floating breakwater with kelp, Applied Ocean Research, 124 (2022) 103213.

[17] **B. Sun**, H. Zhang, S. Yang, C. Li. Experimental investigation on the wave-attenuating performance and shape optimization of water ballast type floating breakwater, Ocean Engineering, 248 (2022) 110848.

[18] **B. Sun**, C. Li, S. Yang, H. Zhang. A simplified method and numerical simulation for wedge-shaped plunger wavemaker, Ocean Engineering, 241 (2021) 110023.

[19] **B. Sun**, H. Zhang, S. Yang, L. Yang, S. Chen, C. Li. The hydraulic characteristics and shape optimisation of submerged Box-type floating breakwater, Ships and Offshore Structures, (2021).

[20] **B. Sun**, L. Yang, S. Zhu, Q. Liu, C. Wang, C. Zhang. Study on the applicability of four flumes in small rectangular channels, Flow Measurement and Instrumentation, 80 (2021) 101967.

[21] **B. Sun**, L. Yang, S. Zhu, H. Zhang, C. Zhang, J. Zhang. Investigation of flow measurement mechanism and hydraulic characteristics of the NACA airfoil pillar-shaped flume with different wing lengths in a rectangular channel, Water Science and Technology-Water Supply, 21(6)

(2021) 2875-2892.

[22] Z. Wang， M. Dou， P. Ren, **B. Sun**, Y. Zhou. Settling velocity of irregularly shaped microplastics under steady and dynamic flow conditions, Environmental Science and Pollution Research, (2) (2021) 1-17.

[23] **B. Sun**, S. Chen, Q. Liu, Y. Lu, C. Zhang, H. Fang. Review of sewage flow measuring instruments, Ain Shams Engineering Journal 12(2) (2021) 2089-2098.

[24] J. Zhang, H. Li, **B. Sun**, H. Fang. Multi-time scale co-integration forecast of annual runoff in the source area of the Yellow River, Journal of Water and Climate Change 12(1) (2021) 101-115.

[25] J. Zhang, Y. Jin, **B. Sun**, Y. Han, Y. Hong. Study on the Improvement of the Application of Complete Ensemble Empirical Mode Decomposition with Adaptive Noise in Hydrology Based on RBFNN Data Extension Technology, Cmes-Computer Modeling in Engineering & Sciences 126(2) (2021) 755-770.

[26] **B. Sun**, S. Zhu, L. Yang, Q. Liu, C, Zhang, J. Zhang. Experimental and Numerical Investigation of Flow Measurement Mechanism and Hydraulic Performance on Curved Flume in Rectangular Channel, Arabian Journal for Science and Engineering, 46(5) (2020) 4409-4420.

[27] **B. Sun**, L. Yang, S. Zhu, Q. Liu, C. Zhang, J. Zhang. Experimental and Numerical Investigation of Flow Measurement Mechanism and Hydraulic Performance of Portable Pillar-Shaped Flumes in Rectangular Channels, Shock and Vibration (2020) 8815957.

[28] **B. Sun**, Y. Lu, Q. Liu, H. Fang, C. Zhang, J. Zhang. Experimental and Numerical Analyses on Mixing Uniformity of Water and Saline in Pipe Flow, Water 12(8) (2020) 2281.

[29] **B. Sun**, Q. Liu, H. Fang, C. Zhang, Y. Lu, S. Zhu. Numerical and Experimental Study of Turbulent Mixing Characteristics in a T-Junction System, Applied Sciences-Basel 10(11) (2020) 3899.

[30] J. Zhang, H. Li, **B. Sun**, H. Fang. Annual runoff prediction in the source area of the Yellow River based on structure change co-integration theory, Water Supply 20(5) (2020) 1664-1677.

[31] Y. Zhang, **B. Sun**, H. Fang, D. Zhu, L. Yang, Z. Li. Experimental and Simulation Investigation on the Kinetic Energy Dissipation Rate of a Fixed Spray-Plate Sprinkler, Water 10(10) (2018) 1365.

[32] 王菲菲,槐文信,陈海亮,**孙斌**,李志伟.基于涡黏度模型的冰封河道纵向时均流速垂向分布解析解[J].水利学报,2023,1-12.

[33] 胥维纤,张晓斐,**孙斌**.基于模型试验的泵站进水前池优化和特性研究[J].西北水电,2023(03):82-87.

[34] 李志伟,方宏远,**孙斌**.基于云平台的水力学混合教学模式探析[J].郑州师范教育,2022,11(05):40-43.

[35] **孙斌**,朱顺,杨磊,张超,石喜.灌区明渠无喉道量水槽水力特性的影响因素研究[J].水利水电技术(中英文),2021,52(04):105-114.

三、部分代表性知识产权成果

[1]孙斌,李成,张海嘉,宋占琪,仝安,方宏远,杨绍林. 一种适用于制造高阶非线性波的楔体柱塞造波装置[P]. 河南省：CN114235331B,2023-06-23.（状态：授权）

[2]孙斌,张广毅,方宏远等. 一种基于高速稳定水流发生器的水力空化设备[P]. 河南省：CN113175464B,2022-11-11.（状态：授权）

[3]孙斌,杨昊宇,郑薇,苏朋. 一种排水管内淤泥检测装置[P]. 河南省：CN220354826U,2024-01-16. (状态：授权)

[4]孙斌,郑薇,仝安,阳润芝,麻文军. 一种用于排水管道淤积污泥收集装置[P]. 河南省：CN218176105U,2022-12-30. (状态：授权)

[5]孙斌,阳润芝,仝安. 一种排水管道的流量测量装置[P]. 河南省：CN217980398U,2022-12-06. (状态：授权)

[6]孙斌,宋占琪,杨磊,李志刚,李成,仝安. 一种用于渠道水量监测的机翼堰槽式测控一体闸[P]. 河南省：CN217157159U, 2022-08-09. (状态：授权)

[7]董俊,周慧明,勇鹏飞,方宏远,孙斌,王念念,秦晓林,孙妍. 一种射流推进器[P]. 河南省：CN216994813U, 2022-07-19. (状态：授权)

[8]孙斌,仝安,阳润芝. 排水管道中的泥沙输送装置[P]. 河南省：CN216689656U, 2022-06-07.（状态：授权）

[9]孙斌,陈仕哲,阳润芝,仝安,方宏远,张超,李志伟. 一种给排水管道综合试验平台[P]. 河南省：CN216012700U, 2022-03-11.（状态：授权）

四、科技与教学获奖

[1]河南省教育厅，河南省高等教育教学成果特等奖，基于“实践育人共享平台”大土木人才培养模式探索与实践，2022.04，豫教[2022]14842

[2]河南省教育厅，河南省教育信息化优秀成果一等奖，湖泊富营养化与水华防控虚拟仿真实验建设与实践，2022.07，豫教[2022]24094