赵雅宏简介

<table>
<tr><td>姓　　名</td><td>赵雅宏</td><td>性　　别</td><td>男</td><td>出生年月</td><td>1994.02</td><td rowspan="4">  </td></tr>
<tr><td>职　　称</td><td>直聘研究员</td><td>民　　族</td><td>汉</td><td>籍　　贯</td><td>山西晋中</td></tr>
<tr><td>电子邮箱</td><td colspan="3">zhaoyahong@zzu.edu.cn</td><td>最终学位</td><td>博士</td></tr>
<tr><td>学术头衔</td><td colspan="5">无</td></tr>
<tr><td>研究方向</td><td colspan="6">市政管网健康服役与安全运维；水利工程结构防护与修复；
岩土体与结构相互作用评价</td></tr>
<tr><td>主要学习、科研和工作经历</td><td colspan="6">1. 教育背景
2017.09至2022.12　中国地质大学（武汉）　博士
2013.09至2017.06　成都理工大学　学士
2. 科研和工作经历
2025.05至　今　郑州大学　直聘研究员
2023.03至2025.03　中山大学　博士后</td></tr>
<tr><td>代表性科研成果与科研奖励</td><td colspan="6">1. 学术主页
Researchgate, Google Scholar
2. 科研项目
[1] 河南省青年科学基金(252300423467)：交变水压作用下脱空压力管道损伤机理及其原位修复方法，2026.01-2027.12，主持，在研
[2] 国家资助博士后研究人员计划- C类(GZC20233298)，2023.03-2025.03，主持；
[3] 企业委托项目(20250446A)：排水管道CIPP修复工艺优化与评价关键技术研究，2025.08-2026.06，主持；
[4] 企业委托项目(SYSU-76140-20230703)：供水用大口径薄壁不锈钢内衬稳定性评估及结构增强技术研究，2023.12-2025.12，主持
[5] 中华人民共和国科学技术部国家重点研发计划(2023YFC3208104)：高龄服役管线水力条件和结构安全提升技术与装备研发，2023.12-2027.05，参与，在研

3. 代表性论文、论著、专利
3.1 代表性论文
[1] Zhao Yahong, Hu Shaowei, Ma Baosong, et al. Water hammer propa-gation in pipes under multi-defect coupling and gradient boosting decision tree-based intelligent prediction[J]. Physics of Fluids, 2026, 38(2).
[2] Zhao Yahong, Hu Shaowei, Bi Jingjie, et al. A Nonlinear Multiscale Computational Framework for Fiber-Reinforced Liners in Pipeline Rehabilitation[J]. Polymer Composites, 2026.</td></tr>
</table>

	[3] **Zhao Yahong**, Chen Yang, Yan Xuefeng, et al. Impact of bedding layers to soil-pipe-liner structure under static and traffic loads with EPR technology[J]. *Tunnelling and Underground Space Technology*, 2024, 146: 105651. (SCI中科院1区 TOP) [4] **Zhao Yahong**, Ma Peng*, Bi Jingjie, et al. Mitigating aging infrastructure risks: An optimized epoxy resin system for water supply pipeline rehabilitation[J]. *Polymer*, 2024: 127791. [5] **Zhao Yahong**, Ma Peng*, Chen Yang, et al. Stability assessment of CIPP liner under varied boundary conditions: A theoretical and simulation study[J]. *Results in Engineering*, 2024, 22: 102187. [6] **Zhao Yahong**, Huang Sheng, Ma Baosong*,et al. Experiment and evaluation model of liner design for renewal of deteriorated reinforced concrete pipes utilizing cured-in-place-pipe technology[J]. *Tunnelling and Underground Space Technology*, 2023, 132: 104866. (SCI中科院1区TOP) [7] **Zhao Yahong**, Ma Baosong, Ariaratnam Samuel T., et al. Buckling behaviour of internal stiffened thin-walled stainless steel liners under external constraints[J]. *Tunnelling and Underground Space Technology*, 2022, 129: 104685. (SCI中科院1区TOP) [8] **Zhao Yahong**, Ma Baosong*, Ariaratnam Samuel T., et al. Structural performance of damaged rigid pipe rehabilitated by centrifugal spray on mortar liner[J]. *Tunnelling and Underground Space Technology*, 2021, 116: 104117. (SCI中科院1区TOP) [9] Ma Peng, **Zhao Yahong***, Song Zhanpin, et al. Experimental Study and Performance Comparison of Different Jacking Pipes under the Effects of Concentrated Loads[J]. *Journal of Pipeline Systems Engineering and Practice*, 2025, 16(4): 04025054. [10]Zhou Hao, Chen Xiaolong, **Zhao Yahong***, et al. Mechanical performance of ultra-large-section jacking prestressed concrete cylinder pipe (JPCCP): a case study of flood diversion pipeline in Zhengzhou, China[J]. *Tunnelling and Underground Space Technology*, 2025, 165: 106841. (SCI中科院1区TOP) [11]Zhou Hao, Huang Sheng, Ma Baosong*, **Zhao Yahong***, Tan Xuhong, Zhang Haifeng. Prestressed steel wires impact on axial bearing capacity of ultra-large section jacking prestressed concrete cylinder pipe (JPCCP): Field experiment and simulation[J]. *Engineering Failure Analysis*, 2025: 109046. [12] Ma Peng, **Zhao Yahong***, Shimada H, et al. Effectiveness analysis of a novel rectangular tunnel boring machine with planetary transmission for box jacking[J]. *Scientific Reports*, 2024, 14(1): 27059. [13] Yan Xuefeng, Wang Xuehao, Deng Caiying, **Zhao Yahong***, Mei Shuang, Bai Jianhui, Ma Baosong. Testing and analysis of CIPP liner under simulated groundwater pressure[J]. *Tunnelling and Under-*

ground Space Technology, 2024, 152: 105903. (SCI 中科院 1 区 TOP，唯一通讯)

[14] Yan Xuefeng, Wang Xuehao, Xiang Weigang, **Zhao Yahong***, Ma Baosong. Buckling behavior of Formed-in-Place-Pipe (FIPP) liners under groundwater pressure: An experimental investigation for buried municipal pipelines[J]. *Tunnelling and Underground Space Technology*, 2023, 142: 105397. (SCI中科院1区TOP，唯一通讯)

[15] Yan Xuefeng, Deng Caiying, **Zhao Yahong***, Liu Han, Mei Shuang. Mechanical performance study of pipe-liner composite structure based on the digital image correlation method[J]. *IEEE Transactions on Instrumentation and Measurement*, 2022, 72: 1-12.

[16] **赵雅宏**, 马保松*, 张海丰, 何春良, 史国棚. 既有管道与内衬叠合界面受力性能及计算方法[J]. 哈尔滨工业大学学报，2020，52(11):167-174.

[17] **赵雅宏**, 曾正, 马保松.《给排水管道原位固化法修复工程技术规程》关键技术[J].特种结构,2019,36(01):108-112.

[18] 罗宏川, 马保松, 郑立宁, 闭靖杰, **赵雅宏***. 外水压作用下供水管道内衬稳定性足尺试验研究[J]. 地下空间与工程学报, 2025, 21(06): 2040-2050.

[19] 胡成洪, 夏举飞, **赵雅宏***.非开挖技术在天然气管道修复中的应用[J].地质科技情报,2018,37(05):254-259.

3.2 授权专利及软著

[1] **赵雅宏,** 邓才莹, 马保松, 等. 一种自动一体化非开挖管道注浆系统和注浆方法[P]. 湖北省: CN2021115968 81.4, 2022-08-26.

[2] **赵雅宏**, 邓才莹, 马保松, 等.一种管道修复用可改变气囊椭圆度的气囊结构[P]. 湖北省: CN202123295104.4, 2022-09-20.

[3] **赵雅宏**, 邓才莹, 马保松, 等. 一种自动一体化非开挖管道注浆设备[P]. 湖北省: CN202123295142.X, 2022-08-16.

[4] Ma Baosong, Huang Sheng, **Zhao Yahong**, et al. Spiral winding repair device for underground pipe[P]. 南非: 2025/00429, 2025-01-17.

[5]**赵雅宏**, 马保松, 黄胜, 周浩, 王学灏, 丁耀胜. 城市供水管网非开挖修复设计分析软件系统V1.0，登记号：2024SR1934806.

4. 科研奖励

[1]2025年河南省科学技术进步奖一等奖(R11). 复杂环境下混凝土断裂理论及测试技术与装备；

[2]2024广东省非开挖技术协会科学技术一等奖(R3). 复杂城镇排水管道重大缺陷CIPP内衬整体修复关键技术研究；

[3] 中国地质大学（武汉）优秀博士论文奖. 混凝土排水管道CIPP修复内衬结构受力特性及试验研究