导师简介

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| **研究方向** | | 地下工程灾变防护 | | | | | | |
| **主要学习、科研和工作经历** | **2023-至今 郑州大学 水利与交通学院 直聘研究员、硕士生导师**  **2018-2022 中山大学 土木工程 博士 导师：王复明 院士**  **2021-2022 Queen's University 岩土工程 导师：Ian Moore 院士（加拿大）** | | | | | | | |
| **代表性科研成果与科研奖励** | **科研项目：**   1. 国家自然科学基金青年项目，主持； 2. 中国博士后创新人才支持计划，主持； 3. 中国博士后面上项目，主持。   **科技论文：**   1. **Zhai K**, Wang F, Fang H, Ni P, Ji X, Guo C, Hu S. Serviceability assessment of prestressed concrete cylinder pipes with broken wires: analytical solution and numerical simulation. Tunnelling and Underground Space Technology, 2022. (SCI, TOP, 中科院一区, JCR1区, IF=6.407) 2. **Zhai K**, Moore Ian. Axial stresses in pressure pipe liners spanning joints with initial gap, opening as a result of differential ground movements. Tunnelling and Underground Space Technology, 2023, 133, 104965. (SCI, TOP, 中科院一区, JCR1区, IF=6.407)   3. **Zhai** **K**, Fang H, Guo C, Ni P, Wu H, Wang F. Full-scale experiment of prestressed concrete cylinder pipe with broken wires strengthened by prestressed CFRP. Tunnelling and Underground Space Technology, 2021, (SCI, TOP, 中科院一区, JCR1区, IF=6.407)  4. **Zhai K**, Fang H, Li B, et al. 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In-service repair method combining externally bonded pre-stressed FRP and polymer grouting for PCCP with broken wire（美国专利授权，专利号：US 11, 274, 784 B2）  2. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种断丝PCCP不停水预应力CFRP与高聚物注浆修复方法.(发明授权)  3. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 不停输外贴纤维布修复PCCP管的预应力施加装置及使用方法. (发明授权)  4. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种断丝PCCP开挖修复支撑装置及其施工方法. (发明授权)  5. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种预应力FRP加固柱形结构的预应力施加装置及其施工方法.(发明授权)  6. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种预应力FRP加固柱形结构的预应力施加装置. (实用新型授权)  7. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种断丝PCCP开挖修复支撑装置. (实用新型授权)  8. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 不停输外贴纤维布修复PCCP管道的预应力施加装置. (实用新型授权)  9. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种PCCP管道不中断输水修复加固方法. (发明公开)  10. 王复明, 方宏远, **翟科杰**, 潘艳辉, 赵鹏. 一种PCCP管道不停输外贴纤维布修复加固方法. (发明公开) | | | | | | |