个人简介

<table>
<tr><td>姓名</td><td>王锟</td><td>性别</td><td>男</td><td>出生年月</td><td>1994.03</td><td rowspan="3">  </td></tr>
<tr><td>职称</td><td>副研究员</td><td>民族</td><td>汉</td><td>籍　贯</td><td>河南焦作</td></tr>
<tr><td colspan="2">电子邮箱</td><td colspan="2">kun.wang@zzu.edu.cn</td><td>最终学位</td><td>工学博士</td></tr>
<tr><td>学术头衔</td><td colspan="5">1. 全国博新计划入选者
2. 国际材料和结构实验研究联合会（RILEM）青年委员
3. 中国灾害防御协会会员、中国水利学会会员
4. 《Constr. Build. Mater.》、《Eng. Struct.》、《Mater. Struct.》等10余个学术期刊审稿人</td><td></td></tr>
<tr><td>研究方向</td><td colspan="6">1. 水工混凝土耐久性
2. 智能/仿生混凝土
3. 水泥基材料微结构调控机理
4. 基础设施数智化增韧</td></tr>
<tr><td>主要学习、科研和工作经历</td><td colspan="6">2026.01～至今　郑州大学，水利与交通学院，副研究员（业绩优秀直接认定）
2024.07～2025.12　郑州大学，水利与交通学院，助理研究员
2023.08～2024.08　新加坡国立大学，结构工程，联合培养博士
2020.09～2024.06　郑州大学，水工结构工程，博士</td></tr>
<tr><td>代表性科研成果</td><td colspan="6">主持科研项目：
[1] 全国博士后创新人才支持计划（博新计划），BX20250046，2026.06-2028.06
[2] 国家自然科学基金青年科学基金项目（C类），52508317，冻融-硫酸盐耦合作用下混凝土相变反应演化机制及性能提升，2026.01-2028.12
[3] 河南省重点研发与推广专项，252102231005，基于肌肉仿生的桥梁拼宽混凝土粘结性能调控技术研究，2025.01-2026.12
[4] 河南省博士后科研项目，严酷条件下石灰石-煅烧黏土-水泥胶凝体系混凝土力学性能演变机理研究，2026.01-2027.12
[5] 中建七局科技研发课题，CSCE7b-2025-Z-20，除冰盐侵蚀与冻融循环影响下城市桥梁耐久性能提升关键技术研究，2025.06-2028.03
论文：
[1] Kun Wang, Jinjun Guo*, Xiaomeng Li. Neutralization behavior of Belite-rich cement concrete under acid rain exposure[J]. Construction and Building Materials, 2025, 472: 140798. (SCI, IF=7.4, 中科院1区, TOP期刊)</td></tr>
</table>

[2] **Kun Wang**, Wang Bingjie, Guo Jinjun*, Meng Qingxin, Feng Hu. Sharpey's fiber-inspired gradient anchoring and multiscale synergistic modification of the new–old concrete interface for bridge widening applications[J]. Developments in the Built Environment, 2025,23:100750. (SCI, IF=8.2, 中科院2区)

[3] **Kun Wang**, Jinjun Guo*. Structural evolution of silicate tetrahedral polymerization in C-(A)-S-H gels subjected to rare earth leaching environments[J]. Journal of Sustainable Cement-Based Materials, 2025,2588313. (SCI, 中科院3区)

[4] **Kun Wang**, Jinjun Guo*, Jinjin Wang, Donghui Qi, Yuanxun Zheng, Shaowei Hu. Bio-inspired widening concrete using cellulose nanofiber to enhance multiscale Fiber–Matrix interface[J]. *Journal of Materials Research and Technology*, 2024, 33, 6223-6233. (SCI, IF=6.4, 中科院1区, TOP期刊)

[5] **Kun Wang**, Kang Dong, Jinjun Guo*, Hongjian Du. Absorption and Release mechanism of superabsorbent polymers and its impact on shrinkage and durability of internally cured concrete – A review[J]. *Case Studies in Construction Materials*, 2024, 21, e03909. (SCI, IF=4.9, 中科院2区)

[6] **Kun Wang**, Jinjun Guo*, Juan Wang, Yuanxun Zheng, Peng Zhang, Hongjian Du. Numerical and experimental analysis of the effect of multi-ion electrical coupling on the sulfate convection zone in hydraulic concrete[J]. *Construction and Building Materials*, 2024, 449, 138340-138340. (SCI, IF=7.4, 中科院1区, TOP期刊)

[7] **Kun Wang**, Juhyuk Moon, Hongjian Du, Xing Xia, Duo Zhu, Peng Zhang, Jinjun Guo*. Early-age shrinkage and hydration of concrete incorporating a mutually reinforcing systems of super absorbent polymers and MgO expansive agent under low humidity conditions[J]. *Construction and Building Materials*, 2024, 417, 135350. (SCI, IF=7.4, 中科院1区, TOP期刊)

[8] **Kun Wang**, Yuanyuan Cheng, Benbo Sun, Lin Yang, Peng Zhang, Jinjun Guo*. Effects and interactions of scouring abrasion and external sulfate attack on deterioration of lining concrete: Experiments and preliminary modeling[J]. *Construction and Building Materials*, 2023, 263, 120635. (SCI, IF=7.4, 中科院1区, TOP期刊)

[9] Jinjun Guo, **Kun Wang***, Peng Zhang, Hongyin Xu. Effect of internal curing on early-age properties of concrete under simulative natural environment in arid regions[J]. *Construction and Building Materials*, 2023, 362, 129697. (SCI, IF=7.4, 中科院1区, TOP期刊)

[10] Jinjun Guo, Xiaomeng Li, Yaoqun Xu, Peng Zhang, **Kun Wang***. Neutralization evolution of concrete under acid rain and carbonation erosion: A review[J]. *Journal of Materials Research and Technology* 2023, 25. (SCI, IF=6.4, 中科院 1 区, TOP 期刊)

[11] **Kun Wang**, Jinjun Guo*, Lin Yang, Peng Zhang, Hongyin Xu. Multiphysical damage characteristics of concrete exposed to external sulfate attack: Elucidating effect of drying–wetting cycles[J]. *Construction and Building Materials*, 2022, 329, 127143. (SCI, IF=7.4, 中科院1区, TOP期刊)

[12] Jinjun Guo, Minghao Gao, **Kun Wang***, Peng Zhang. Mechanisms and influential variables on the abrasion resistance hydraulic concrete[J]. *Nanotechnology Reviews*, 2022, 11: 2997–3019(SCI, IF=7.4, 中科院2区)

[13] Yan Lu, **Kun Wang***, Duo Zhu, Qingxin Meng, Liyan Cui. Hydration and pore structure characteristics of concrete incorporating internal curing materials in a dry and large-temperature-difference environment[J]. *Materials Research Express*, 2022, 9, 035502.

[14] **Kun Wang**, Jinjun Guo*, Peng Zhang, Qingxin Meng. The counterbalance of the adverse effect of abrasion on the properties of concrete incorporating nano-SiO_2 and polypropylene fiber based on pore structure fractal characteristics[J]. *Fractal and Fractional*, 2022, 6, 392. (SCI, IF=5.4, 中科院1区)

[15] **Kun Wang**, Jinjun Guo*, Lin Yang. Effect of dry–wet ratio on sulfate transport-reaction mechanism in concrete[J]. *Construction and Building Materials*, 2021, 302, 124418. (SCI, IF=7.4, 中科院1区, TOP期刊)

[16] **Kun Wang**, Jinjun Guo*, Xuanjun Liu, Lin Yang, Peng Zhang. Effect of dry–wet ratio on pore-structure characteristics of fly ash concrete under sulfate attack[J]. *Materials and Structures*, 2021, 54, 100. (SCI, IF=3.8, 中科院3区)

[17] Jinjun Guo, **Kun Wang***, Cuige Qi. Determining the Mineral Admixture and Fiber on Mechanics and Fracture Properties of Concrete under Sulfate Attack[J]. *Journal of Marine Science and Engineering*, 2021, 9, 251.

[18] **Kun Wang**, Jinjun Guo*, Hao Wu, Lin Yang. Influence of dry-wet ratio on properties and microstructure of concrete under sulfate attack[J]. *Construction and Building Materials*, 2020, 263, 120635. (SCI, IF=7.4, 中科院1区, TOP期刊)

专著：

[1] 郭进军，王锟，黄琪，姚兵，张鹏，卢燕.《干湿交替下硫酸盐侵蚀混凝土传输-反应机制演变》，37.9万字，科学出版社，本人撰写24.3万字

授权国家发明专利：

[1] 王锟，郭进军，卢燕. 一种基于真实孔隙结构与溶液组成的水工混凝土离子传输方法，专利号：ZL202411837983.4. 授权日：2025年11月5日

[2] 郭进军，王锟，韩易辰，程林.一种用于防渗面板的抗裂混凝土及制备方法. 专利号：ZL201810115496.5. 授权日：2021年03月26日.

[3] 郭进军，王锟，孟庆鑫，高明昊，梅莉.一种定量检测受硫酸盐侵蚀混凝土中钙矾石含量的方法. 专利号：ZL201911284392.8. 授权日：2023年05月02日.

[4] 郭进军，王锟，卢燕.一种用于混凝土内部相对湿度测量的试验装置. 专利号：ZL201811591139.2. 授权日：2024年05月10日.

[5] 徐宏殷，郭进军，陈旭东，张亚东，王锟.等 一种适用于结构受拉区的微生物定位自修复混凝土材料及其制备方法. 专利号：ZL202110518295.1. 授权日：2021年05月12日.

荣誉与奖励：

[1] 教育部科技进步二等奖，2023

[2] 河南省教育厅科技成果一等奖，2024

[3] 河南省优秀博士学位论文，2025