## 林威

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# 工作

- 博士研究生、同济大学、03/2021 Present
- 实验演示员, 剑桥大学, 10/2023 03/2024
- 访问博士研究生, 剑桥大学, 04/2023 03/2024
- 研究实习生, 浙江省交通运输科学研究院, 08/2022
- 管理助理员,同济大学,09/2019-02/2021
- 工程实习生、上海隧道工程有限公司、07/2018 08/2018

#### 教育

- 同济大学, 工学博士研究生, 03/2021 Present
- 剑桥大学, 工学博士研究生, 04/2023 03/2024
- 同济大学, 工学硕士研究生, 09/2019 02/2021
- 同济大学, 工学学士, 09/2015 07/2019
- 福建省莆田第一中学, 09/2012 07/2015

#### 荣誉奖励

- GeoShanghai Prize for Service Award, 05/2024
- 国家留学基金委奖学金, 07/2022
- 工程建设科学技术进步奖, 二等奖, 12/2021
- "张江国信安杯"BIM 建模大赛, 三等奖, 09/2021
- 上海市优秀毕业生, 05/2019
- 国家奖学金, 11/2017
- 全国周培源大学生力学竞赛, 二等奖, 06/2017
- 福陆奖学金, 12/2016
- 许阿琼奖学金, 08/2015

## 出版物

#### 期刊论文

- 1. Lin, W., Sheil, B., Zhang, P., Zhou, B., Wang, C., & Xie, X. (2024). Seg2Tunnel: A hierarchical point cloud dataset and benchmarks for segmentation of segmental tunnel linings. Tunnelling and Underground Space Technology, 147, 105735. https://doi.org/10.1016/j.tust.2024.105735. (中科院 Q1, 中科院 TOP, JCR Q1, IF 6.7, 谷歌学术引用 1)
- 2. Li, K., Xie, X., Zhou, B., Huang, C., Lin, W., Zhou, Y., & Wang, C. (2024). Thickness regression for backfill grouting of shield tunnels based on GPR data and CatBoost & BO-TPE: A full-scale model test study. Underground Space, 17, 100—119. https://doi.org/10.1016/j.undsp.2023.10.003. (中科院 Q1, JCR Q1, IF 8.2, 谷歌学术引用 0)
- 3. Lin, W., Li, P., Xie, X., Cao, Y., & Zhang, Y. (2023). A novel back-analysis



- approach for the external loads on shield tunnel lining in service based on monitored deformation. Structural Control and Health Monitoring, 2023, 8128701. https://doi.org/10.1155/2023/8128701. (中科院 Q2, JCR Q1, IF 4.6, 谷歌学术引用 5)
- 4. Lin, W., Li, P., & Xie, X. (2022). A novel detection and assessment method for operational defects of pipe jacking tunnel based on 3D longitudinal deformation curve: A case study. Sensors, 22, 7648. https://doi.org/10.3390/s22197648. (中科院 Q2, JCR Q2, IF 3.4, 谷歌学术引用 7)
- 5. 邹成路, 林威, 罗文静, 周彪, & 谢雄耀. (2022). 城市轨道交通车站半成岩深基坑围护结构变形特性研究. 城市轨道交通研究, 25(3), 150-155. https://doi.org/10.16037/j.1007-869x.2022.03.032. (北大核心)
- 6. 谢雄耀, 林威, 周彪, & 邹成路. (2022). 半成岩超深基坑围护结构变形与受力 特性研究 . 结构 工程师 , 38(1), 164–172. https://doi.org/10.15935/j.cnki.jggcs.2022.01.019.
- 7. 梁小波, 林威, 徐金峰, 刘志义, & 赵刚. (2022). 滇中红层软岩填料高路堤稳 定性分析. 建筑施工, 44(9), 2248–2251. https://doi.org/10.14144/j.cnki.jzsg.2022.09.068.

#### 会议论文

- 1. Lin, W., Sheil, B., Xie, X., Zhang, Y., & Cao, Y. (2024). Semantic segmentation of large-scale segmental lining point clouds using 3D deep learning. GeoShanghai International Conference 2024, 012026. https://doi.org/10.1088/1755-1315/1337/1/012026.
- 2. Lin, W., Sheil, B., Xie, X., Li, K., & Niu, G. (2024). Segment segmentation of tunnel ring point clouds using 3D deep learning. World Tunnel Congress 2024, 3059–3066. https://doi.org/10.1201/9781003495505-406.
- 3. Lin, W., Xie, X., Zhou, B., Li, P., & Wang, C. (2023). Refined perception and management of ring-wise deformation information for shield tunnels based on point cloud deep learning and BIM. Eighth International Symposium on Life-Cycle Civil Engineering (IALCCE 2023), 3991–3998. https://doi.org/10.1201/9781003323020-490.
- 4. Lin, W., Xie, X., Li, P., Xiao, B., Lu, X., Feng, B., Jin, P., & Hu, Y. (2022). Prediction of settlement induced by tidal fluctuation for underwater shield tunnel during service based on historical monitoring data. 2022 8th International Conference on Hydraulic and Civil Engineering: Deep Space Intelligent Development and Utilization Forum (ICHCE), 1042–1047. https://doi.org/10.1109/ICHCE57331.2022.10042697.

#### 专利

- 1. 周应新,谢雄耀,周彪,林威,张洋宾,陈思晗,徐泓睿,钱正富,曾维成,杨俊宏,唐能,刘志义,史明梅,唐忠林,胡兴云,赵刚,&叶朋果. (2022). 一种用于差异沉降控制的路堤水载预压反馈调节系统. (发明,公开)
- 2. 鲁正, 常佳奇, 林威, & 宰秋锐. (2018). 可变阻尼铅芯橡胶阻尼器. (发明, 授权)
- 3. 鲁正, 林威, 常佳奇, & 宰秋锐. (2018). 装配式建筑墙梁节点. (实用新型, 授权)

4. 鲁正, 宰秋锐, 常佳奇, & 林威. (2018). 钢结构装配式建筑墙板节点. (实用新型, 授权)

#### 软件

1. 浙江省交通运输科学研究院. (2022). 山岭隧道横向变形点云处理系统 1.0.

## 学术活动

#### 汇报

- 1. Semantic segmentation of large-scale segmental lining point clouds using 3D deep learning, GeoShanghai International Conference 2024, Shanghai, 27/05/2024
- 2. Computer vision for the segmentation of tunnel point clouds: Dataset and network, World Tunnel Congress 2024, Shenzhen, 24/04/2024
- 3. Understanding tunnel point clouds using 3D deep learning, Norwegian Geotechnical Institute, online, 01/11/2023
- 4. Refined perception and management of ring-wise deformation for segmental linings using 3D deep learning and BIM, Eighth International Symposium on Life-Cycle Civil Engineering (IALCCE 2023), Milan, 04/07/2023
- 5. The digital twin of shield tunnels for structural analysis, hyperTunnel, online, 05/05/2023
- 6. The digital twin of shield tunnels for structural analysis, Mott MacDonald, online, 27/04/2023

### <u>海报</u>

- 1. Revealing high-fidelity and present-day geometry of segmental linings by AI, 11th International Symposium of Geotechnical Aspects of Underground Construction in Soft Ground (IS-Macau 2024), Macau, 14–17/06/2024
- 2. Prediction of settlement induced by tidal fluctuation for underwater shield tunnel during service based on historical monitoring data, 2022 8th International Conference on Hydraulic and Civil Engineering: Deep Space Intelligent Development and Utilization Forum (ICHCE), Xi'an, 25–27/11/2022

#### 评审

- 1. Tunnelling and Underground Space Technology, 1 review
- 2. Underground Space, 3 reviews

## 研究课题

#### 负责人

- 1. 国家留学基金委 [202206260174], 04/2023 03/2024
- 2. 上海市教育委员会 [201710247118], 01/2017 01/2018

#### 参与人

- 1. 中华人民共和国科学技术部 [2023YFC3806705]
- 2. 中华人民共和国科学技术部 [2023YFC3806702]
- 3. 中华人民共和国科学技术部 [2023YFC3806701]
- 4. 中华人民共和国科学技术部 [2019YFC0605103]
- 5. 中华人民共和国科学技术部 [2019YFC0605100]
- 6. 国家自然科学基金委员会 [52378408]
- 7. 国家自然科学基金委员会 [52038008]

- 8. 国家自然科学基金委员会 [51978431]
- 9. 上海市科学技术委员会 [22DZ1203004]
- 10. 上海市科学技术委员会 [20DZ1202004]
- 11. 上海市科学技术委员会 [2017SHZDZX02]
- 12. 云南省交通运输厅 [2021-7]
- 13. 国网上海市电力公司 [52090W23000B]
- 14. 国网上海市电力公司 [52090W220001]
- 15. 广州地铁设计研究院股份有限公司 [KY-B-2016-018]