Weilian Li

Gender: Male Date of Birth: 2nd July 1993

Degree: Doctor Native Place: Sichuan Dazhou

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Education

Feb. 2021- At present	HafenCity University Hamburg	Guest Researcher: Geovisualization
Sep. 2016- Dec. 2020	Southwest Jiaotong University	Ph.D.: Geomatics Science and Technology
Sep. 2015- Jun. 2016	Southwest Jiaotong University	M.S.: Geomatics Science and Technology
Sep. 2011- Jun. 2015	Tianjin Chengjian University	B.S.: Surveying and Mapping Engineering

Research Experience

- **Fusion and augmented visualization of large-scale and complex disaster scenes**
  Sponsor: National Key Research and Development Program of China **2016.07-2020.12**
- **Task-driven adaptive visualization method of disaster scenes**
  Sponsor: National Natural Science Foundation of China **2019.01-2022.12**
- **Users need oriented fusion visualization method of disaster scenes**
  Sponsor: Doctoral Innovation Fund Program of Southwest Jiaotong University **2019.05-2020.05**

Responsibilities: As a primary researcher in these projects, I am responsible for project proposal, visualization of disaster scenes, spatiotemporal process simulation, spatial cognition and the implement of a disaster visualization system

Achievements: Five international journal papers, one international conference paper and four Chinese journal papers have been published as the first author/Correspondence, Three national invention patents of China have been applied.

Honors/Awards/Scholarships

- Sino-German (China Scholarship Council(CSC) and Deutscher Akademischer Austauschdienst(DAAD)) Postdoc Scholarship **2021.06**
- Honored as Promising Young Researcher in College GIS Forum **2020.11**
- National Scholarship for Doctoral Students **2019.10**
- The Cultivation Program for the Innovative Doctoral Dissertation of SWJTU **2019.05**
- HI-TARGET Prize of SWJTU **2018.12**
- MingCheng Prize of SWJTU **2018.10**
- The Cultivation Target for Top Innovation Talents of SWJTU **2018.03**
- Early Career Research Paper Prize of the 6th National Conference on VGE **2017.11**

Scientific Presentations

- **Li Weilian,** Zhu Jun. Display and Interaction of Disaster Scene for Mobile Virtual Reality. *The 25th International Conference on Geoinformatics*. Buffalo, USA, 2017. (Oral Presentation)
- **Li Weilian,** Zhu Jun. A Fusion Modeling and Interaction Method with Spatial Semantic Constraint for Debris Flow VR Scene. *The 26th International Conference on Geoinformatics*. Kunming, China, 2018. (Oral Presentation)
- **Li Weilian,** Zhu Jun. A Fusion Visualization Method for Disaster Information Based on Self-Explanatory Symbols and Photorealistic Scene Cooperation. *1st Regional Conference on Environmental Modeling and Software,* Nanjing, China, 2019. (Oral Presentation)
- **Li Weilian.** Zhu Jun. Modeling and Visual Analysis of Typical Disasters in Virtual Geographic Environment. Bonn, Germany, 2018. (Short Exchange)
- Zhang Yunhao, Zhu Jun, **Li Weilian.** Modeling and Visual Analysis of Typical Disasters in Virtual Geographic

Environment. *Geo Delft Conferences*. Delft, Netherlands, 2018. (Team Report)

English Level

- Be proficient in English listening & speaking & reading & writing and pass the CET6
- As an assistant of foreign dean and a foreign receptionist of the Faculty of Geosciences and Environmental Engineering, Southwest Jiaotong University

Self-evaluation

- Ambitious, dedicated researcher with a strong sense of responsibility and team-spirit
- Strong interests in 3D visualization & spatial cognition and scientific research

Scientific Publications

[1] **Li Weilian,** Zhu Jun*, Fu Lin, Zhu Qing, Xie Yakun. An augmented representation method of debris flow scenes to improve public perception[J]. *International Journal of Geographical Information Science*, 2020, DOI: 10.1080/13658816.2020.1833016.

[2] **Li Weilian,** Zhu Jun*, Fu Lin, Zhu Qing, Guo Yukun, Gong Yuhang. A rapid 3D reproduction system of dam-break floods constrained by post-disaster information[J]. *Environmental Modelling Software*, 2021, 139, https://doi.org/10.1016/j.envsoft.2021.104994.

[3] **Li Weilian,** Zhu Jun, Zhang Yunhao, Fu Lin, Gong Yuhang, Hu Ya, Cao Yungang*. An on-demand construction method of disaster scenes for multitype users[J]. *Natural Hazards*, 2020, 101(2): 409-428.

[4] **Li Weilian,** Zhu Jun*, Zhang Yunhao, Cao Yungang*, Hu Ya, Fu Lin, Huang Pengcheng, Xie Yakun, Yin Lingzhi, Xu Bingli. A fusion visualization method for disaster information based on self-Explanatory symbols and photorealistic scene cooperation[J]. *ISPRS International Journal of Geo-Information*, 2019, 8(3): 104.

[5] **Li Weilian*,** Zhu Jun, Zhang Yunhao, Hu Ya. Disaster scene fusion modeling and visualization method for emergency in the network environment[C]//Geoinformatics, *2018 26th International Conference on IEEE*, 2018: 1-5.

[6] Guo Yukun, Zhu Jun, Wang Yu, Chai Jinchuan, **Li Weilian*,** Fu Lin, Xu Bingli, Gong Yuhang. A virtual reality simulation method for crowd evacuation in a multiexit indoor fire environment[J]. *ISPRS International Journal of Geo-Information*, 2020, 9(12): 750.

[7] **李维炼,** 朱军, 朱秀丽, 付林, 张昀昊, 胡亚, 何秋玲, 黄鹏诚. 无人机遥感数据支持下滑坡 VR 场景探索分析方法[J]. *武汉大学学报(信息科学版)*, 2019(07): 1065-1072. (In Chinese)

[8] **李维炼,** 朱军, 张昀昊, 付林, 胡亚, 尹灵芝, 戴义. 空间语义约束的泥石流灾害 VR 场景融合建模及交互方法[J]. *武汉大学学报(信息科学版)*, 2020, 45(07): 1073-1081. (In Chinese)

[9] **李维炼,** 朱军, 胡亚, 张昀昊, 尹灵芝, 曹振宇. 面向多用户类型的泥石流应急灾害信息特征可视化方法[J]. *灾害学*, 2018, 33(02): 231-234. (In Chinese)

[10] **李维炼,** 朱军, 黄鹏诚, 王有祥, 周乐韬. 不同可视化方法对泥石流灾害信息认知影响对比分析[J]. *灾害学*, 2020, 35(02): 230-234. (In Chinese)

[11] Fu Lin, Zhu Jun*, **Li Weilian,** Zhu Qing, Xu Bingli, Xie Yakun, Zhang Yunhao, Hu Ya, Lu Jingtao. Tunnel vision optimization method for VR flood scenes based on Gaussian blur[J]. *International Journal of Digital*

Earth, 2021, DOI: 10.1080/17538947.2021.1886359.

[12] Fu Lin, Zhu Jun*, **Li Weilian,** You Jigang, Hua Zhangyu. Fast estimation method of volumes of land slide deposit by the 3D reconstruction of smartphone images[J]. *Landslides*, 2021, doi.org/10.1007/s10346-021-01702-9.

[13] Hu Ya, Zhu Jun*, **Li Weilian,** Zhang Yunhao, Zhu Qing, Qi Hua, Zhang Huixin, Cao Zhenyu, Zhu Weijun, Zhang Pengcheng. Construction and optimization of three-dimensional disaster scenes within mobile virtual reality[J]. *ISPRS International Journal of Geo-Information*, 2018, 7(215): 1-16.

[14] Zhang Yunhao, Zhu Jun, **Li Weilian,** Zhu Qing, Hu Ya*, Fu Lin, Zhang Junxiao, Huang Pengcheng, Xie Yakun, Yin Lingzhi. Adaptive construction of the virtual debris flow disaster environments driven by multitype visualization task[J]. *ISPRS International Journal of Geo-Information*, 2019, 8(5): 209.

[15] Zhang Yunhao, Zhu Jun, Zhu Qing, **Li Weilian,** Zhang Junxiao, Liu Mingwei, Li Yun, Feng Bin. Optimized organization and adaptive visualization of complicated mountain disaster 3D scenes for diverse terminals. *International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences*. 2018, 42, 237–241.

[16] Zhang Yunhao, Zhu Jun*, Zhu Qing, Xie Yakun, **Li Weilian,** Fu Lin, Zhang Junxiao, Tan Jianmei. The construction of personalized virtual landslide disaster environments based on knowledge graphs and deep neural networks[J]. *International Journal of Digital Earth*, 2020: 1-19.

[17] Xie Yakun, Zhu Jun, Cao Yungang*, Feng Dejun, Hu Minjun, **Li Weilian,** Zhang Yunhao, Fun Lin. Refined extraction of building outlines from high-resolution remote sensing imagery based on a multifeature convolutional neural network and morphological filtering[J]. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 2020, 13: 1842-1855.

[18] Yin Lingzhi, Zhu Jun*, Li Yi, Zeng Chao, Zhu Qing, Qi Hua, Liu Mingwei, **Li Weilian,** Cao Zhenyu, Yang Weijun, Zhang Pengcheng. A virtual geographic environment for debris flow risk analysis in residential areas [J]. *ISPRS International Journal of Geo-Information*, 2017, 6(11), 377.

[19] Zhang Yunhao, Zhu Jun, **Li Weilian.** Adaptive web 3D visualization for diverse terminals[C]//Geoinformatics, *2018 26th International Conference on IEEE*, 2018: 1-5.

[20] 胡亚, 朱军, **李维炼,** 张昀昊, 胡明远, 曹振宇. 移动 VR 洪水灾害场景构建优化与交互方法[J]. *测绘学报*, 2018, 47(08): 1123-1132. (In Chinese)

[21] 朱军, 付林, **李维炼,** 郑全红, 胡亚, 郭煜坤, 黄鹏诚, 杨利. 知识引导的滑坡灾害场景动态表达方法[J]. *武汉大学学报(信息科学版)*, 2020,45(08): 1255-1262. (In Chinese)

[22] 张昀昊, 朱军, **李维炼,** 胡亚, 刘铭崴. 面向多样化终端的自适应网络三维可视化方法[J]. *西南交通大学学报*, 2019, 54(05): 989-996. (In Chinese)

[23] 朱军, 佘平, **李维炼,** 曹云刚, 齐华, 王博, 王瑜. 基于导航网格的室内火灾逃生路径动态规划[J]. *西南交通大学学报*, 2020, 55(05): 1103-1110. (In Chinese)

[24] 郭煜坤, 朱军, 付林, **李维炼,** 郑全红, 赵媛媛, 吴思豪. 一种面向公众教育的滑坡灾害可视化视觉表征方法[J]. *武汉大学学报(信息科学版)*, 2020, 45(09): 1378-1385. (In Chinese)

[25] 朱军，吴思豪，张昀昊，黄华平，郭煜坤，陈逸东，**李维炼.** 大规模道路交通数据网络轻量化可视化方法[J]. *西南交通大学学报*, 2020(1):1-10. (In Chinese)

[26] 康琳，朱军，**李维炼.** 基于溃坝洪水模型的山区堰塞湖避难场所选址[J]. *自然灾害学报*，2018，27(05): 39-45. (In Chinese)

[27] 黄鹏诚，朱军，**李维炼,** 周乐韬，何秋玲，付林，路井涛. 无人机遥感数据驱动下的滑坡动态可视化方法研究[J]. *灾害学*, 2020, 35(01): 230-234. (In Chinese)

[28] 唐俊，朱军，**李维炼,** 佘平. 基于虚拟地理环境的室内火灾真实感可视化[J]. *地理信息世界*, 2019, 26(03): 72-76. (In Chinese)

[29] 杨小凤，曹云刚，冯薪朗，龚竞，曹振宇，**李维炼.** 基于无人机高分影像的七盘沟泥石流风险性评价[J]. *灾害学*, 2016, 31(02): 206-212. (In Chinese)

Invention Patents

[1] Zhu Jun, Cao Yungang, Hu Ya, **Li Weilian,** Tang Jun. A Dynamic Path Planning Method of UAV Under Complex Environment Constraints. Authorization Number:(CN)201910441841.9.

[2] Zhu Jun, Zhu Qing, **Li Weilian,** Zhang Tianyi, Ren Shiman, Dang Pei. An interactive method of personalized railway VR scene. Application Number:(CN)202010156431.2.

[3] Zhu Jun, Zhu Qing, **Li Weilian,** Fu Lin. VR scene optimization method based on tunnel vision. Application Number:(CN)202010883183.1.