

● 教育与学历

姓名：张华

学位：博士

职称：教授

研究方向：遥感智能解译，LiDAR 点云数据处理，
GIS 理论与智慧矿山

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● 教育与学历

2017.02-2018.02	访问学者	意大利特伦托大学
2009.03-2010.09	访问学者	香港理工大学
2008.09-2012.12	地图制图学与地理信息工程博士	中国矿业大学
2001.09-2004.06	地图制图学与地理信息工程硕士	中国矿业大学

● 工作经历

- 2023.1-至今 中国矿业大学环境与测绘学院 教授
- 2014.1-2022.12 中国矿业大学环境与测绘学院 副教授
- 2004.7-2013.12 中国矿业大学环境与测绘学院助教 讲师

● 期刊论文

● 2024

Hua Zhang, Hu Dou, Zelang Miao, Nanshan Zheng, Ming Hao, and Wenzhong Shi. (2024). Extracting Building Footprint from Remote Sensing Images by an Enhanced Vision Transformer Network. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 62 (SCI);

Yueheng Yang, Zelang Miao, Xiaojing Li, **Hua Zhang** and Shuai Chen. (2024). LSL-SS-Net level set loss-guided semantic segmentation networks for landslide extraction. *GIScience & Remote Sensing* (SCI);

Yueheng Yang, Zelang Miao, **Hua Zhang**, Bing Wang, and Lixin Wu. (2024). Lightweight Attention-Guided YOLO With Level Set Layer for Landslide Detection from Optical Satellite Images. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing* (SCI);

Hua Zhang, Ziyang Wan, Ruizheng Xu, Nanshan Zheng & Ming Hao. (2024). A large-scale point cloud semantic segmentation neural network based on long-range contextual dependencies enhancement. *Remote Sensing Letters* (SCI);

Feng Li, Wenzhong Shi, **Hua Zhang**, Yunlin Tu, Ming Hao, Yangjie Sun (2024). Automatic multi-storey building partitioning from point cloud via bidirectional cloth simulation. *Journal of Building Engineering* (SCI);

张华, 徐瑞政, 郑南山, 郝明, 刘东烈, 史文中(2024). 融合颜色信息和多尺度几何特征的点云语义分割方法. *地球信息科学学报* (SCI);

● **2023**

Gang Yuan , Yunjia Wang , Feng Zhao , Member, IEEE, Shiyong Yan, **Hua Zhang**, etc. (2023). Spatiotemporal Correlation Characteristics Between Thermal Infrared Remote Sensing Obtained Surface Thermal Anomalies and Reconstructed 4-D Temperature Fields of Underground Coal Fires. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 61 (SCI);

Yuqing Liu, Wenzhong Shi, **Hua Zhang** and Min Zhang. (2023). A multilevel stratified spatial sampling approach based on terrain knowledge for the quality assessment of OpenStreetMap dataset in Hong Kong. *Transactions in GIS* (SCI);

Feng Li, Wenzhong Shi, Yunlin Tu, **Hua Zhang** (2023). Automated methods for indoor point cloud preprocessing: Coordinate frame reorientation and building exterior removal. *Journal of Building Engineering* (SCI);

Ming Hao, Chaoyun Yang, Huijing Lin, Lanlan Zou, Shu Liu & **Hua Zhang** * (2023). Bi-Temporal change detection of high-resolution images by referencing time series medium- resolution images. *International Journal of Remote Sensing* (SCI);

2022

Hua Zhang, Kai Ren, Nanshan Zheng, and Ming Hao (2022). A Multiscale Convolutional Neural Network With Color Vegetation Indices for Semantic Labeling of Point Cloud. *IEEE Geoscience and Remote Sensing Letters*, vol.19, 6501705. (SCI)

Hua Zhang, Zhenwei Duan, Nanshan Zheng*, Yong Li, Yu Zeng, and Wenzhong Shi (2022). An Efficient Class-Constrained DBSCAN Approach for Large-Scale Point Cloud Clustering. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, vol. 15, 7323. (SCI);

Hua Zhang, Xiangcheng Zheng, Nanshan Zheng*, and Wenzhong Shi (2022). A Multiscale and Multipath Network with Boundary Enhancement for Building

Footprint Extraction from Remotely Sensed Imagery. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, vol. 15 (SCI);

张华, 郑祥成, 郑南山*, 史文中 (2022). 基于 **MAEU-CNN** 的高分辨率遥感影像建筑物提取. 地球信息科学学报, Vol.24, No.6, 1189-1203.

Wenzhong Shi, Dizhou Guo*, Hua Zhang (2022). A reliable and adaptive spatiotemporal data fusion method for blending multi-spatiotemporal-resolution satellite images. *Remote Sensing of Environment*. vol. 268, 112770. (SCI);

Dizhou Guo, Wenzhong Shi, Hua Zhang, Ming Hao (2022). A Flexible Object-Level Processing Strategy to Enhance the Weight Function-Based Spatiotemporal Fusion Method. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 60 (SCI);

2021

Hua Zhang, Yue Sun, Wenzhong Shi, Dizhou Guo & Nanshan Zheng (2021). An object-based spatiotemporal fusion model for remote sensing images. *European Journal of Remote Sensing*, VOL. 54, NO. 1, 86-101 (SCI);

Feng Li, Wenzhong Shi, and Hua Zhang* (2021). A Two-Phase Clustering Approach for Urban Hotspot Detection with Spatiotemporal and Network Constraints. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, vol. 14, 3695-3705. (SCI);

2019

Yue Sun, **Hua Zhang***(2019). A Two-Stage Spatiotemporal Fusion Method for Remote Sensing Images. *Photogrammetric Engineering & Remote Sensing*, vol. 86, No. 12, 907-914 (SCI);

Yue Sun, **Hua Zhang*** and Wenzhong Shi (2019). A spatio-temporal fusion method for remote sensing data Using a linear injection model and local neighbourhood information. *International Journal of Remote Sensing*, vol. 40, no. 8, 2965-2985. (SCI);

Ming Hao, Min Tan and **Hua Zhang** (2019). A change detection framework by fusing threshold and clustering methods for optical medium resolution remote sensing images. *European Journal of Remote Sensing*, vol. 52, no. 1, 96-106. (SCI);

2018

Hua Zhang, Lorenzo Bruzzone, Wenzhong Shi, Ming Hao, and Yunjia Wang (2018). Enhanced Spatially Constrained Remotely Sensed Imagery Classification Using a Fuzzy Local Double Neighborhood Information C-Means Clustering Algorithm. *IEEE Journal of Selected Topics in Applied Earth Observation and Remote Sensing*, vol. 11, no. 8, 2896-2910. (SCI);

Hua Zhang, Wenzhong Shi, Ming Hao, Zhenxuan Li and Yunjia Wang (2018). An adaptive spatially constrained fuzzy c-means algorithm for multispectral remotely sensed imagery clustering. *International Journal of Remote Sensing*, vol. 39, no. 8, 2207-2237. (SCI);

Pengfei He, Wenzhong Shi and **Hua Zhang** (2018). Adaptive superpixel based Markov random field model for unsupervised change detection using remotely sensed images. *Remote Sensing Letters*, vol. 9, no. 8, 724-732. (SCI);

2017

Hua Zhang, Qunming Wang, Wenzhong Shi, and Ming Hao (2017). A Novel Adaptive Fuzzy Local Information C-Means Clustering Algorithm for Remotely Sensed Imagery Classification. *IEEE Transactions on Geoscience and Remote Sensing*, vol. 55, no. 9, 5057-5067. (SCI);

Ming Hao, **Zhang Hua***, Zhenxuan Li, and Bing qian Chen (2017). Unsupervised change detection using a novel fuzzy c-means clustering simultaneously incorporating local and global information. *Multimedia Tools and Applications*, vol. 76, no. 19, 20081-20098 (SCI);

Zhenxuan Li, Wenzhong Shi, **Hua Zhang**, and Ming Hao (2017). Change Detection Based on Gabor Wavelet Features for Very High-Resolution Remote Sensing Images. *IEEE Geoscience and Remote Sensing Letters*, 2017, 14(5), 783-787. (SCI)

2016

Liping Cai, Wenzhong Shi, **Hua Zhang** and Ming Hao (2016). Object-oriented change detection method based on adaptive multi-method combination for remote-sensing images, *International Journal of Remote Sensing*, vol. 37, no. 22, 5457-5471. (SCI)

Ming Hao, Wenzhong Shi, **Hua Zhang**, Qunming Wang, Kazhong Deng (2016). A Scale-Driven Change Detection Method Incorporating Uncertainty Analysis for Remote Sensing Images, *remote sensing*, vol. 8, no. 9. (SCI)

Ming Hao, Wenzhong Shi, Kazhong Deng, **Hua Zhang** and Pengfei He. An Object-Based Change Detection Approach Using Uncertainty Analysis for VHR Images, *Journal of Sensors*, 2016. (SCI)

2015

Pengfei He, Wenzhong Shi, Zelang Miao, **Hua Zhang** and Liping Cai.(2015). Advanced Markov random field model based on local uncertainty for unsupervised change detection, *Remote Sensing Letters*, vol.6, no.9, 667-676. (SCI)

Liping Cai, Wenzhong Shi, Pengfei He, Zelang Miao, Ming Hao and **Hua Zhang**.(2015). Fusion of multiple features to produce a segmentation algorithm for remote sensing images, *Remote Sensing Letters*, vol.6, no.5, 390-398. (SCI)

Ming Hao, Wenzhong Shi, Kazhong Deng, and **Hua Zhang** (2015), Fusion-based approach to change detection to reduce the effect of the trade-off parameter in the active contour model, *Remote Sensing Letters*, vol.6, no.1, pp: 39-48. (SCI)

2014

Hua Zhang, Wenzhong Shi, Yunjia Wang, Ming Hao, and Zelang Miao (2014), Spatial-Attraction-Based Markov Random Field Approach for Classification of High Spatial Resolution Multispectral Imagery, *IEEE Geoscience and Remote Sensing Letters*, vol.11, no.2, 489-493.(SCI)

Hua Zhang, Wenzhong Shi, Yunjia Wang, Ming Hao, and Zelang Miao (2014), Classification of Very High Spatial Resolution Imagery Based on a New Pixel Shape Feature Set, *IEEE Geoscience and Remote Sensing Letters*, vol.11,no.5, 940-944. (SCI)

Nanshan Zheng, **Hua Zhang***, Jingjing Fan and Hongjie Guan (2014), A fuzzy local neighbourhood-attraction based information c-means clustering algorithm for very high spatial resolution imagery classification, *Remote Sensing Letters*, vol.5, no.9, 843–852, (SCI)

Ming Hao, Wenzhong Shi, **Hua Zhang** and Chang Li (2014), Unsupervised change detection with Expectation-Maximization-based level set, *IEEE Geoscience and Remote Sensing Letters*, vol.11, no.1, 210-214. (SCI)

Yongbo Wang, Yunjia Wang, Kan Wu, Hua chaoYang, **Hua Zhang** (2014), A dualquaternion-based, closed-form pairwise registration algorithm for point clouds, *ISPRS Journal of Photogrammetry and Remote Sensing*, vol.94, 63–69. (SCI)

Quming. Wang, Wenzhong. Shi and **Hua Zhang** (2014), Classallocation for soft-then-hard subpixel mapping algorithms with adaptivevisiting order of classes. *IEEE Geoscience and Remote Sensing Letters*, vol.11, no.9, 1494–1498. (SCI)

Ming Hao, Wenzhong Shi, Kazhong Deng, and **Hua Zhang** (2014), Acontrast-sensitive Potts model custom-designed for change detection, *European Journal of Remote Sensing*, vol.47, no.1, 643-654. (SCI)

Pengfei He, Wenzhong Shi, **Hua Zhang** and Ming Hao. (2014). A novel dynamic threshold method for unsupervised change detection from remotely sensed images, *Remote Sensing Letters*, vol.5, no.4, 396-403. (SCI)

Zelang Miao, Wenzhong Shi, **Hua Zhang** (2014), A Semi-Automatic Method for Road Centerline Extraction From VHR Images, *IEEE Geoscience and Remote Sensing Letters*, vol.11,no.11, 1856-1860. (SCI)

Wenzhong Shi, Zelang Miao, Qunming Wang and **Hua Zhang** (2014), Spectral–Spatial Classification and Shape Features for Urban Road Centerline Extraction, *IEEE Geoscience and Remote Sensing Letters*, vol.11, no.4, 788-792. (SCI)

2013

Zelang Miao, Wenzhong Shi, **Hua Zhang** and Xinxin Wang (2013), Road Centerline Extraction From High-Resolution Imagery Based on Shape Features and Multivariate Adaptive Regression Splines, *IEEE Geoscience and Remote Sensing Letters*, vol.10, no.3, 583-587. (SCI)

Ming Hao, Wenzhong Shi, and **Hua Zhang** (2013), Unsupervised change detection using fuzzy c-means and MRF from remotely sensed images. *Remote Sensing Letters*, vol.4, no.12, 1185-1194. (SCI)

2012

Hua Zhang, Wenzhong Shi, and Kim Liu (2012). Fuzzy-topology-integrated Support Vector Machine for remotely sensed image classification. *IEEE Transactions on Geoscience and Remote Sensing*, vol.50, no.3, 850-862. (SCI)

2011

Kimfung Liu, Wenzhong Shi and **Hua Zhang** (2011), A fuzzy topology-based maximum likelihood classification, *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 66, 103–114(SCI)

Kimfung Liu, Wenzhong Shi and **Hua Zhang** (2011), A study of supervised classification accuracy in fuzzy topological methods, *International Journal of Applied Earth Observation and Geoinformation*, vol.13, no.1, 89–99 (SCI)

● 项目

1. 基于高分辨率单片卫星影像的矢量建筑物基底轮廓更新方法研究，国家自然科学基金面上项目（42571389），2026.01-2029.12。
2. 基于倾斜摄影的城市不透水面精细化提取方法，国家自然科学基金面上项目（41971400），2020.01-2023.12。
3. 基于模糊拓扑及多特征融合的遥感影像亚像元定位，国家自然科学基金青年基金项目（41201451），2013.01-2015.12。
4. 可靠性遥感影像分类与空间关联分析研究，国家自然科学基金重点项目子课题（41331175），2014.01-2018.12。
5. 数字周边构建与地缘环境分析关键技术研究，十二五科技支撑（2012BAK12B03-1），2012.1-2014.12。
6. 融合空间邻域信息的可靠性遥感影像变化检测，学科前沿方向研究专项，2015XKQY09,2015.07-2018.07。
7. 遥感影像变化检测软件开发与系统集成服务项目，中国移动沈阳分公司（企业委托），2021-2022
8. 面向复杂山地地形的激光点云自适应滤波处理系统，中国电建集团贵州电力设计研究院有限公司（企业委托），2025-2026

9. 大田无人机数据获取（企业委托），2021-2022
10. 鱼塘航拍及调查项目，江苏省水文水资源勘测局徐州分局（企业委托），2022
11. 麻家梁矿区控制网重建及 14102 工作面开采引起的地表变形规律研究，麻家梁矿（企业委托），2015

● 指导的已经毕业的研究生

2025

- 姜文龙，硕士论文：基于高分辨率卫星影像的城市建筑物轮廓精细化提取方法研究
- 欧伟楠，硕士论文：InSAR 与光学遥感协同反演的矿区沉陷积水区动态监测

2024

- 窦虎，硕士论文：基于语义信息增强的高空间分辨率遥感影像建筑物提取方法研究
- 徐瑞政，硕士论文：基于多特征融合的大规模点云语义分割方法研究
- 周恒，硕士论文：基于 BIM 与 GIS 的校园内涝模拟分析系统设计与开发

2023

- 郑祥成，硕士论文：基于深度学习的高空间分辨率遥感影像建筑物提取
- 段振威，硕士论文：基于匹配点云的城市不透水面精细化提取
- 刘磊：硕士论文：基于深度学习的高分辨率遥感影像语义分割及边界优化
- 杨景文：硕士论文：基于实景三维及 BIM 的不动产管理系统

2022

邹剑波，硕士论文：无人机倾斜摄影精细化实景三维建模及校园 GIS 应用

王颖婷，硕士论文：基于多时相遥感影像的火烧迹地提取及植被恢复评价

高豪：硕士论文：基于迁移学习的遥感影像建筑物提取方法

2021

任 凯，硕士论文：融合颜色特征的卷积神经网络点云分类

赵亚松，硕士论文：基于实景三维地图的视频监控选址优化及应用

2020

孟艳秋，硕士论文：徐州市不透水面时空扩展与热环境研究

2019

孙悦，硕士论文：基于 Landsat 与 MODIS 数据的时空融合算法研究

2018

杨国庆，硕士论文：基于空间邻域信息的高光谱遥感影像半监督分类

2016

樊敬敬，硕士论文：基于机载 LiDAR 点云数据的城区植被与建筑物提取研究

● 在读研究生

2020 级

刘玉卿，大地测量学与测量工程

郑祥成，摄影测量与遥感

段振威，测绘工程

刘磊，测绘工程

杨景文，测绘工程

● 获奖

2021 中国煤炭工业科技进步奖(I, R3)

2020 教育部科技进步奖（II, R8）

2019 湖南省科技进步奖（II, R5）

2019 中国煤炭工业科技进步奖(II, R5)

2019 中国煤炭工业科技进步奖(II, R7)

2017 测绘科技进步奖(特等, R6)

- 2016 测绘科技进步奖（I, R8）
- 2014 江苏省优秀博士论文奖
- 2013 江苏省科技进步奖(II, R7)
- 2012 江苏省科技进步奖(III, R3)
- 2012 测绘科技进步奖（II, R3）