

● 教育与学历

姓名：张华

学位：博士

职称：教授

行政职务：无

研究方向：遥感智能解译，GIS 理论与智慧矿山，

LiDAR 点云数据处理。

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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

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。
2. 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。
3. 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。
4. 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。
5. 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。
6. 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
7. 大田无人机数据获取，企业委托，2021-2022
8. 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
9. 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

2022

邹剑波，硕士学位论文：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，硕士学位论文：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：硕士学位论文：基于迁移学习的遥感影像建筑物提取方法

2021

任 凯，硕士学位论文：融合颜色特征的卷积神经网络点云分类

赵亚松，硕士学位论文：基于实景三维地图的视频监控选址优化及应用

2020

孟艳秋，硕士学位论文：徐州市不透水面时空扩展与热环境研究

2019

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

2018

杨国庆，硕士学位论文：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，硕士学位论文：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

2021 级

窦虎，地图制图学与地理信息工程

徐瑞政，地图制图学与地理信息工程

周恒，资源与环境（测绘工程）

2022 级

姜文龙，摄影测量与遥感

蒋志伟，资源与环境（测绘工程）

欧伟楠，资源与环境（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）