Xiaoshui Huang

https://xiaoshuihuang.github.io/

University of Sydney – Sydney, NSW Australia.

Bith:1988.01, Hunan, Male. Research interests: 3D computer vision. Wechat: Xiaoshui_Huang

Education

University of Technology Sydney *Ph.D. in Computer Science*	2015.02-2019.03
Shenyang Aerospace University *M.Eng. in Computer Science*	2011.09-2014.01
Taiyuan University of Technology *B.Sc. in Geometric Information System*	2006.09-2010.07

Work Experience

Shanghai AI Laboratory: *Research Fellow*	20122.03-Present
University of Sydney: *Postdoctoral Research Associate*	2019.09-2022.02
University of Technology Sydney *Research Fellow*	2019.01-2019.09

Teaching

UTS 48450: Real-time Operating System – Tutor

UTS 49238: Telecommunication Networks Management – Tutor

Grants

1. **Xiaoshui Huang**, Matthew Field, Lois Holloway, Paul Keall, Shalini Vinod. "Analysing lung cancer guideline compliance with patient treatment outcomes using deep learning". *Ingham Research grant.* 2020–2021, **$20K.**

2. Ali Haidar, Lois Holloway, Matthew Field, **Xiaoshui Huang**, Nasreen Kaadan, Farhannah Aly, Vikneswary Batumalai. "Unsupervised Machine Learning for Detecting and Fixing Variations in Cancer Patients Medical Records". *Ingham Research grant.* 2020–2021, **$15K.**

Patents

1. Lixin Fan, **Xiaoshui Huang**, Qiang Wu, Jian Zhang. Point cloud matching method. 2020.09, US10776936B2. **US patent**.

Selected Publications

 Journals:

- **Xiaoshui Huang**; Wentao Qu; Yifan Zuo; Yuming Fang; Jian Zhang; Xiaowei Zhao. IMFNet: Interpretable Multimodal Fusion for Point Cloud Registration. IEEE Robotics and Automation Letters (RA-L), 2022. **(JCR Q1)**

- **Xiaoshui Huang**; Yangfu Wang; Guofeng Mei; Zongyi Xu; Yucheng Wang; Mohammed Bennamoun. Robust Real-world Point Cloud Registration by Inlier Detection. Computer Vision and Image Understanding (CVIU), 2022. **(JCR Q1)**

- **Xiaoshui Huang**; Sheng Li; Yifan Zuo; Yuming Fang; Jian Zhang; Xiaowei Zhao. Unsupervised Point Cloud Registration by Learning Unified Gaussian Mixture Models. IEEE Robotics and Automation Letters (RA-L), 2022. **(JCR Q1)**

- **Xiaoshui Huang**, Lixin Fan, Qiang Wu, Jian Zhang, Chun Yuan. A coarse-to-fine algorithm for matching and registration in 3D cross-sourced point clouds. Transactions on Circuits and Systems for Video Technology (T-CSVT). 2017. **(JCR Q1)**

- **Xiaoshui Huang**, Jian Zhang, Lixin Fan, Qiang Wu, Chun Yuan. "A Systematic Approach for Cross-Source Point Cloud Registration by Preserving Macro and Micro Structures," in IEEE Transactions on Image Processing (T-IP), vol. 26, no. 7, pp. 3261-3276, July 2017. **(JCR Q1)**

- Shuchao Pang, Anan Du, Mehmet Orgun; Yan Wang; Michael Sheng; Shoujin Wang; **Xiaoshui Huang**; Zhenmei Yu. Beyond CNNs: Exploiting Further Inherent Symmetries in Medical Image Segmentation. IEEE Transactions on Cybernetics. **(JCR Q1)**

- Yifan Zuo, Hao Wang, Yuming Fang, **Xiaoshui Huang**, Xiwu Shang, Qiang Wu. "MIG-net: Multi-scale Network Alternatively Guided by Intensity and Gradient Features for Depth Map Super-resolution", Accepted in IEEE Transactions Multimedia (TMM). 2021. **(JCR Q1)**

- Shoujin Wang, Longbing Cao, Liang Hu, Shlomo Berkovsky, **Xiaoshui Huang**, Lin Xiao, Wenpeng Lu. "Hierarchical attentive transaction embedding with intra- and inter-transaction dependencies for next-item recommendation". IEEE Intelligent Systems. 2020. **(JCR Q1)**

Conferences:

- **Xiaoshui Huang**, Shalini Vinod, Paul Keall, Matthew Field, Vikneswary Batumalai, Lois Holloway. Real world radiotherapy protocol compliance for patients with Stage I-III Non-Small Cell Lung cancer. Poster In European Society for Therapeutic Radiology and Oncology (ESTRO) 2021.

- **Xiaoshui Huang**, Guofeng Mei, Jian Zhang. Feature-metric Registration: A Fast Semi-supervised Approach for Robust Point Cloud Registration without Correspondences. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2020. **(CCF A)**

- **Xiaoshui Huang**, Lixin Fan, Qiang Wu, Jian Zhang, Chun Yuan. Fast Registration for cross-source point clouds by using weak regional affinity and pixel-wise refinement. International Conference of Multimedia Expro (ICME) 2019. **(CCF B)**

- **Xiaoshui Huang**, Chun Yuan, and Jian Zhang, 2015, September. Graph Cuts Stereo Matching Based on Patch-Match and Ground Control Points Constraint. In Pacific Rim Conference on Multimedia (PCM) (pp. 14-23). Springer International Publishing. **(CCF C)**

- **Xiaoshui Huang**, Jian Zhang, Qiang Wu, Lixin Fan, Chun Yuan. A coarse-to-fine algorithm for registration in 3D street-view cross-source point clouds. In 2016 International Conference

on Digital Image Computing: Techniques and Applications (DICTA) (pp. 1-6). IEEE.

- **Xiaoshui Huang**, Lixin Fan, Jian Zhang, Qiang Wu, and Chun Yuan, 2016. Real Time Complete Dense Depth Reconstruction for a Monocular Camera. In Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW) (pp. 32-37). IEEE.

- **Xiaoshui Huang**, Jian Zhang, Qiang Wu, Chun Yuan, and Lixin Fan, 2015, November. Dense Correspondence Using Non-local DAISY Forest. In 2015 International Conference on Digital Image Computing: Techniques and Applications (DICTA) (pp. 1-8). IEEE.

- Guofeng Mei, **Xiaoshui Huang**, Jian Zhang, Qiang Wu. Overlapping guided coarse-to-fine correspondence prediction for point cloud registration. ICME 2022. **(CCF B)**

- Guofeng Mei, **Xiaoshui Huang**, Jian Zhang, Qiang Wu. Partial Point Cloud Registration via Soft Segmentation. ICIP 2022. **(CCF C)**

- Guofeng Mei, **Xiaoshui Huang**, Juan Liu, Jian Zhang, Qiang Wu. Unsupervised Point Cloud Pre-training via Contrasting and Clustering. ICIP 2022. **(CCF C)**

- STEVE LING, Yujiao Wu, Steven Su, Ma Jie, **Xiaoshui Huang**. DeepMMSA: A Novel Multimodal Deep Learning Framework for Non-small Cell Lung Cancer Survival Analysis. IEEE International Conference on Systems, Man, and Cybernetics (SMC) 2021. **(CCF C)**

- Anan Du, Shuchao Pang, **Xiaoshui Huang**, Jian Zhang, Qiang Wu. Exploring long-short-term context for point cloud semantic segmentation. International Conference on Image Processing (ICIP) 2020. **(CCF C)**

- Tao Chen, Jian Zhang, Guo-Sen Xie, Yazhou Yao, **Xiaoshui Huang**, Zhenmin Tang. Classification Constrained Discriminator for Domain Adaptive Semantic Segmentation. International Conference of Multimedia Expro (ICME) 2020. **(CCF B)**

- Anan Du, **Xiaoshui Huang**, Jian Zhang, Lingxiang Yao, Qiang Wu. KPSNET: Keypoint detection and feature extraction for point cloud registration. International Conference on Image Processing (ICIP) 2019. **(CCF C)**

- Shoujin Wang, Liang Hu, Longbing Cao, **Xiaoshui Huang**, Defu Lian, Wei Liu. Attention-based Transactional Context Embedding for Next-Item Recommendation. AAAi 2018. **(CCF A)**

Awards

UTS International research scholarship.
UTS FEIT Research Scholarship.
UTS FEIT One-off Research Scholarship.
Higher Degree by Research Publication Award.
Nokia patent award.

Academic Service

Associate Editor:
IEEE Robotics and Automation Letters (RA-L)

Journal Reviewer:
IEEE Transactions on Pattern Recognition and Machine Learning (TPAMI)

International Journal of Computer Vision (IJCV)
IEEE Transactions on Image Processing (TIP)
IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
IEEE Transactions on Multimedia (TMM)
IEEE Intelligent Systems
IEEE Sensors Journal
IEEE MultiMedia
EURASIP Journal on Image and Video Processing

Conference Reviewer:
ICLR 2022, 2023
NeurIPS 2020, 2021, 2022
CVPR 2021, 2022
ICCV 2021
ECCV 2022
IJCAI 2020, 2021, 2022
AAAI 2021, 2022
ICME 2018, 2019
ICIP 2017
DICTA 2016