

Jin Xie

Contact Information

Department of Computer Science and Engineering, Nanjing University of Science and Technology, China.

Email: csjxie@njust.edu.cn

Research Interests

My research is in the area of machine learning, computer vision, computer graphics and robotics, especially in applying machine learning to 3D computer vision and computer graphics tasks.

Research Experience

Nanjing University of Science and Technology

Sep. 2017- Faculty

New York University Abu Dhabi/ New York University Tandon school of Engineering

Jan. 2017-Aug. 2017 Research scientist

New York University Abu Dhabi/ New York University Tandon school of Engineering

Jan. 2014-Dec.2016 Postdoctoral associate

Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences

Jan. 2013- Dec. 2013 Research associate

Education

Hong Kong Polytechnic University, Hong Kong, China

Mar. 2008 – Oct. 2012 Ph.D in Computing

Supervisor: Lei Zhang

Dissertation: Texton encoding based texture classification and its applications to skin texture analysis

Northwestern Polytechnic University, Xi'an, China

Sep. 2004 – July. 2007 M.S in Automatic control

Supervisor: Quan Pan

Shen yang Aerospace University, Shen yang, China

Sept. 2000 – July. 2004 B.S in Automatic control

Research Projects

- NSFC Structured cycle consistency based 3D object feature representation and matching 2019-2022
- Jiangsu Distinguished Professor Program Deep learning based 3D object feature representation 2017-2020
- SAIC Motor Lane and road marking detection from single image 2019-2021

Publications

Conference

1. Le Hui, Rui Xu, **Jin Xie**, Jianjun Qian and Jian Yang, Progressive point cloud deconvolution generation network, *European Conference on Computer Vision, ECCV 2020*.
2. Mingmei Cheng, Le Hui, **Jin Xie**, Jian Yang and Hui Kong, Cascaded non-local neural network for point cloud semantic segmentation, *International Conference on Intelligent Robots and Systems, IROS 2020*.
3. Kangkan Wang, **Jin Xie**, Guofeng Zhang, Lei Liu and Jian Yang, Sequential 3D human pose and shape estimation from point clouds, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2020*.
4. Jiaxin Chen, Jie Qin, Fan Zhu, Li Liu, Fumin Shen, **Jin Xie** and Ling Shao, Deep sketch-shape hashing with segmented 3D stochastic viewing, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2019*.
5. Fan Zhu, Li Liu, **Jin Xie**, Ling Shao and Yi Fang, Learning to synthesize 3D indoor scenes from monocular images, *ACM Conference on Multimedia, ACM MM 2018*.
6. Guoxian Dai, **Jin Xie** and Yi Fang, Siamese CNN-BiLSTM architecture for 3D shape representation learning , *International Joint Conference on Artificial Intelligence, IJCAI 2018*.
7. Jing Zhu, **Jin Xie** and Yi Fang, Learning adversarial 3D model generation with 2D image enhancer, *AAAI Conference on Artificial Intelligence 2018, AAAI 2018*.
8. Guoxian Dai, **Jin Xie** and Yi Fang, Metric-based generative adversarial network, *ACM Conference on Multimedia, ACM MM 2017*.
9. Guoxian Dai, **Jin Xie**, Fan Zhu and Yi Fang, Deep correlation learning for sketch based 3D shape retrieval, *AAAI Conference on Artificial Intelligence, AAAI 2017*.
10. **Jin Xie**, Guoxian Dai, Fan Zhu and Yi Fang, Learning Barycentric representations of 3D shapes for sketch-based 3D shape retrieval, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2017*.
11. **Jin Xie**, Meng Wang and Yi Fang, Learned binary spectral shape descriptor for 3D shape correspondence, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2016*.
12. Fan Zhu, **Jin Xie** and Yi Fang, Heat diffusion long-short term memory learning for 3D shape analysis, *European Conference on Computer Vision, ECCV 2016*.
13. Fan Zhu, **Jin Xie** and Yi Fang, Learning cross-domain neural networks for sketch-based 3D shape retrieval, *AAAI Conference on Artificial Intelligence, AAAI 2016*.
14. **Jin Xie**, Yi Fang, Fan Zhu and Edward K.Wong, Deepshape:deep learned shape descriptor for 3D shape matching and retrieval, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2015*.
15. **Jin Xie**, Fan Zhu, Guoxian Dai and Yi Fang, Progressive shape-distribution-encoder for 3D shape retrieval, *ACM Multimedia 2015*.

16. Yi Fang, **Jin Xie***, Guoxian Dai, Meng Wang, Fan Zhu, Tiantian Xu and Edward Wong, 3D deep shape descriptor, *IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2015* (*: Corresponding author).
17. Min Zhang, **Jin Xie**, Hiroshi Fujita and Xiangrong Zhou, No reference image quality assessment based on local binary pattern statistics, *Visual Communications and Image Processing, 2013*.
18. **Jin Xie**, Lei Zhang, Jane You and David Zhang, Texture classification via patch-based sparse texton learning, *International Conference on Image Processing, ICIP2010*.

Journal

1. Guoxian Dai, **Jin Xie** and Yi Fang, Deep correlated holistic metric learning for sketch-based 3D shape retrieval, *IEEE Trans. Image Processing*, 2018.
2. **Jin Xie**, Guoxian Dai, Fan Zhu, Ling Shao and Yi Fang, Deep non-linear metric learning for 3D shape retrieval, *IEEE Trans. Cybernetics*, 2018.
3. **Jin Xie**, Guoxian Dai, Fan Zhu, Edward K.Wong and Yi Fang, Deepshape:deep-learned shape descriptor for 3D shape retrieval, *IEEE Trans. Pattern Analysis and Machine Intelligence*, 2017.
4. **Jin Xie**, Guoxian Dai and Yi Fang, Deep multi-metric learning for shape-based 3D model retrieval, *IEEE Trans. Multimedia*, 2017.
5. **Jin Xie**, Fan Zhu, Guoxian Dai, Ling Shao and Yi Fang, Progressive shape-distribution-encoder, *IEEE Trans. Image Processing*, 2017.
6. Meng Wang, **Jin Xie**, Fan Zhu and Yi Fang, Linear discrimination dictionary learning for shape descriptors, *Pattern Recognition Letters*, 2016.
7. Guoxian Dai, **Jin Xie**, Fan Zhu and Yi Fang, Learning discriminative deformation-invariant 3D shape descriptor via many-to-one encoder, *Pattern Recognition Letters*, 2016.
8. Fan Zhu, Ling Shao, **Jin Xie** and Yi Fang, From handcrafted to learned representations for human action recognition: a survey, *Image and Vision Computing*, 2016.
9. **Jin Xie** and Yi Fang, Dynamic texture recognition with video set based collaborative representation, *Image and Vision Computing*, 2016.
10. **Jin Xie**, Lei Zhang, Jane You and Simon Shiu, Effective texture classification by texton encoding induced statistical features, *Pattern Recognition*, 2015.
11. Jianquan Yang[#], **Jin Xie**[#], Guopu Zhu, and Yunqing Shi, An effective method for detecting double JPEG compression with the same quantization matrix, *IEEE Trans. Information Forensics and Security*, 2014 ([#]: Equal contribution).
12. Feng Ding, Guopu Zhu, Jianquan Yang, **Jin Xie** and Yunqing Shi, Edge perpendicular binary coding for USM sharpening detection, *IEEE Trans. Signal Processing Letters*, 2014.
13. **Jin Xie**, Lei Zhang, Jane You, David Zhang and Xiaofeng Qu, A study of hand back skin texture pattern for person identification and gender classification, *Sensors*, 2012.

14. Jianyu Shi, Shaowu Zhang, Quan Pan and **Jin Xie**, Prediction of protein subcellular localization by support vector machines using multi-scale energy and pseudo amino acid composition, *Amino Acids*, 2007.