

Nan Xue

PHD CANDIDATE IN COMPUTER VISION

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Education

PhD Student

STRUCTURE-FROM-MOTION, JUNCTION DETECTION AND DEEP LEARNING

Sep. 2016 - present

Wuhan University

Wuhan, China

Master Student

STRUCTURE-FROM-MOTION, MULTIVIEW GEOMETRY

Sep. 2014 - Jun. 2016

Wuhan University

Wuhan, China

Research Intern

POLAR-SAR IMAGE DENOISING

Nov. 2013 - Aug. 2014

Wuhan University

Wuhan, China

Bachelor's Degree in Science

INFORMATION AND COMPUTATIONAL SCIENCE

Sep. 2010 - Jun. 2014

Wuhan University

Wuhan, China

Honors & Awards

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| 2018 | Academic Innovation Award , Second Prize | Wuhan University |
| 2018 | Scholarship for Graduate Students Second Prize | Wuhan University |
| 2016 | Scholarship for Graduate Students Second Prize | Wuhan University |
| 2015 | Scholarship for Graduate Students Second Prize | Wuhan University |
| 2014 | Scholarship for Excellent Freshman | Wuhan University |
| 2013 | RenMin Scholarship Second Prize | Wuhan University |
| 2012 | Meritorious Winner , The American Mathematical Contest in Modeling | American Consortium
for Math. and Its Appl. |
| 2009 | First Prize National Olympiad in Informatics in Provinces | China Computer
Federation (CCF) |
| 2008 | Second Prize National Olympiad in Informatics in Provinces | China Computer
Federation (CCF) |

Academic Publications

- [1] **Nan Xue**, Song Bai, Fudong Wang, Gui-Song Xia, Tianfu Wu, and Liangpei Zhang. Learning attraction field representation for robust line segment detection. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [2] Jian Ding, **Nan Xue**, Yang Long, Gui-Song Xia, and Qikai Lu. Learning roi transformer for detecting oriented objects in aerial images. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018.
- [3] Zhu-Cun Xue, **Nan Xue**, Gui-Song Xia, and Weiming Shen. Learning to calibrate straight lines for fisheye image rectification. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [4] Fudong Wang, **Nan Xue**, Yipeng Zhang, Xiang Bai, and Gui-Song Xia. Adaptively transforming graph matching. In *the European Conference on Computer Vision (ECCV)*, 2018.
- [5] **Nan Xue**, Gui-Song Xia, Xiang Bai, Liangpei Zhang, and Weiming Shen. Anisotropic-scale junction detection and matching for indoor images. *IEEE Transactions on Image Processing*, 27(1):79–91, 2018.

- [6] Tian-Zhu Xiang, **Nan Xue**, Gui-Song Xia, and Liangpei Zhang. Image stitching based on anisotropic-scale junction. *Journal of Signal Processing*, 33(4):465–471, 2017.
- [7] Bowen Xu, **Nan Xue**, Gui-Song Xia, and Liangpei Zhang. Finding edges of buildings via a junction process in high-resolution remotely sensed images. In *the IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2015.
- [8] Gui-Song Xia, **Nan Xue**, Zifeng Wang, and Liangpei Zhang. Anisotropic diffusion on complex tensor fields for polsar image filtering. *Geomatics and Information Science of Wuhan University (in Chinese)*, 2015.
- [9] **Nan Xue**, Gui-Song Xia, and Liangpei Zhang. Anisotropic diffusion on complex tensor fields for polsar image filtering. In *the IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2014.
- [10] Gang Liu, Gui-Song Xia, Wen Yang, and **Nan Xue**. Sar image segmentation via non-local active contours. In *the IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*, 2014.

Skills

COMPUTER SCIENCE

- Good at C, C++, CUDA, Matlab and Python.
- Familiar with Mathematic and Maple.
- Experienced in developing algorithms on Unix/Linux with CMake and Make.
- Experienced in writing academic paper by using LaTeX

DEEP LEARNING

- Good at *TensorFlow*, *CaffeLibrary* and *PyTorch*

MATHEMATICS

- Calculus and Analysis, Linear Algebra and Abstract Algebra, Probability and Statistics, Differential Equations, Differential Geometry, Multiview Geometry, Variational Calculus, Numerical Analysis and Optimization.

INFORMATICS

- Image Processing, Computer Vision, Scientific Computing, Data Structure, Machine Learning

LANGUAGE

- Mandarin Chinese (mother tongue)
- English (Fluent)