Curriculum Vitae of Qian Xie

BASIC INFORMATION	Name: Qian Xie Personal website Google scholar link Github link Gender: Male Birthday: 1992.12.08 Place of Birth: Jingzhou, Hubei, P.R China
CONTACT	97 Rewley Road, Oxford OX1 2RQ, United Kingdom phone: +44 7926527678 email: xieqian26@gmail.com
RESEARCH INTERESTS	3D Vision, Point Cloud Processing, Scene Understanding, Machine Learning.

CAREER

University of Oxford, Oxford, UK

2021.08 - present, Research Associate, Department of Computer Science,

- Advisors: Niki Trigoni, Professor; Andrew Markham, Assistant Professor
- Research Project: scene understanding.

EDUCATION

Nanjing University of Aeronautics and Astronautics, Nanjing, P.R China

2017.04 - 2021.06, Ph.D candidate, Visual Analysis and Perception,

- Advisors: Jun Wang, Professor
- Research Project: 3D scene understanding.

Cardiff University, Wales, Cardiff, UK

2019.07 - 2021.01, joint PhD. student, 3D Vision

- Advisors: Yu-Kun Lai, Professor
- Research Project: 3D object detection from point cloud.

Nanjing University of Aeronautics and Astronautics, Nanjing, P.R China

2015.09 - 2017.03, M.S.Computer Vision,

- Advisors: Jun Wang, Professor
- Major courses: Matrix Theory, Computer Graphics, Computer Vision.

2011.09 - 2015.06, B.S., Aviation Maintenance Engineering and Technology

- Major courses: Linear Algebra, Probability Theory, Fundamentals of Mechanical Manufacturing.

PUBLICATIONS

1. **Qian Xie**, Yu-Kun Lai, Jing Wu, Zhoutao Wang, Dening Lu, Mingqiang Wei, Jun Wang. VENet: Voting Enhancement Network for 3D Object Detection[C]. **IEEE International Conference on Computer Vision (ICCV)**. 2021: 3712-3721.

2. Zhoutao Wang, **Qian Xie (equal first author)**, Yu-Kun Lai, Jing Wu, Kun Long, Jun Wang. MLVSNet: MultiLevel Voting Siamese Network for 3D Visual Tracking[C]. **IEEE International Conference on Computer Vision (ICCV)**. 2021: 3101-3110.

3. **Qian Xie**, Yiming Zhang, Xuanming Cao, Dening Lu, Yabin Xu, Honghua Chen, Jun Wang. Part-in-whole Point Cloud Registration for Aircraft Partial Scan Automated Localization [J]. **Computer-Aided Design(CAD)**, 2021, 137:103042.

4. **Qian Xie**, <u>Yu-Kun Lai</u>, Jing Wu, Zhoutao Wang, Yiming Zhang, <u>Kai Xu</u>, Jun Wang. Vote-based 3D Object Detection with Context Modeling and SOB-3DNMS [J]. **International Journal of Computer Vision(IJCV)**, 01 April 2021.

5. **Qian Xie**, <u>Yu-Kun Lai</u>, Jing Wu, Zhoutao Wang, Yiming Zhang, <u>Kai Xu</u>, Jun Wang. MLCVNet: Multi-Level Context VoteNet for 3D Object Detection[C]. **IEEE CVF Conference on Computer Vision and Pattern Recognition (CVPR)**. 2020: 10447-10456.

6. **Qian Xie**, Kun Long, Dening Lu, Dawei Li, Yuan Zhang, Jun Wang. Integrated Circuit Gold Wire Bonding Measurement via 3D Point Cloud Deep Learning[J]. **IEEE Transactions on Industrial Electronics**, 2021.

7. **Qian Xie**, Dening Lu, Anyi Huang, Jianping Yang, Dawei Li, Yuan Zhang, Jun Wang. RRCNet:Rivet Region Classification Network for Rivet Flush Measurement Based on 3-D Point Cloud[J]. **IEEE Transactions on Instrumentation and Measurement**, 2020, 70: 1-12.

8. **Qian Xie**, Dening Lu, Jinxuan Xu, Jiajia Dai, Honghua Chen, Jun Wang. Aircraft Skin Rivet Detection Based on 3D Point Cloud via Multiple Structures Fitting[J]. **Computer-Aided Design(CAD)**, 2020, 120: 102805.

9. **Qian Xie**, Dawei Li, Zhenghao Yu, Jun Zhou, Jun Wang. Detecting Trees in Street Images via Deep Learning with Attention Module[J]. **IEEE Transactions on Instrumentation and Measurement(TIM)**, 2019, 69(8):5395 - 5406.

10. **Qian Xie**, Dawei Li, Jinxuan Xu, Zhenghao Yu, Jun Wang. Automatic detection and classification of sewer defects via hierarchical deep learning. **IEEE Transactions on Automation Science and Engineering (TASE)**, 2019, 16(4): 1836-1847.

11. **Qian Xie**, Oussama Remil, <u>Yanwen Guo</u>, Mingqiang Wei, Meng Wang, Jun Wang. Object detection and tracking under occlusion for object-level RGB-D video segmentation[J]. **IEEE Transactions on Multimedia(TMM)**, 2017, 20(3): 580-592.

12. Dawei Li, **Qian Xie**, Xiaoxi Gong, Zhenghao Yu, Jinxuan Xu, Yangxing Sun, Jun Wang. Automatic defect detection of metro tunnel surfaces using a vision-based inspection system[J]. **Advanced Engineering Informatics**, 2021, 47: 101206.

13. Oussama Remil, **Qian Xie**, Honghua Chen, Jun Wang. 3D Shape Synthesis via Content-style Revealing Priors[J]. **Computer-Aided Design(CAD)**, 2019, 115: 87-97.

14. Oussama Remil, **Qian Xie**, Qiaoyun Wu, Yanwen Guo, Jun Wang. Intrinsic shape matching via tensor-based optimization[J]. **Computer-Aided Design(CAD)**, 2019, 107: 64-76.

15. Oussama Remil, **Qian Xie**, Xingyu Xie, <u>Kai Xu</u>, Jun Wang. Surface reconstruction with data-driven exemplar priors[J]. **Computer-Aided Design(CAD)**, 2017, 88: 31-41.

16. Oussama Remil, **Qian Xie**, Xingyu Xie, <u>Kai Xu</u>, Jun Wang. Data Drive Sparse Priors of 3D Shapes[J]. **Computer Graphics Forum(CGF)**. 2017, 36(7): 63-72.

17. Jun Wang, **Qian Xie**, Yabin Xu, Laishui Zhou, Nan Ye. Cluttered indoor scene modeling via functional part-guided graph matching[J]. **Computer Aided Geometric Design(CAGD)**, 2016, 43: 82-94.

18. Yingying Xu, Dawei Li, **Qian Xie**, Qiaoyun Wu and Jun Wang. Automatic Defect Detection and Segmentation of Tunnel Surface Using Modified Mask R-CNN. **Measurement**, 2021, 178: 109316.

19. Dawei Li, Yida Li, **Qian Xie**, Qiaoyun Wu, Zhenghao Yu and Jun Wang. Tiny Defect Detection in High-resolution Aero-engine Blade Images via a Coarse-to-fine Framework. **IEEE Transactions on Instrumentation & Measurement(TIM)**, 2021, 70: 3512712.

20. Jiajia Dai, Mingqiang Wei, **Qian Xie**, Jun Wang. Aircraft Seam Feature Extraction from 3D Raw Point Cloud via Hierarchical Multi-structure Fitting[J]. **Computer-Aided Design(CAD)**, 2021, 130: 102945.

21. Cheng Yi, Dening Lu, **Qian Xie**, Mingqiang Wei, Jun Wang. Hierarchical tunnel modeling from 3D raw LiDAR point cloud[J]. **Computer-Aided Design(CAD)**, 2019, 114: 143-154.

22. Jun Zhou, Yuanpeng Liu, Jinshan Liu, **Qian Xie**. BOLD3D: A 3D BOLD descriptor for 6Dof pose estimation[J]. **Computers and Graphics(CAG)**, 2020, 89: 94-104.

REVIEWER   Journals: IEEE TIM, IEEE TMM, CAD, CAGD.
Conferences: CVPR, ICRA, IROS, SPM, PG, SMI.

CONFERENCES

1. **GMP 2016**: Geometric Modeling and Processing, Apr 11-13, 2016, San Antonio, Texas, USA. 30-minute presentation on our accepted paper by me.

2. **PG 2017**: Pacific Graphics 2017, October 16-19, 2017, Taipei, Taiwan. 30-minute presentation on our accepted paper by me.

3. **CVPR 2020**: IEEE CVF Conference on Computer Vision and Pattern Recognition, June 16-18, 2020, online poster by me.

4. **ICCV 2021**: IEEE International Conference on Computer Vision, October 11-17, 2021, online poster by me.

SKILLS   Skills: C++, Python, Matlab; QT, Pytorch etc.