WEIDI XIE

• Department of Engineering Science, University of Oxford • weidi.xie@eng.ox.ac.uk

EDUCATION

University of Oxford, Doctor of Philosophy (DPhil) 2014 – 2018
- Advisors: Professor Alison Noble OBE FREng FRS & Professor Andrew Zisserman FRS
- Thesis: Deep Neural Networks in Computer Vision and Biomedical Image Analysis
- Thesis Defence Committees: Professor Andrea Vedaldi & Professor Daniel Rueckert

University College London, Master of Science (MSc) 2012 – 2013
- Thesis: Document Authorship Recognition with Machine Learning (Distinction)
- Advisor: Professor Lewis D. Griffin

Queen Mary, University of London, Bachelor of Science (BSc, exchange student, First-Class) 2011 – 2012

Beijing University of Posts and Telecommunications, Bachelor of Science (BSc, First-Class) 2008 – 2011

WORK EXPERIENCE

University of Oxford, Research Fellow in Visual Geometry Group Nov 2017 – Present

University College London, Research Assistant Sep 2013 – Feb 2014

AWARDS & SCHOLARSHIPS

- **Best Paper Award** Computer Methods in Biomechanics and Biomedical Engineering 2019
- **Excellence Award** Department of Engineering Science, University of Oxford. 2018
- **Best Paper Award** MICCAI workshop on Fetal and InFant Image Analysis. 2017
- **Best Poster Award** Conference on Functional Imaging and Modelling of the Heart. 2017
- **Google Oxford-Deepmind Graduate Scholarships** Google DeepMind 2015 – 2017
- **Travel Award** Wolfson College, Oxford. 2015
- **Magadalen Award** China Oxford Scholarship Fund 2014 – 2015

COMPUTER VISION PUBLICATIONS

[1] Z. Lai and **W. Xie**, "Self-supervised Learning for Video Correspondence Flow". In: *British Machine Vision Conference (BMVC)*, 2019. **(Oral Presentation)**

[2] H. Chen, **W. Xie**, A. Vedaldi, and A. Zisserman, "AutoCorrect: Deep Inductive Alignment of Noisy Geometric Annotations". In: *British Machine Vision Conference (BMVC)*, 2019.

[3] D. Xu, **W. Xie**, and A. Zisserman, "Geometry-Aware Corner Network for Video Object Detection from Static Cameras". In: *British Machine Vision Conference (BMVC)*, 2019. **(Oral Presentation)**

[4] **W. Xie**, L. Shen, and A. Zisserman, "Comparator Networks". In: *European Conference on Computer Vision (ECCV)*, 2018.

[5] **W. Xie**, and A. Zisserman, "Multicolumn Networks on Face Recognition". In: *British Machine Vision Conference (BMVC)*, 2018.

[6] E. Lu, **W. Xie**, and A. Zisserman, "Class-agnostic Counting". In: *Asian Conference on Computer Vision (ACCV)*, 2018.

[7] Q. Cao, L. Shen, **W. Xie**, O. M. Parkhi, and A. Zisserman, "VGGFace2: A Dataset for Recognising Faces Across Pose and Age". In: *IEEE International Conference on Automatic Face and Gesture Recognition (F&G), 2018.* ***(Oral Presentation)***

[8] **W. Xie**, J. A. Noble, and A. Zisserman, "Layer Recurrent Neural Networks". Technical Report, 2016.

ACOUSTICS PROCESSING

[1] **W. Xie**, A. Nagrani, J. S. Chung, A. Zisserman, "Utterance-level Aggregation For Speaker Recognition In The Wild". In: *International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, 2019. **(Oral Presentation)**

BIOMEDICAL IMAGING

[1] **W. Xie***, D. M. Vigneaulta*, C. Y. Ho, D. A. Bluemke, and J. A. Noble, "Ω-Net: Fully Automatic, Multi-View Cardiac MR Detection, Orientation, and Segmentation with Deep Neural Networks". In: *Medical Image Analysis*, Volume 48, August 2018, Pages 95-106. (Joint first authors)

[2] R. Huang, **W. Xie**, and J. A. Noble, "VP-Nets : Efficient Automatic Localization of Key Brain Structures in 3D Fetal Neurosonography". In: *Medical Image Analysis*, Volume 47, July 2018, Pages 127–139.

[3] **W. Xie***, A. I.L. Namburete*, M. Yaqub, A. Zisserman, and J. A. Noble, "Fully-Automated Alignment of 3D Fetal Brain Ultrasound to A Canonical Reference Space Using Multi-task Learning". In: *Medical Image Analysis*, Volume 46, May 2018, Pages 1-14. (Joint first authors)

[4] M. A. Maraci, **W. Xie**, and J. A. Noble, "Can Dilated Convolutions Capture Ultrasound Video Dynamics?". In: *9th International Conference on Machine Learning in Medical Imaging (MLMI), 2018*.

[5] A. I.L. Namburete, **W. Xie**, and J. A. Noble, "Robust Regression of Brain Maturation from 3D Fetal Neurosonography using CRNs". In: *MICCAI Workshop on Fetal and InFant Image analysis (FIFI), 2017*. **(Best Paper Award)**.

[6] D. M. Vigneaulta, **W. Xie**, D. A. Bluemke, and J. A. Noble, "Feature Tracking Cardiac Magnetic Resonance via Deep Learning and Spline Optimization". In: *Functional Imaging and Modelling of the Heart (FIMH), 2017*. **(Best Poster Award)**.

[7] Y. Hu, E. Gibson, L. Lee, **W. Xie**, D. C. Barratt, T. Vercauteren, and J. A. Noble, "Freehand Ultrasound Image Simulation with Spatially-conditioned Generative Adversarial Networks". In: *MICCAI Workshop on Reconstruction and Analysis of Moving Body Organs (RAMBO), 2017*.

[8] **W. Xie**, J. A. Noble, and A. Zisserman, "Microscopy Cell Counting And Detection with Fully Convolutional Regression Networks". In: *Computer Methods in Biomechanics and Biomedical Engineering : Imaging & Visualization*, May 2016, Pages 283-292. **(Best Paper Award)**

[9] **W. Xie**, J. A. Noble, and A. Zisserman, "Microscopy Cell Counting with Fully Convolutional Regression Networks". In: *MICCAI 1st Deep Learning Workshop (DLMIA)*, 2015.

PRESENTATIONS

- IEEE International Conference on Automatic Face and Gesture Recognition (F&G), Xi'an, China, 2018
- Deep Learning Workshop in MICCAI, Munich, Germany, 2015
- Microscopy Cell Counting with Fully Convolutional Networks, in Heidelberg Collaboratory for Image Processing Group, Heidelberg, Germany, 2015

PROFESSIONAL & ACTIVITIES

- Reviewer for MICCAI, ECCV, CVPR, ICCV.
- Reviewer for BMC Bioinformatics.
- Reviewer for ACM Computing Surveys.
- Reviewer for IEEE Transactions on Medical Imaging.
- Reviewer for International Journal of Computer Vision.
- Reviewer for IEEE Journal of Biomedical and Health Informatics.
- Reviewer for Transactions on Pattern Analysis and Machine Intelligence.
- Reviewer for IEEE Transactions on Biometrics, Behavior, and Identity Science.

[*CV compiled on 2019-07-07*]