

Yipeng Qin (Senior Lecturer @ Cardiff University, FHEA)

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RESEARCH INTERESTS Artificial Intelligence (AI), Machine Learning, Computer Vision, Computer Graphics

EMPLOYMENT **Senior Lecturer (~Associate Professor)** 2023.12 – now

School of Computer Science and Informatics
Cardiff University, Wales, United Kingdom

Lecturer (~Assistant Professor) 2019.06 – 2023.12

School of Computer Science and Informatics
Cardiff University, Wales, United Kingdom

Post Doctoral Research Fellow 2017.11 – 2019.05

Visual Computing Center
King Abdullah University of Science and Technology, Saudi Arabia

EDUCATION **Ph.D. in Computer Science** 2013.10 – 2017.07

National Centre for Computer Animation (NCCA)
Bournemouth University, United Kingdom

B.Eng.(Hons) in Electronic Engineering 2009.09 – 2013.06

School of Electronic Information and Electrical Engineering
Shanghai Jiao Tong University, P.R.China

PUBLICATIONS Please see my [Google Scholar](#) profile (**2,300+** citations) for more details.

Z. Yan, Y. Wu, **Y. Qin**, X. Han, S. Cui, G. Li. “Universal Semi-supervised Model Adaptation via Collaborative Consistency Training”, IEEE/CVF Winter Conference on Applications of Computer Vision (WACV), 2024. [[link](#)] (Accepted)

L. Zhan, T. Xiong, H. Zhang, S. Guo, X. Chen, J. Gong, J. Lin, **Y. Qin**. “TouchEditor: Interaction Design and Evaluation of a Flexible Touchpad for Text Editing of Head-Mounted Displays in Speech-unfriendly Environments”, Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT**), 2023. [[link](#)] (Accepted)

C. Zuo, J. Fang, S. Guo, **Y. Qin**. “Self-Adaptive Motion Tracking against On-body Displacement of Flexible Sensors”, Thirty-seventh Conference on Neural Information Processing Systems (**NeurIPS**), 2023. [[link](#)] (Accepted)

E. Ying, T. Xiong, S. Guo, M. Qiu, **Y. Qin**, H. Fu. “WristSketcher: Creating Dynamic Sketches in AR with a Sensing Wristband”, *International Journal of Human-Computer Interaction*, 2023. [[link](#)] (Provisionally Accepted)

- K. Wang, X. Xu, Y. Zheng, D. Zhou, S. Guo, **Y. Qin**, X. Guo. “Computational Design of Wiring Layout on Tight Suits with Minimal Motion Resistance”, ACM SIGGRAPH Conference and Exhibition on Computer Graphics and Interactive Techniques in Asia (**SIGGRAPH ASIA**), 2023. [\[link\]](#) (Accepted)
- S. Song, Y. Liang, J. Wu, Y. Lai, **Y. Qin**. “Feature Proliferation – the ‘Cancer’ in StyleGAN and its Treatments”, IEEE International Conference on Computer Vision (**ICCV**), 2023. [\[link\]](#)
- O. Jones, T. Poudevigne-Durance and **Y. Qin**. “Synthesis of Time-series with Missing Observations Using Generative Adversarial Networks”, Proceedings of the 34th Panhellenic Statistics Conference, 2023. [\[link\]](#)
- J. Lou, X. Zhao, X. Wu, Y. Wu, L. Lvque, X. Liu, P. Guo, **Y. Qin**, H. Lin, D. Saupe, and H. Liu. “CUDAS: Distortion-aware Saliency Benchmark”, *IEEE Access*, 2023. [\[link\]](#)
- W. Zhou, G. Yue, R. Zhang, **Y. Qin** and H. Liu. “Reduced-Reference Quality Assessment of Point Clouds Via Content-Oriented Saliency Projection.” *IEEE Signal Processing Letters*, 2023. [\[link\]](#)
- R. Huang, P. Lai, **Y. Qin**, G. Li. “Parametric Implicit Face Representation for Audio-Driven Facial Reenactment.” IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023. [\[link\]](#)
- G. Zhao, G. Li, **Y. Qin**, Y. Yu. “Improved Distribution Matching for Dataset Condensation.” IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023. [\[link\]](#)
- F. Fang, H. Zhang, L. Zhan, S. Guo, M. Zhang, J. Lin, **Y. Qin**, H. Fu. “Handwriting Velcro: Endowing AR Glasses with Personalized and Posture-adaptive Text Input using Flexible Touch Sensor.” Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (**IMWUT**), 2022. [\[link\]](#)
- X. Chen, X. Jiang, L. Zhan, S. Guo, Q. Ruan, G. Luo, M. Liao, **Y. Qin**. “Full-body Human Motion Reconstruction with Sparse Joint Tracking Using Flexible Sensors.” ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), 2022. [\[link\]](#)
- G. Zhao, G. Li, **Y. Qin**, F. Liu, Y. Yu. “Centrality and Consistency: Two-Stage Clean Samples Identification for Learning with Instance-Dependent Noisy Labels.” European Conference on Computer Vision (**ECCV**), 2022. [\[link\]](#)
- X. Yu, J. Tang, **Y. Qin**, C. Li, L. Bao, X. Han, S. Cui. “PVSeRF: Joint Pixel-, Voxel- and Surface-Aligned Radiance Field for Single-Image Novel View Synthesis.” ACM International Conference on Multimedia (**ACM MM**), 2022. [\[link\]](#)
- C. Chen, X. Shi, **Y. Qin**, X. Li, X. Han, Y. Tao, S. Guo. “Real-World Blind Super-Resolution via Feature Matching with Implicit High-Resolution Priors.” ACM

International Conference on Multimedia (**ACM MM**), 2022 (**oral**). [\[link\]](#)

Y. Liang, J. Wu, Y. Lai, **Y. Qin**. “Exploring and Exploiting Hubness Priors for High-Quality GAN Latent Sampling.” International Conference on Machine Learning (**ICML**), 2022. [\[link\]](#)

Z. Yan*, Y. Wu*, G. Li, **Y. Qin**, X. Han, S. Cui. “Multi-level Consistency Learning for Semi-supervised Domain Adaptation.” International Joint Conference on Artificial Intelligence (**IJCAI**), 2022. (*equal contribution) [\[link\]](#)

T. Poudevigne-Durance, O. Jones, **Y. Qin**. “MaWGAN: A Generative Adversarial Network to Create Synthetic Data from Datasets with Missing Data.” *Electronics*, 2022. 11(6):837. [\[link\]](#)

Z. Yan, X. Yu, **Y. Qin**, Y. Wu, X. Han, S. Cui. “Pixel-level Intra-domain Adaptation for Semantic Segmentation.” ACM International Conference on Multimedia (**ACM MM**), 2021. [\[link\]](#)

Z. Zhu, S. Guo, **Y. Qin**, X. Chen, R. Wu, Y. Shi, X. Liu, M. Liao. “Robust Elbow Angle Prediction with Aging Soft Sensors via Output-Level Domain Adaptation.” *IEEE Sensors Journal*, Vol 21, Issue 20, 2021. [\[link\]](#)

Z. Chen, X. Chen, Y. Ma, S. Guo, **Y. Qin**, and M. Liao. “Human posture tracking with flexible sensors for motion recognition.” *Computer Animation and Virtual Worlds*, Vol 32, Issue 5, 2021. [\[link\]](#)

J. Su, X. Gao, **Y. Qin**, and S. Guo. “Correcting corrupted labels using mode dropping of ACGAN”. 15th International Symposium on Medical Information and Communication Technology (ISMICT), pp. 98-103, IEEE, 2021. [\[link\]](#)

Y. Qin, N. Mitra, P. Wonka. “How does Lipschitz Regularization Influence GAN Training?” European Conference on Computer Vision (**ECCV**), 2020. [\[link\]](#)

P. Zhu, R. Abdal, **Y. Qin**, P. Wonka. “SEAN: Image Synthesis with Semantic Region-Adaptive Normalization.” IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2020 (**oral**). [\[link\]](#)

R. Abdal, **Y. Qin**, P. Wonka. “Image2StyleGAN++: How to Edit the Embedded Images?” IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2020. [\[link\]](#)

R. Abdal, **Y. Qin**, P. Wonka. “Image2StyleGAN: How to Embed Images Into the StyleGAN Latent Space?” IEEE International Conference on Computer Vision (**ICCV**), 2019 (**oral**). [\[link\]](#)

Y. Qin, H. Yu, J. Zhang. “Fast and Memory-Efficient Voronoi Diagram Construction on Triangle Meshes.” *Computer Graphics Forum*, Vol 36, No 5, **SGP** 2017. [\[link\]](#)

Y. Qin*, X. Han*, H. Yu, Y. Yu, J. Zhang. “Fast and Exact Discrete Geodesic

Computation Based on Triangle-Oriented Wavefront Propagation.” *ACM Transactions on Graphics*, Vol 35, No 4, **SIGGRAPH** 2016. (* joint first authors) [\[link\]](#)

H. Yu, **Y. Qin**, J. Zhang. “Eigenspace-based surface completeness.” *Journal of Electronic Imaging*, 24(2), 2015. [\[link\]](#)

PREPRINTS/
TECHNICAL
REPORTS

G. Zhao, G. Li, **Y. Qin**, J. Zhang, Z. Chai, X. Wei, L. Lin, Y. Yu. “Exploration and Exploitation of Unlabeled Data for Open-Set Semi-Supervised Learning” *arXiv preprint arXiv:2306.17699*, 2023. [\[link\]](#)

J. Yu, T. Ren, S. Guo, F. Fang, K. Wang, Z. Zeng, Y. Zhang, A. Aristidou, **Y. Qin**. “Motion-R³: Fast and Accurate Motion Annotation via Representation-based Representativeness Ranking” *arXiv preprint arXiv:2304.01672*, 2023. [\[link\]](#)

T. Ren, J. Yu, S. Guo, Y. Ma, Y. Ouyang, Z. Zeng, Y. Zhang, **Y. Qin**. “Diverse Motion In-betweening with Dual Posture Stitching” *arXiv preprint arXiv:2303.14457*, 2023. [\[link\]](#)

P. Zhu, R. Abdal, **Y. Qin**, J. Femiani, P. Wonka. “Improved StyleGAN Embedding: Where are the Good Latents?” *arXiv preprint arXiv:2012.09036*, 2020. [\[link\]](#)

K. Crane, M. Livesu, E. Puppo, **Y. Qin**. “A Survey of Algorithms for Geodesic Paths and Distances.” *arXiv preprint arXiv:2007.10430*, 2020. [\[link\]](#)

PATENTS

T. Chen, Z. Zhu, X. Li, Z. Liu, Y. Qin, Y. Ye, J. Wu. Cards (Oracle Bone Character Learning). Patent Number: ZL 2020 3 0403735.5 . Filed July 21, 2020 and issued January 1, 2021. *Chinese Patent*. [\[link\]](#)

Y. Qin. Idle-Bandwidth Self-Adaption Method for Internet Video Streaming Media Transmission. Patent Number: ZL 2013 1 0108664.5 . Filed March 29, 2013 and issued April 27, 2016. *Chinese Patent*. [\[link\]](#)

FUNDING

Revolutionizing Visitor Experiences of Cultural Heritage: Unleashing the Power of AI-Powered Chattable Avatars in Interactive Exhibitions, £15,000, **PI**, UKRI Harmonised Impact Acceleration Account (IAA). [\[link\]](#). 2023.11 - 2024.05

Charting New Frontiers: An Exploratory Expedition and Pilot Study on Chattable Virtual Avatars, Unveiling Ethical and Social Dimensions in Content Delivery, £5,000, **PI**, GW4 Crucible 2023 Seed Funding, No. Cru23-01, [\[link\]](#). 2023.09 - 2024.03

Prototyping Smart Clothes for Population-level Motion Monitoring and Analysis, £12,000, **PI**, Royal Society International Exchanges 2021 Cost Share (NSFC), No. IEC\NSFC\211022, [\[link\]](#). 2022.03 - 2024.03

Uncovering the “Instincts” of Deep Generative Models for Fair and Unbiased Visual Content Creation, ~£72,922, **Main Supervisor**, EPSRC DTP, No. EP/T517951/1

(2599521), [\[link\]](#). 2021.10 – 2025.03

Sensor Layout Optimization for 3D Body Shape Reconstruction, £3,200, **PI**, Cardiff
-Xiamen University Research Collaboration Funding. 2020.07 – 2020.08

TALKS

- Invited Talk**, Creative AI Collaboration Workshop by Media Cymru 2023.09
- Invited Talk**, Cardiff-Waikato ML Seminar 2023.08
- Invited Talk**, Cardiff-DUT Collaboration Workshop 2023.07
- Invited Talk**, SUSTech International Center for Mathematics 2022.02
- Invited Talk**, NCCA, Bournemouth University 2021.07
- Invited Talk**, IROHMS Human-Like AI Working Group (Cardiff Uni) 2021.04
- Invited Talk**, 4th Tsinghua-Cardiff workshop on Visual Computing 2019.09
- Invited Talk**, Prof. Shengyong Chen's group, Tianjin, P.R.China 2017.10
- Oral Presentation**, SGP 2017, London, United Kingdom 2017.07
- Invited Talk**, IEA/AIE 2017 workshop CAnimAI, Arras, France 2017.06
- Oral Presentation**, SIGGRAPH 2016, Anaheim, CA, U.S. 2016.06

ADVISING

- Zhuoling Jiang [School Funded]** 2024.01 – now
Main supervisor, co-supervised with Dr. Daniel Finnegan and Prof. Yukun Lai at School of Computer Science and Informatics, Cardiff University, UK.
- Jinqi Wang** 2022.10 – now
Main supervisor, co-supervised with Prof. Yukun Lai and Dr. Bailin Deng at School of Computer Science and Informatics, Cardiff University, UK.
- Yuanbang Liang [EPSRC DTP]** 2021.10 – now
Main supervisor, co-supervised with Prof. Yukun Lai and Dr. Jing Wu at School of Computer Science and Informatics, Cardiff University, UK.
- Shuang Song [CSC Funded]** 2021.10 – now
Main supervisor, co-supervised with Prof. Yukun Lai and Dr. Jing Wu at School of Computer Science and Informatics, Cardiff University, UK.
- Ebtihal Alwadee** 2021.10 – now
Third supervisor, co-supervised with Dr. Frank Langbein and Dr. Xianfang Sun at School of Computer Science and Informatics, Cardiff University, UK.
- Stephen Miles [PT, TA]** 2021.07 – now
Main supervisor, co-supervised with Prof. Paul Rosin at School of Computer Science and Informatics, Cardiff University, UK.
- Hateef Alshewaier [Saudi Government Funded]** 2021.04 – now
Second supervisor, co-supervised with Dr. Xianfang Sun at School of Computer Science and Informatics, Cardiff University, UK.
- Thomas A. Poudevigne-Durance [PT, KESS Funded]** 2020.11 – now
Second supervisor, co-supervised with Prof. Owen Jones at School of Mathematics, Cardiff University, UK.
- Xin Zhao** 2020.03 – now
Second supervisor, co-supervised with Dr. Hantao Liu at School of Computer Science and Informatics, Cardiff University, UK.

	Peihao Zhu	2019.09 – 2020.03
	MS-PhD student of Prof. Peter Wonka at KAUST, Saudi Arabia.	
	Rameen Abdal	2018.09 – 2019.12
	MS-PhD student of Prof. Peter Wonka at KAUST, Saudi Arabia.	
RESEARCH ASSISTANT	Zhuoling Jiang [RA, PT]	2023.09 – 2024.03
	Part-time Research Assistant (computer science) recruited for our GW4 Crucible 2023 Seed Funding. Zhuoling is an MSc student at Cardiff University.	
	Elif Nur Duman Cogen [RA, PT]	2023.09 – 2024.03
	Part-time Research Assistant (social science) recruited for our GW4 Crucible 2023 Seed Funding. Elif is a PhD student at the University of Bath.	
RESEARCH INTERNS	Rupam Kumawat [Remote]	2023.05 – 2023.08
	Main supervisor Awarded AI Safety Careers Fellowship IIT Delhi with his intern project.	
	Anshika Prajapati [Remote]	2023.05 – 2023.07
	Main supervisor	
	Bhavesh Garg [Remote]	2021.05 – 2021.11
	Second supervisor, co-supervised with Prof. Paul Rosin at School of Computer Science and Informatics, Cardiff University, UK.	
ACADEMIC VISITORS	Prof. Jianxin Liu, Xihua University	2021.12 – 2022.06
	Main host, co-hosting with Dr. Ze Ji at School of Engineering, Cardiff University, UK.	
	Prof. Guimei Zhang, Nanchang Hangkong University	2021.12 – 2022.06
	Main host, co-hosting with Dr. Xianfang Sun at School of Computer Science and Informatics, Cardiff University, UK.	
TEACHING	CMT316 - Applications of Machine Learning: NLP/CV	
	Postgraduate level Academic year: 2021/2022 - now Cardiff University, UK	
	CMT307 - Applied Machine Learning	
	Postgraduate level Academic year: 2021/2022 - now Cardiff University, UK	
	CM1205 - Architecture and Operating Systems (Module Leader)	
	Undergraduate level (Year 1) Academic year: 2019/2020 - now Cardiff University, UK	
ADMIN	ECR Representative in COMSC Research Committee	2022.11 – now

PGT Programme Lead (MSc DSA & Data Gov)

2020.10 – now

PROFESSIONAL
ACTIVITIES

Teaching Qualification Fellowship of HEA (FHEA), Open University HZMC881
Online teaching: creating courses for adult learners (Pass with Merit)

Member ACM SIGGRAPH, Computer Vision Foundation (CVF), Asia Graphics (ID: 04060581), IROHMS Human-Like AI Working Group (Cardiff University), British Academy Early Career Researcher Network (ID: 0353813)

Grant Reviewer EPSRC, EPSRC Additional Funding Programme for Mathematical Sciences (University Panel Member), Belgium Concerted Research Actions (CRAs)

Book Reviewer CRC Press/Taylor and Francis Group

Journal Reviewer ACM Transactions on Graphics (TOG), IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), IEEE Transactions on Image Processing (TIP), IEEE Transactions on Visualization and Computer Graphics (TVCG), Computer Graphics Forum (CGF), Pattern Recognition, Neurocomputing, Computers & Graphics, IEEE Access, Visual Informatics, Image and Vision Computing, Frontiers in Imaging.

Conference Program Committee (PC) Member / Reviewer SIGGRAPH, SIGGRAPH Asia, CVPR, ICCV, ECCV, NeurIPS, ICLR, ICML, AAAI, ACM MM, Eurographics, Pacific Graphics, BMVC, CVM, CGI, IJCNN.

TRAINING
(CPD)

Connections across Cymru 2023.05.02

Topic: How Joining an ECR Network can Help Your Career.
Provided by: Learned Society of Wales.

PSE Viva Chair Workshop 2023.03.20

Aim: provide an insight into the role, practical tips and pitfalls to avoid.
Provided by: Cardiff University.

Line Manager Training 2023.02 - 2023.03

Provided by: Cardiff University.

Supervising Doctoral Studies (Second Edition) 2023.02 - 2023.02

Provided by: Epigeum / OUP.

GW4 Crucible 2023 2023.02 - 2023.04

Our Data and Digital World - Opportunities for Transformative Interdisciplinarity
Provided by: GW4.

Wellcome ITPA and STFC IAA - Spinout Bootcamp 2022.10 - 2022.10

Provided by: AnchoredIn.

Online Teaching: Creating Courses for Adult Learners 2021.10 - 2022.04

Provided by: Open University (HZMC881).
Grade: Pass with Merit.

Academic Practice for Early Career Staff Programme 2019.09 - 2021.05
Provided by: Cardiff University.

REFERENCES

Yukun Lai (Line Manager)

Professor

School of Computer Science and Informatics
Cardiff University

E-mail: LaiY4@cardiff.ac.uk

Paul Rosin (Section Head)

Professor

School of Computer Science and Informatics
Cardiff University

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Peter Wonka

Professor, Associate Director

Visual Computing Center

King Abdullah University of Science and Technology

E-mail: peter.wonka@kaust.edu.sa