


Qiuyu (Louis) Lu

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Education

University of Wollongong, School of Physics Master of medical radiation physics(ACPSEM and CAMPEP accredited), WAM: 90.6/100	Wollongong, Australia 2024.7 – Present
Ludwig-Maximilian-Universität München, Fakultät für Physik Master program of physics(withdrew)	Munich, Germany 2020.10 – 2021.3
Huazhong University of Science and Technology, School of Physics Bachelor of Science, major in physics, GPA: 3.50/4 Bachelor thesis: <i>Review on relativistic quantum information</i> , Supervisor: Prof. Jianming Cai	Wuhan, China 2016.9 – 2020.6
Huazhong University of Science and Technology, School of Optoelectronic Information Major in optoelectronic information(later transferred to physics), GPA: 3.86/4	Wuhan, China 2015.9 – 2016.9

Research

<u>Image X Institute, University of Sydney</u> Deep learning based marker-less tracking research project • Developed deep learning models for 2D segmentation of lung tumors using 4DCT datasets. Supervisor: Prof. Paul Keall, Dr. Chandrima Sengupta, Dr. Zhuang Xiong	Sydney, Australia 2025.7 - Present
<u>HUST-UULM International Joint Laboratory on Quantum Sensing and Quantum Metrology</u> Undergraduate research assistant • Quantum sensing and quantum metrology technology • Quantum dynamics in biophotonics Supervisor: Prof. Jianming Cai	Wuhan, China 2018.10 - 2020.6

Working

Jinshazhou Hospital of Guangzhou University of Chinese Medicine Radiotherapy shadowing	Guangzhou, China 2024.6
Educational institution Math and physics tutor • A-Level Mathematics, A-Level Mathematics further, A-Level Physics • AP Precalculus, AP Calculus, AP Physics • Sixth Term Examination Paper (STEP), Mathematics Admissions Test (MAT), Physics Aptitude Test (PAT) • Chinese Physics Olympiad	Shenzhen, China 2022.1 – 2024.1

Publications

- Min Yu, Pengcheng Yang, Musang Gong, Qingyun Cao, **Qiuyu Lu**, Haibin Liu, Shaoliang Zhang, Martin B Plenio, Fedor Jelezko, Tomoki Ozawa, Nathan GoldAman, Jianming Cai, *Experimental measurement of the quantum geometric tensor using coupled qubits in diamond*, *National Science Review*, vol. 7, issue 2, 2020, pp. 254–260.
[DOI: 10.1093/nsr/nwz193](https://doi.org/10.1093/nsr/nwz193)

Meetings

- MMND-ITRO 2025, Sydney 2025.2
- American Physical Society March Meeting, Boston 2019.3
- Many body entanglement & topological matter school, SUSTech 2019.1
- Chinese Physical Society Annual Meeting, Wuhan University 2017.12
- National symposium of quantum simulation, Shanxi University 2017.10

Awards & Honours

- Online-Germany Physics Tournament 2020, By20, Best Reviewer 2020.12
- Lecture on scientific big data, PARIS-SUD HONORS 2018.3
- MCM/ICM, Honorable Mention 2018.2
- ITPO for undergraduate Students, Tied 1st place 2018.1
- University Physics Competition, Silver medal 2017.11
- Outstanding undergraduates in terms of academic performance(top 0.5%) 2017.10
- National Scholarship(top 1%) 2017.10

Skills & Interests

- **Programming:**
 - C/C++ and Python: scientific computing, data analysis, deep learning architecture
 - Fortran: high-performance modeling for numerical methods
 - R: statistical analysis, data visualization
- **Applications:**
 - MATLAB, Mathematica: signal processing, optimization, symbolic computation
 - COMSOL Multiphysics: finite-element modeling of EM fields, radiation transport and dosimetry
 - Blender: 3D modeling, visualization for science communication
- **Languages:**
 - Mandarin: native
 - English: fluent (TOEFL R30/L28/S24/W26; GRE V152/Q170/W3.5)
 - Japanese: advanced proficiency
- **Interests:** Chinese calligraphy, classical music, coffee craft, photograph

