

### Education

- 2018–2023 **Ph.D. in Physics**, *The University of Texas at Austin*, Austin, TX, USA  
Thesis: *Exotic phases in condensed matter systems: space-time crystals and moiré superlattices*.  
Advisor: Prof. Qian Niu.
- 2013–2017 **B.Sc. in Applied Physics**, *University of Science and Technology of China*, Hefei, China  
Thesis: *On the Efficiency and its Enhancement of the Quantum-dot based light-emitting diode (QLED)*.  
Advisor: Prof. Zhenyu Zhang.










### Appointments



- 2024–present **Postdoctoral Fellow**, *Harvard University*, Cambridge, MA, USA
- 2019–2023 **Research Assistant**, *The University of Texas at Austin*, Austin, TX, USA
- 2018–2019 **Teaching Assistant**, *The University of Texas at Austin*, Austin, TX, USA
- 2017–2018 **Research Assistant**, *University of Science and Technology of China & Shenzhen University*, China

### Publications

Total citations as of 09/10/2025: 1103. citationbar: 0 100

#### Peer-reviewed

- [1] **Qiang Gao**, Ryan A Lanzetta, Patrick Ledwith, Jie Wang, Eslam Khalaf. “Bootstrapping the quantum hall problem”. In: *Physical Review X* 15.3 (2025), p. 031034. 
- [2] Yanxing Li, Chuqiao Shi, Fan Zhang, Xiaohui Liu, Yuan Xue, Viet-Anh Ha, **Qiang Gao**, Chengye Dong, Yu-Chuan Lin, Luke N Holtzman, et al. “Robust supermoiré pattern in large-angle single-twist bilayers”. In: *Nature Physics* (2025), pp. 1–8. 
- [3] Yanxing Li, Fan Zhang, Viet-Anh Ha, Yu-Chuan Lin, Chengye Dong, **Qiang Gao**, Zhida Liu, Xiaohui Liu, Sae Hee Ryu, Hyunsue Kim, et al. “Tuning commensurability in twisted van der Waals bilayers”. In: *Nature* 625.7995 (2024), pp. 494–499. 
- [4] **Qiang Gao**, Junkai Dong, Patrick Ledwith, Daniel Parker, Eslam Khalaf. “Untwisting moiré physics: Almost ideal bands and fractional Chern insulators in periodically strained monolayer graphene”. In: *Physical Review Letters* 131.9 (2023), p. 096401. 
- [5] **Qiang Gao**, Eslam Khalaf. “Symmetry origin of lattice vibration modes in twisted multilayer graphene: Phonons versus moiré phonons”. In: *Physical Review B* 106.7 (2022), p. 075420. 
- [6] **Qiang Gao**, Qian Niu. “Semiclassical dynamics of electrons in a space-time crystal: Magnetization, polarization, and current response”. In: *Physical Review B* 106.22 (2022), p. 224311. 
- [7] **Qiang Gao**, Yafei Ren, Qian Niu. “DC current generation and power feature in strongly driven Floquet-Bloch systems”. In: *Physical Review Research* 4.1 (2022), p. 013216. 
- [8] **Qiang Gao**, Zhi Lin, Xiaoguang Li, Zhenyu Zhang. “Spontaneous surface plasmon polariton decay of band-edge excitons in quantum dots near a metal surface”. In: *Physical Review B* 103.3 (2021), p. 035416. 
- [9] **Qiang Gao**, Qian Niu. “Floquet-Bloch oscillations and intraband Zener tunneling in an oblique spacetime crystal”. In: *Physical Review Letters* 127.3 (2021), p. 036401. 

- [10] Yafei Ren, **Qiang Gao**, AH MacDonald, Qian Niu. “WKB estimate of bilayer graphene’s magic twist angles”. In: *Physical Review Letters* 126.1 (2021), p. 016404. 
- [11] Huaibin Shen, **Qiang Gao**, Yanbin Zhang, Yue Lin, Qingli Lin, Zhaohan Li, Ling Chen, Zaiping Zeng, Xiaoguang Li, Yu Jia, et al. “Visible quantum dot light-emitting diodes with simultaneous high brightness and efficiency”. In: *Nature Photonics* 13.3 (2019), pp. 192–197. 

### Preprints

- [12] **Qiang Gao**, Zhaoyu Han, Eslam Khalaf. “Bootstrapping Flat-band Superconductors: Rigorous Lower Bounds on Superfluid Stiffness”. In: (2025). arXiv: 2506.18969.
- [13] Zhaoyu Han, Jonah Herzog-Arbeitman, **Qiang Gao**, Eslam Khalaf. “Exact models of chiral flat-band superconductors”. In: (2025). arXiv: 2508.21127.
- [14] Zhida Liu, **Qiang Gao**, Yanxing Li, Xiaohui Liu, Fan Zhang, Dong Seob Kim, Yue Ni, Miles Mackenzie, Hamza Abudayyeh, Kenji Watanabe, et al. “Field-Tunable Valley Coupling and Localization in a Dodecagonal Semiconductor Quasicrystal”. In: (2024). arXiv: 2408.02176.

### Talks

#### Seminars

- 08/2025 Seminar @UChicago, Chicago, IL. *Quantum Many Body Bootstrap beyond Energies*.
- 05/2025 Kid’s Seminar @Harvard, Boston, MA. *Bootstrapping the Quantum Hall problem*.

#### Contributed Talks

- 03/2025 APS March Meeting, Anaheim, CA. *Bootstrapping the Quantum Hall problem*.
- 03/2023 APS March Meeting, Las Vegas, NV. *Almost ideal Chern bands in periodically strained graphene*.
- 03/2018 APS March Meeting, Los Angeles, CA. *Surface plasmon polariton controlled de-excitation of quantum dot*.

### Skills

- Languages Mandarin Chinese (native), English
- Coding MATLAB, Mathematica, Python, L<sup>A</sup>T<sub>E</sub>X, Java

### Awards and Fellowships

- 2018–2023 Provost’s Graduate Excellence Fellowship, The University of Texas at Austin
- 2017 Outstanding Undergraduate Thesis, University of Science and Technology of China

### Academic Services

Active reivewer for *Physical Review Letters*, *Physical Review X*, and *Physical Review B*

### References

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#### Prof. Xiaoqin Li

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#### Prof. Jie Wang

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