

KEMING HE

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EDUCATION

University of Southern California

Los Angeles, California, U.S.

- **Master of Science, Electrical Engineering**

01/2022 – 05/2023

- **GPA: 3.85/4.00**

- **Relevant Courses:** Quantum Information Processing, Quantum Information Theory, Theory of Open Quantum System

Chongqing University

Chongqing, China

- **Bachelor of Science in Electronic Information Science and Technology**

09/2017 – 06/2021

- **Relevant Courses:** Electrodynamics, Quantum Mechanics, Signals and Systems, Semiconductor Physics

- **Honors:** Comprehensive Excellence Scholarship (department-level; top 15%)

01/2019

- Comprehensive Excellence Scholarship (department-level; top 15%)

06/2020

RESEARCH EXPERIENCE

Research Assistant

Hong Kong University of Science and Technology (Guangzhou).

09/2023 – present

- Working on quantum information and quantum computing supervised by Dr. Xin Wang

Calculation and comparison of Different Master Equations of a Spin-Boson Model

University of Southern California

04/2023 – 05/2023

- Studied and analytically solved a model of a qubit coupled to bosonic bath in a cavity within the 1-excitation subspace in open quantum system
- Calculated the model with Ohmic spectral density function by means of various derivation of Lindblad master equation and time convolutionless master equation(TCL)
- Numerically calculated the results on Matlab and compared the approximation methods to analytical solution

Sound-Absorbing Metamaterial for Environment with Varying Noises

School of Physics of Chongqing University

08/2020 – 06/2021

- Developed ventilating and adjustable sound-absorbing structure that simulated the effect of sound-absorbing in COMSOL
- Designed the STM32-based control unit and maximized the effect of sound-absorbing in terms of sound frequency
- Publication: Tian H, Xiang X, He K, et al. **Automatically Adaptive Ventilated Metamaterial Absorber for Environment with Varying Noises**[J]. Advanced Materials Technologies, 2021, 6(12): 2100668.

TECHNICAL SKILLS

- Proficient in MATLAB, C language, Python, Qiskit, LaTeX
- Skillful at Programming, Physical Experiments, and Data Processing