# YUHANG GAN

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## EDUCATION

**University of California, Santa Cruz**                                   Santa Cruz, USA
Ph.D. in Computer Science and Engineering                                 09/2021 – now
Advisor: Prof. Chen Qian
GPA: 3.97/4

**Nanjing University**                                                    Nanjing, China
B.Sc. in Computer Science and Technology                                  09/2017 – 06/2021
Advisor: Prof. Wei Wang
GPA: 4.26/5

## PUBLICATION

[1] A Routing Framework for Quantum Entanglements with Heterogeneous Duration
   **Yuhang Gan**, Xiaoxue Zhang, Ruilin Zhou, Yi Liu and Chen Qian
   IEEE International Conference on Quantum Computing and Engineering (QCE 23)

[2] Simulation of Atom-Atom Entanglement with Atomic Ensembles and Quantum Optics
   Ruilin Zhou, Xuanying Lai, **Yuhang Gan**, Katia Obraczka, Shengwang Du and Chen Qian
   IEEE International Conference on Quantum Computing and Engineering (QCE 23) (*short paper*)

[3] Towards Flow Scheduling in A Quantum Data Center
   Ruilin Zhou, **Yuhang Gan**, Yi Liu
   ACM SIGCOMM Workshop on Quantum Networks and Distributed Quantum Computing (QuNet 2023)

## PROJECT EXPERIENCE

**University of California, Santa Cruz**                                   Santa Cruz, USA
Ph.D. student advised by Prof. Chen Qian, Professor                        09/2021 – 04/2023
**Topic: Entanglement Resource Management in Quantum Networks**

- In this project I work on solving resource management problems in emerging quantum networks. Realistic quantum network nodes are implemented in heterogeneous way with continuously evolving hardware devices. To cover the gap between new powerful and old weak devices. I proposed a Bloom filter based solution to increase the utilization of existing entanglement resource to improve the efficiency and throughput of quantum network.[1]

**Nanjing University**                                                    Nanjing, China
Research Assistant to Prof. Wei Wang, Professor                            08/2020 – 06/2021
**Topic: Heart rate detection method based on handheld smart devices (***Undergraduate Thesis***)**

- This project is designed to develop a heartbeats monitoring application tool that uses mobile phones' sensors (accelerometers) when users hold their phones, which will provide user's HRV signals to assess whether the user has potential heart disease.

**Nanjing University**                                                    Nanjing, China
Research Assistant to Prof. Furao Shen, Professor                         06/2019 – 09/2020
**Topic: RoboCup 3D Soccer Simulation League**

- This competition involved the creation of soccer playing robots in a 3D simulation environment.
- I was responsible for designing and implementing the 'running and kicking' function of the robot. I used the CMA-ES Algorithm to improve the robots' running function. Eventually, the walking speed of the robot increased by ~ 12%.
- Funded by National College Student Innovation and Entrepreneurship Training Program.
- Award: 2020 Robot World Cup China Competition, 3D Category, Second Prize;

**University of Göttingen (Institute of Computer Science)**            Göttingen, Germany
Visiting Student                                                        07/2019 – 08/2019
**International Scientific Research Training in Cross-cultural Social Computing Theory and Applications**

- During this exchange I surveyed and analyzed data on the status of urban governance in Germany. The project was interdisciplinary seeing me team up with classmates studying Sociology.
- I processed data and conducted data analysis as well as produced data visualization products.

## TEACHING EXPERIENCE

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| Teaching Assistant, C Programming Language, NJU | 09/2019 – 01/2020 |
| Teaching Assistant, CSE 80N Intro to Networking and the Internet, UCSC | 01/2022 – 04/2022 |
| Teaching Assistant, CSE 201 Analysis of Algorithms, UCSC | 09/2022 – 12/2022 |
| Teaching Assistant, CSE 120 Computer Architecture, UCSC | 12/2022 – 03/2023 |
| Teaching Assistant, CSE 150 Intro to Computer Networks, UCSC | 04/2023 – 06/2023 |

## ADDITIONAL INFORMATION

**Awards**

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|---|---|
| The People's Scholarship. | Nanjing University (2019) |
| Regents Fellowship | University of California, Santa Cruz (2021) |
| Department Fellowship | University of California, Santa Cruz (2021) |

**Competencies**

Programming: C/C++, P4, Kotlin, Python, Matlab;
Background Knowledge: Computer Networks, SDN, Quantum Computing, Hashing Data Structure, Machine Learning, Deep Learning/Reinforcement Learning, Computer Architecture;

**Interests**

Clarinet: I learned clarinet since eight years old and served as the second-chair clarinet in the NJU's symphony orchestra for one year.