Qian **You**

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Education

Southern University of Science and Technology *Shenzhen, China*

M.Sc. in Electronic Science and Technology *Sep. 2022 - Jun. 2025*

- Institute of Future Networks
- GPA: 3.79/4 Outstanding Graduate Student of Southern University of Science and Technology

Hunan University of Science and Technology *Xiangtan, China*

B.Sc. in Computer Science *Sep. 2018 - Jun. 2022*

- School of Computer Science and Engineering
- GPA: 3.85/4 Rank 1/101 China National Scholarship (Top 0.2%)

Publications

Qian You, Bing Tang. Efficient task offloading using particle swarm optimization algorithm in edge computing for industrial internet of things. (Journal of Cloud Computing, **Cited 60+**)

Ruide Cao, Jiao Ye, Jin Zhang, **Qian You**, et al. An adaptive UAV scheduling process to address dynamic mobile network demand efficiently. (DATE2024, **CCF-B**, **Second Student Author**)

Patents

Kun Huang, **Qian You**. Method, Device, and Storage Medium for Deterministic Finite Automaton Compression. Patent No. **CN115149962A**

Kun Huang, **Qian You**. Method, Matching Method, Device, and Medium for Deterministic Finite State Automaton Compression. Patent No. **CN115801020A**

Kun Huang, Qianpeng Su, **Qian You**, et al. Method, Transmission Configuration Method, Device, Equipment, and Medium for Packet Transmission. Patent No. **CN116962321A**

Experience

Intern, Network Department, Peng Cheng Laboratory *Shenzhen, Guangdong*

Fast Compression Algorithms for Deep Packet Inspection *September 2022 - Present*

- Designed and implemented various **TCAM-based string matching compression algorithms**.
- Implemented a fast and scalable DFA compression algorithm utilizing dependencies among DFA states, **reducing time complexity from $O(n^2)$ to $O(n\log(n))$**.
- Conducted simulations using real Snort and Suricata feature rule sets in **C/C++** (codebase: 15000+ lines) and **P4** experiments.
- Applied for **2 patents** and submitted **1 paper** as the first student author.

A Magic Hash Method for Route Path Control *March 2023 - Present*

- Developed an efficient approach to achieve complete path control across the network by controlling critical parameters of the **ECMP hash function**.
- Analyzed existing DCN network topologies (SpineLeaf, Fat-Tree, and Google Jupiter) and conducted experiments, designing and implementing them using **C/C++** (codebase: 3000+ lines).
- Applied for **2 patents** as the first student author.

Southern University of Science and Technology *Shenzhen, Guangdong*

Adaptive UAV Scheduling Procedure *July 2023 - August 2023*

- Preprocessed real student travel data and conducted **OMNeT++ simulation experiments** using k-means and mean shift methods.
- Published **1 poster**, **1 paper**, applied for **1 patent**, and attended the **DATE2024** conference in Spain.