Hongwei CUI

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Hong Kong, China

EDUCATION

- **Ph.D. Information Engineering**
  The Chinese University of Hong Kong (QS #32)
  Supervised by Prof. Soung Chang Liew
  2021 - Present

  Interested Research Area:

  > Optical wireless communication
  > LLM-based AI agents
  > IoT systems
  > AI-powered wireless communication

- **B.S. Electronic Information Engineering**
  Shandong University
  CGPA: 4.625/5.0 (Ranking 1st in Chongxin College)
  2017 - 2021

AWARDS & RECOGNITION

- **First Prize of Taishan Student Scholarship**
  Tai Shan Students Foundation
  2024
- **Outstanding Undergraduate Dissertation**
  Shandong University
  2021

SKILLS

- **Research and Development Abilities**
  - Analog/digital circuit design and simulation
  - PCB layout
  - IoT and embedded system development
  - 3D modeling and rendering
  - Web front-end development
  - Mobile application development
  - Game engine development
  - Optical simulation
- **Programming Languages/Frameworks**
  C, C++, Python, Pytorch, HTML5, JavaScript, React Native, Verilog, Java

RESEARCH WORKS

- **Optical Wireless Ether: Enabling Controlled Dynamic Signal Propagation in OWC Systems**
  Hongwei Cui, Soung Chang Liew
  arXiv (Preprint)
  2025/2/10
- **Wi-LiFi: Integrated Optical Wi-Fi for Enhanced Mobile Robotic Communications and Localization**
  Hongwei Cui, Soung Chang Liew, He Chen
  IEEE Transactions on Vehicular Technology
  2024/12/13
- **LLMind: Orchestrating AI and IoT with LLM for Complex Task Execution**
  Hongwei Cui, Yuyang Du, Qun Yang, Yulin Shao, Soung Chang Liew
  IEEE Communications Magazine
  2024/9/27
- **Wi-LiFi: Integrated Optical Wi-Fi for Enhanced Mobile Robotic Communications**
  Hongwei Cui, Soung Chang Liew, He Chen
  IEEE International Conference on Communications
  2024/6/9

PATENT

- 一种**Wi-Fi**信道检测系统及方法 **(A Wi-Fi Channel Detection System and Method)**
  崔洪玮 (Hongwei Cui)
  Patent Number: ZL2022101481253
  2022/5/6

HOBBIES & INTERESTS

Electronic Circuit | AI & LLM | UI & UX | Photography