# Shangkun Li

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## EDUCATION

**Department of Physics, Fudan University, Shanghai, China**                 Sept 2020 – Present

- B.E. in Physics, **Overall GPA: 3.82/4.0, Ranking: 1/112,** Major GPA: 3.91/4.0
- Courses Taken: Fundamentals of Digital Electronics, Reconfigurable Computing, Program Design, Introduction to Electronic Systems, Optics, Electrodynamics, Quantum Mechanics, Thermodynamics and Statistical Physics, Quantum Mechanics, etc.

## AWARDS

- Academic Year 2021-2022, **National Scholarship** (Top 1%)
- Academic Year 2021-2022, **Pacemaker to Merit Student** (10 out of all undergraduates in Fudan University)
- Academic Year 2020-2021, **The First Prize Scholarship** (Top 5%)
- Academic Year 2020-2021, Merit Student
- Aug 2021, Grand Prize of the 12th China Undergraduate Physics Tournament (Ranking 2nd in China)
- Dec 2022, Third Prize of the 8th China Undergraduate Physics Experiment Competition

## RESEARCH EXPERIENCES

**Learning and Practice in CGRA (Coarse-grained Reconfigurable Architecture)** | Research Assistant          Jan 2023 – Present

Advisor: Lingli Wang, professor, Deputy Director of EDA Research Institute, School of Microelectronics, Fudan University

- Learned reconfigurable computing knowledge
- Investigated the application of AI in CGRA acceleration

**Extending the Recursive Function of HLS tool based on MLIR** | Research Assistant          Aug 2022 – Dec 2022

Advisor: Lingli Wang, professor, Deputy Director of EDA Research Institute, School of Microelectronics, Fudan University

- Learned the process of compiling high-level language to assembly language and the syntax and framework of MLIR
- Proposed a scheme to extend the recursive function of the HLS (High-level Synthesis) tool based on MLIR
- Completed the iterative unfolding of 3 recursive benchmarks at the MLIR level

**Automated Guided Vehicle based on Raspberry Pi** | Team Member          Mar 2021 – Jun 2021

Supervisor: Yajie Qin, Associate Professor, School of Information Science and Engineering, Fudan University

- Completed the realization of the image recognition function based on Raspberry Pi and Python
- Designed an automated Guided Vehicle

**Grand Prize of the 12th China Undergraduate Physics Tournament** | Team Member          Aug 2021

Supervisor: Yongkang Le, Director of Physics Teaching Experiment Center, Fudan University

- Built a ferromagnet induction sensors and optimized related parameters
- Designed a circuit to measure wind speed based on thermistors

## LEADERSHIP AND ACTIVITIES

**Academic and Innovation Department, Student Union,** Department of Physics | Director          Sept 2021 – Sept 2022

- Recognized for the Outstanding Student Leadership at Fudan
- Organized the defense of the Xiyuan Project and the Introduction Meeting of the Project Group in Physics
- Planned and organized scientific software training activities, including MATLAB, Python, Mathematica, and COMSOL.

**The Science Debate Club** | Vice President          Sept 2021 – Sept 2022

- Responsible for organizing various research skills training courses for the Department of Physics

**Tengfei School, Fudan University** | Teaching Assistant of the Forerunner Courses          Aug - Oct 2021 & Aug - Oct 2022

- Tutoring students in Mathematical Analysis, Program Design, and General Physics

## SKILLS

- Basic program manage skills: git, shell
- Programming Languages: C/C++, Python, Verilog, MLIR, Mathematica, COMSOL
- Office Applications: Microsoft Office, Photoshop, Premiere Pro
- Languages: Chinese, English