

# ZONGQI SHEN

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## EDUCATION

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**Fudan University, Shanghai**  
Bachelor in Physics  
Department of Physics

*September 2018 - Present*  
GPA Ranking: 5%

## AWARDS

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**National Scholarship**, 2020  
**China Undergraduate Physics Tournament** the First Prize, 2019  
**Outstanding Student Scholarship** Grade 2, 2019  
**Outstanding Freshman Scholarship** Grade 2, 2018

## RESEARCH INTERESTS

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### Condensed Matter Theory

- 1. quantum transport using NEGF method
- 2. unconventional superconductivity and strongly-correlated system
- 3. topological properties of materials

### Condensed Matter Experiments

- 1. exotic quantum states in interface using transport techniques

## TECHNICAL STRENGTHS

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### Computer Skills

Python, C, Matlab, L<sup>A</sup>T<sub>E</sub>X

### Experimental Skills & Tools

material growth, nanofabrication, transport measurement

## RESEARCH EXPERIENCE

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### 2D materials growth and device fabrication

November 2018-April 2019

- Under the instruction of Prof. Faxian Xiu, I grew some 2D materials like  $Bi_2O_2Se$  using CVD (chemical vapor deposition). Then I did EBL and other nanofabrication techniques.

### Transport properties of topological superconductors

April 2019-present

- Under the instruction of Prof. Wei Li, I theoretically studied the Andreev reflection of high-order topological superconductors both numerically and analytically. In this project, I mastered the powerful NEGF method (nonequilibrium Green's function).

## ADVANCED COURSES TAKEN

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Advanced Quantum Mechanics  
Advanced Solid State Physics  
Physics of Superconductivity