

# Hongxiang Chen

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Southern University of Science and Technology (SUSTech)

## EDUCATION

### SUSTECH

#### BSc IN PHYSICS

2016 - 2017 | Shenzhen, China

GPA: 3.76/4.0

### GUANGZHOU TIEYI MIDDLE SCHOOL

#### HIGH SCHOOL

2011 - 2013 | Guangzhou, China

## LINKS

GitHub: **we-taper**

<https://github.com/we-taper>

Notes: **Study Notes**

<https://github.com/we-taper/Draft>

## SKILLS

### COMPUTER

Conversant:

Java, Matlab,  $\text{\LaTeX}$ , Vim

Intermediate:

Python, Linux System Administration

Basic:

Ruby, Bash

### LANGUAGE

Chinese : Native

Cantonese : Conversational

English : Fluent

German : Basic

## KNOWLEDGE

### PHYSICS KNOWLEDGE BEYOND USUAL CURRICULUM

Conversant:

Topological Insulators and Superconductors, Abstract Algebra,

Advanced Linear Algebra

Experienced:

Solid State Theory, (Real) Differential Geometry, Complex Geometry,

Sheaf Cohomology

Acquainted:

Quantum Many-body Theory, Discrete Mathematics

## RESEARCH INTEREST

Topology • Condensed Matter Theory • Statistical Physics • Biophysics

## RESEARCH EXPERIENCE

### BACHELOR THESIS | TOPIC: CLASSIFICATION OF TOPOLOGICAL INSULATORS

In progress | Advisor: Prof. Jiansheng Wu

- To explore different ways of classifying topological insulators
- Possible Directions:
  - Apply techniques developed in non-interacting pictures to study the topological phenomena in classical mechanics
  - Study classification in other symmetry groups, such as the wallpaper groups

### UNDERGRADUATE RESEARCH | TOPIC: MECHANICAL ANALOGY OF TOPOLOGICAL INSULATOR

2015 – 2016 | Advisor: Prof. Jiansheng Wu

- Calculated the eigenmodes of oscillation on a honeycomb lattices with/without the presence of Coriolis force
- Examined its symmetry using the analogy of quantum symmetries
- Tried to simulate the lattice using 3D-printed objects

## AWARDS AND OTHER ACTIVITIES

|           |  |                                   |
|-----------|--|-----------------------------------|
| 2014-2017 | College Start-up Scholarship, CNY 24,000                         | SUSTech                           |
| 2014      | Excellent Student Scholarship, CNY 1,500                         | SUSTech                           |
| 2013      | Second Place in Debating Competition                             | Student Debating Union, SUSTech   |
| 2013      | Caring for primary school children                               | Volunteer Association, SUSTech    |
| 2011      | Asia-Pacific Robotics Championship China Qualifier - High School | Yong-Le Elementary School, Taipei |