

Admission talk for 2024 Physics @ CUHK

(JUPAS 4601 CUHK Science (大類收生)-> Physics major)

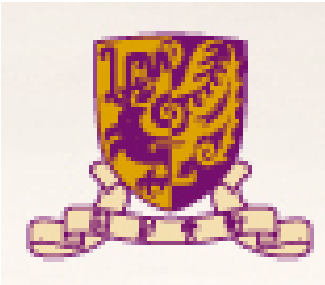
(JUPAS 4690 Enrichment Stream in Theoretical Physics 理論物理精研)

Department of Physics

JUPAS hotline

Email: ugadm@phy.cuhk.edu.hk

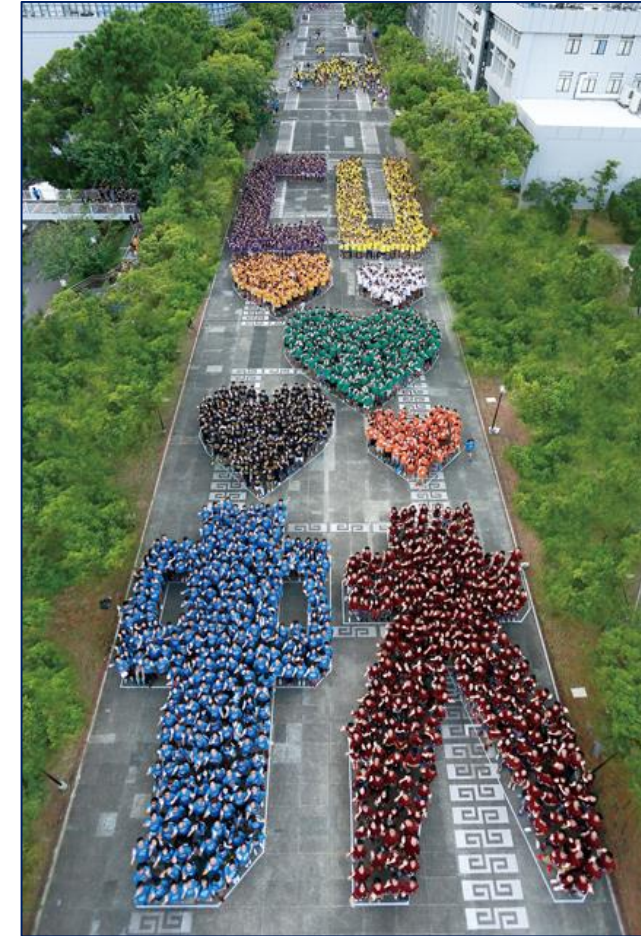
Tel: (852) 3943-6154



The Chinese University of Hong Kong 香港中文大學



未圓湖及獅子亭



百萬大道

- A comprehensive university founded 1963 as a federation of Chung Chi (崇基), New Asia (新亞) and United (聯合) Colleges 書院.
- Currently, 9 colleges 書院 and 9 faculties/schools 學院 (Arts 文學, Business 工商管理, Education 教育, Engineering 工程, Law 法律, Medicine 醫, Science 理, Social Science 社會科學 and Graduate School 研究院).



Department of Physics 物理系

- Founded more than 50 yrs. One of the oldest in CUHK.
- 10 Professors 教授, 10 Associate Professors 副教授, 7 Assistant Professors 助理教授, 1 Research Assistant Professor 研究助理教授, and 6 Senior Lecturers/ Lecturers 講師 → 34 faculty members



You may want to study physics if you want to:

- know how Nature works: **From the atom to the universe**
- become a **scientist** 科學家, a **physics professor** 物理教授, a **science teacher** 理科老師, an **engineer** 工程師, a **financial analyst** 金融分析師,
- or even start your own innovative technology company 科技初創公司

CUHK Physics is the place for you because **we care very much about teaching** 非常關心教學

CUHK Physics has a **very good reputation** 優良聲譽 that **we are very serious in education**

Therefore, we provide a **rigorous curriculum** 嚴謹課程 that helps you to build a solid foundation 堅實的基礎

The curriculum may **not be as easy as you think** but we try our best to ensure “**位位皆尖兵**”

- We have been nurturing over **2000 physics students** over 50 years
- In recent years, over **50%** of graduates move on to **graduate school in top schools** around the world

2021	2020	2019	2018
U. of Cambridge	U. of Chicago	Caltech	Caltech
Duke U.	Duke U.	U. of Chicago	U. of Chicago
U. of Toronto	UIUC	U. C. San Diego	UIUC
ETH Zurich	U. of Wisconsin	U. of Washington	Brown U.
Johns Hopkins	Maryland	U. of Michigan	Notre Dame U.
Ohio State U.	U. British Columbia	U. British Columbia	Ohio State U.
UIUC	U. of Colorado	ETH Zurich	U. C. San Diego

- More than **50** are professors at local and oversea universities
- More than **400** graduates have become physics teachers

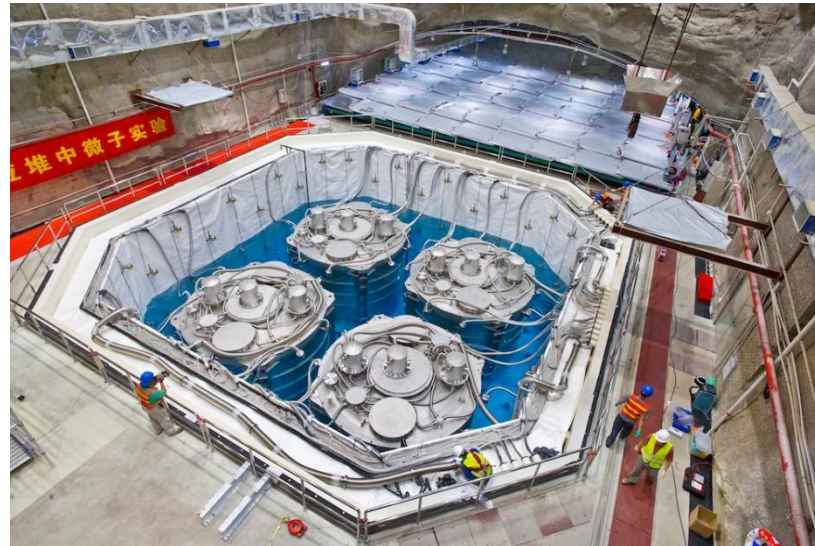
Student achievements

- Every year, we have students awarded the **Innovative and Technology Scholarship 創新科技獎學金** (\$150,000). Placed at the best of the best students in HK.
- **More than 35%** students have been awarded CN Yang scholarships, Undergraduate Research Experience Grant, Chung Chi Scholarship for Excellence, Physics Prize, Admission Scholarship, 1967 Alumni Scholarship,
- They have been awarded from more than **2000 scholarships and prizes** covering **tuition fee 學費** and **living expense 生活費**.
- Students won the international robotics contests 機械人大賽, data and computational competitions 編程大賽

- Participated in large-scale international research projects 大型國際研究項目

High energy physics at CERN 歐洲核子研究中心

LIGO for measuring gravitational waves 重力波



Astrophysics 天體物理



Daya Bay for studying neutrinos 中微子

- Published research papers in high-impact journals.

Physics at CUHK: Curriculum 課程 Overview

- University Physics (1st and 2nd years)
- Classical Mechanics 經典力學 (2nd and 3rd years)
- Quantum Mechanics 量子力學 (3rd and 4th years)
- Electromagnetic theory 電磁理論 (3rd and 4th years)
- Thermal and Statistical Physics 熱物理和統計物理 (3rd and 4th years)
- Mathematical Skills 數學技能 (1st – 3rd years)
- Experimental Skills 實驗技能 (1st – 3rd years)
- Computational Skills 計算能力 (2nd and 3rd years)
- Other electives (3rd and 4th years)

47 (Science)/57 (ESTP) compulsory units and 24/15 elective units out of 123 total units

Enrichment Stream in Theoretical Physics 理論物理精研

- For **elite 精英** students who are talented in physics and mathematics (**top 10 program in CUHK**)
- **Critical mass 凝聚** of very good students love physics
- Provide a solid foundation on theoretical physics and mathematics
- Provide more **project learning** and **research opportunities**
- More **small-group discussion** classes
- **Guaranteed 保證 research opportunities** at an earlier stage

Learning opportunities beyond classroom

SURE – Summer Undergraduate Research Exchange

Cambridge, Oxford, Caltech, CERN, LIGO, Chicago, Toronto,

OPUS – Overseas Program for Undergraduate Students

Berkeley, Fudan

STAR – Summer Teacher Apprenticeship

Local secondary schools

Internships

Summer Research Internship, HK observatory, Space Museum, Science Museum

Exchange programs

University and colleges

Co-op programs

More than 75 companies participate

- **More than 35%** of students participate the Summer Research Internship 暑期研究實習 in their **1st and 2nd years** with financial support
- **More than 30-40%** of students join oversea exchange program, local teaching assistant, and other internships such as HK observatory, Science Museum in **2nd and 3rd years**
- **More than 40%** of students join the college or university exchange programs
- **All students** spend **at least one semester** in conducting research

Science 大類收生 (JS 4601)

4 Core Subjects 核心科目

Level 3 in Chinese and English

Level 2 in Mathematics

Attained in Citizenship and Social Development

- Best 5
- Declare Physics as major programme after admission into CUHK Science

2 Elective Subjects 選修科目

1st - Level 3 in any ONE subject from Biology / Chemistry / Physics / M1 or M2

2nd - Level 3 in any ONE subject in Category A 甲類科目

Some subjects with Heavier Weighting 比重

2.0X Biology, Chemistry, Physics, M1 OR M2

1.5X Mathematics OR English, Economics, Geography, Information and Communication Technology, Technology and Living (Food Science & Technology)

Bonus Point Arrangement

6th and 7th subjects in Category A or Category C

Outstanding performance in interview 面試

School Principal's Nominations (SPN) 校長推薦計劃

理論物理精研 (JS 4690)

4 Core Subjects

Level 3 in Chinese and English

Level 4 in Mathematics

Attained in Citizenship and Social Development

- Best 5
- Direct admission to CUHK Physics via JUPAS

2 Elective Subjects

1st - Level 4 in Physics

2nd - Level 3 in any ONE subject from M1 or M2 (preferred) / Biology / Chemistry / Economics / Geography / Information and Communication Technology / Technology and Living (Food Science & Technology)

Some subjects with Heavier Weighting

HKDSE Subject	Physics	Mathematics and M1/M2	Subjects in Category A*	English/Chinese Language
Weighting factor	× 2	× 1.5	× 1	× 1

- Extra Bonus Points will be given to
 - ✓ 5** in HKDSE Physics, Mathematics & M1/M2
 - ✓ Outstanding performance in interviews 面試 (May 2024)
 - ✓ 6th and 7th subjects in Category A

- JUPAS Quota: **20**

JUPAS Admission Score 2023 (理論物理精研)

Admission Figures	CHI	ENG	MATH	LS	M1/M2	PHY	Sci	Best 5
Upper Quartile	4	4	5	5 ^{**}	5	5 [*]	5 [*]	29
Median	5	4	5 [*]	4	5	5 [*]	5 [*]	28
Lower Quartile	4	5	5	4	N/A	5 ^{**}	5 [*]	27

We are constantly placed at the top 10 program in CUHK

The STEM Talent Scheme

- “3 or more stars with lowest level 3 or above” (e.g. 5*5*5*, 5**5*3, 5**5**5**, ...) in 3 STEM-related elective subjects# 三科 STEM 選修科目# 中考獲最少三粒星
- For 理論物理精研 (JS4690), **Physics** must be one of the 3 STEM-related elective subjects
- Put the science program in **higher priority** 高優先
- Good for those who satisfy the above criteria but fail to fulfill the minimum requirement in the 4 core subjects (3322) by one level in any one subject
 - ◆ Programs will consider their applications and offer interviews to the potential applicants
 - ◆ The application results will be announced as Main Round offer results 正式遴選結果 by JUPAS

More Information

Undergraduate Admission Inquiry: ugadm@phy.cuhk.edu.hk

Physics Curriculum Inquiry: physics@phy.cuhk.edu.hk

Physics Department Webpage: <http://www.phy.cuhk.edu.hk>

Science Faculty Webpage: <http://www.sci.cuhk.edu.hk/>

