The Chinese University of Hong Kong, Shenzhen (CUHK-SZ) Summer Lab Research (SLR) Programme 2024 (in-person)

Programme Overview

The Summer Lab Research (SLR) at CUHK-Shenzhen is a newly-launched summer research program designed for exchange students from our global partner institutions. The participants will gain exciting research experience at cutting-edge laboratories under the guidance of our distinguished faculty for a minimum of 10 weeks in the Summer term with the on-campus residence.

The research topics of the SLR cover a wide range of fields, including ***New Energy and Energy Efficiency Management, Big Data and Scientific Data, Modern Biological Information Engineering, Robotics&AI, etc.***

Please refer below for more useful information including the program benefits, dates and application procedure, as well as a complete list of research opportunities in the Summer 2023. **You are required to meet the requirements of the individual labs that you are applying to.**

You are required to contact the lab supervisor to match interests before applying for SLR. Please cc alvahong@cuhk.edu.cn and luanchengyu@cuhk.edu.cn when you email the supervisor.

Location

This programme takes place in Shenzhen, China.

Dates

13 May 2024 to 02 August 2024

Credit Transfer

This programme can be mapped to a 4 units Science dummy exchange course code counting towards unrestricted elective.

For mapping to the UROPS course code, Life Sciences and Physics majors can map to LSM3288 and PC3288 respectively. For all other majors, please do check with the respective departments' UROPS Coordinators.

Do note that additional assessment may be required from the student by the NUS department for transferring of credits to a UROPS course. Not all UROPS course code can be counted towards major requirements. Please check what requirements the UROPS will count towards and if you are unsure, please check with your department.

Students can transfer a total of 12 units from a maximum of 2 overseas summer/winter programmes without having to pay tuition at NUS during their course of study. Any additional units mapped will be subjected to NUS Special Term fees.

Course mapping and credit transfer for online summer programmes is not allowed.

Eligibility Criteria

NUS students must:

- Be a full-time Faculty of Science student.
- First major is a Science major.
- Have a clean disciplinary record.
- Year 1, Year 2 and Year 3 students may apply

- Minimum GPA of 3.0
- Be fully vaccinated
- Not intending to graduate at the end of AY23/24 Semester 2
- Not be National Servicemen who are called up for In-Camp Training (ICT). Deferment letter will not be provided.

*Please note that parent/guardian consent is required for participation in overseas programme. (The form will be provided to you should you be offered a place for the programme.)

Number of places

There are 2 places available.

Programme Cost

Students do not need to pay NUS Special Term fees or tuition fees to CUHK-SZ if they do not exceed the credits transfer limit stated under the section "Credit Transfer" above. However, students are responsible for their own airfare, accommodation, meals, personal expenses, etc.

Estimated cost (*Please note that the figures provided are only estimates*)

Item	Cost
Return Airfare	SGD500
Accommodation	SGD150/term (sharing basis)
Food and Transport	SGD500/month

Please visit OAL website for further information regarding on-campus lodging. On-campus residence will be arranged for successful applicants, subject to availability of hostel places.

Financial Assistance

Click here to find out more about the various financial assistance schemes offered by NUS.

Programme Application Procedure and Deadline

Login to Education Records System (EduRec) and submit your application under External Study Type "Research Attachment/Internship/Industrial Attachment", External Study Setup ID: **02655**. Please refer to Guide for Student Programme Application BEFORE your application. You will need to log on to NUS WebVPN before accessing the Guide and EduRec.

Application Deadline: **12 January 2024, 11:59pm Singapore Time**

Documents required (upload into your online application in EduRec):

1. Latest NUS unofficial transcript (downloadable from EduRec).
2. Curriculum Vitae. Highlight any prior research experience that you may have to support your application.
3. Personal Statement, indicating your 5 project choices in order of preference, including your area of research interest and why you are interested in the mentioned projects.

4. **You should contact CUHKSZ faculty members in the labs and find a research supervisor before being officially nominated.Please cc alvahong@cuhk.edu.cn and luanchengyu@cuhk.edu.cn when you email the supervisor.**

Note:

- Admission into the programme is at the discretion of CUHK-SZ
- Allocation of project is done by CUHK-SZ

If you face difficulties uploading the documents, email the required documents to SCI SAP Team (scisap@nus.edu.sg) instead by **12 January 2024, 11:59pm Singapore Time**.

Applications would be deemed incomplete even after submission if the required documents are not received by the stipulated deadline, and therefore disqualified from the application.

To be fair to students who abide by the deadline, incomplete or late application will strictly not be considered.

Insurance

All students travelling overseas for activities or purposes approved, endorsed, organised, sponsored or authorised by NUS will be covered by the NUS Student Travel Insurance Policy. Click here for more information.

Exclusions to the NUS Student Travel Insurance may apply. Students are to ensure that they have sufficient travel insurance coverage, and may consider purchasing additional travel insurance if required.

Contact Details

If you have any questions, please submit your enquiry via the MS Form here.

Summer Lab Research (SLR) Program

Introduction

Summer Lab Research (SLR) at CUHKSZ is a newly-launched summer research programme designed for the exchange students from our global partner institutions. The participants will gain exciting research experience at cutting-edge laboratories under the guidance of our distinguished faculty for 8 to 10 weeks in Summer term with on-campus residence.

The research topics cover a wide range of fields, including New Energy and Energy Efficiency Management, Big Data and Scientific Data, Modern Biological Information Engineering, Robotics & AI, etc. Please refer to the List of Summer Labs for more details.

By joining SLR, you will benefit from:

- Enriching research experience to prepare better for future academic and career path;
- Cultural immersion in the most dynamic area of south China;
- Exploring Shenzhen, the global epicenter of hi-tech innovations in telecommunications, automotive, and other industries.

Flexible Timeframe

Students may join the SLR Program in the following four formats.

Summer Term	SLR Program+ summer academic courses (optional) * Conducting research or * Conducting research + Taking credit-bearing courses
Summer Term+Fall term	SLR Program + Fall term exchange (regular courses) *Research in summer followed by credit-bearing courses in Fall.
Spring Term+Summer Term	Spring term exchange (regular courses)+ SLR Program *Credit-bearing courses in spring followed by research in summer.
Summer Term combined with Full Academic Year	SLR Program and Full academic year exchange (regular courses) *Research in summer before or after the full academic year exchange study

Program Requirements

- Be in good academic standing and nominated by an exchange partner of CUHKSZ.
- Meet the specific academic requirements of the lab you intend to apply for. The final decision of admission rests with the labs.
- If English is not a primary language of instruction at your home institution, you should provide a TOEFL/IELTS score report with a minimum TOEFL score of 530 (paper-based) / 71 (internet-based) or IELTS 6.0 or equivalent.

Admission Procedure

- **Nomination Deadline: 15th February**

To participate in SLR, you should be officially nominated by your home institution. Please contact the relevant department/office at your home institution about the opportunity.

*You should contact CUHKSZ faculty members in the labs and find a research supervisor before being officially nominated.

- **Application Deadline: 28th February**

After receiving the nomination from your home institutions, the Office of Academic Links (OAL) will send the instructions of online application to qualified candidates.

Program Fee

The SLR programme is free of charge for exchange students from our partner institutions.

AY2023-2024 List of Summer Labs

Research Field	Laboratory	Quota	Requirements	Contact	Website	Remarks
New Energy and Energy Efficiency Management	PolyGBA Institute	8	- Junior year undergraduate student with materials, chemistry, chemical engineering background;	Prof. He ZHU: zhuhe@cuhk.edu.cn Prof. Qi ZHANG: qizhang@cuhk.edu.cn	https://polysz.cuhk.edu.cn/en	
	PolyCUHKSZ					
Big Data and Scientific Data	Guangdong Provincial Key Laboratory of Big Data Computing	2	- Senior year undergraduate student with any of the following majors: data science, machine learning, electrical engineering (statistical signal processing emphasis), control;	Prof. feng YIN: yinfeng@cuhk.edu.cn	https://www.cuhk.edu.cn/en/article/7326	
	Shenzhen Research Institute of Big Data	5	- Senior year undergraduate student; - Major in wireless communications; - Work on the implementation of OAI-based 5G NR system: up to 5 students;	Prof. Chao SHEN: chaoshen@sribd.cn	https://www.cuhk.edu.cn/en/article/4161	
		2	- Junior/Senior year undergraduate student; - Major in data science, computer science, machine learning, electrical engineering (statistical signal processing emphasis), control;	Dr. Akang WANG wangakang@sribd.cn Prof. Xiaodong LUO xiaodongluo@cuhk.edu.cn		
		3-5	- Junior/Senior year undergraduate student; - Major in data science, computer science, machine learning, electrical engineering (statistical signal processing emphasis), control;	Dr. Shipei ZENG: shipei.zeng@sribd.cn		
	The Chinese University of Hong Kong (Shenzhen)-Shenzhen Research Institute of Big Data-Huawei Innovation Laboratory of Future Network System Optimization	2	- Senior year undergraduate student; - Major in wireless communications; - Work on the FPGA implementation of channel simulator: up to 2 students;	Prof. Tsung-Hui CHANG: changtsunghui@cuhk.edu.cn	https://www.cuhk.edu.cn/en/article/6011	
	Prof. Yao's Lab (High-dimensional Statistics; Random Matrix Theory)	2	- Junior year undergraduate student in mathematics or Statistics majors	Prof. Jeff J. Yao: jeffyao@cuhk.edu.cn	https://jianfengyao.wordpress.com/	
Modern Biological Information Engineering	Guangdong Provincial Key Laboratory of Life and Health Sciences	2	- Major in biology, medicine, chemistry, life sciences, biomedicine engineering or relevant background; - Have completed General Biology or equivalent course; - Prefer good programming skills for applying Bioinformatics lab;	Prof. Richard YE: richardye@cuhk.edu.cn	https://www.cuhk.edu.cn/en/article/6003	
	Futian Biopharmaceutical Innovation and R&D Center, the Chinese University of Hong Kong, Shenzhen		- Major in biology, medicine, chemistry, life sciences, biomedicine engineering or relevant background; - Have completed General Biology, Organic Chemistry, Biochemistry or equivalent course; - Prior lab experience will be preferred although not required;		https://www.cuhk.edu.cn/en/article/5784	
	Arieh Warshel Institute of Computational Biology, the Chinese University of Hong Kong, Shenzhen	3	- Plan to obtain a PhD in computer-aided drug design, AI-aided drug design, computational biology, or computational chemistry; - Proven track record of scientific research and publication; - Experiences with Linux, data analysis, and scripting using programming language; - Good oral and written communication skills in English; - Acquired basic knowledge in: Mathematics Physics Computing Chemistry Biology/Biotechnology/Biomedicine	Prof. Hsien-Da HUANG: huanghsienda@cuhk.edu.cn Prof. Zongyi LI: leetzongyi@cuhk.edu.cn Prof. Guijuan CHENG: chengguijuan@cuhk.edu.cn Prof. Lizhe ZHU: zhulizhe@cuhk.edu.cn Prof.Chen BAI: baichen@cuhk.edu.cn Prof. Hirao Hajime: hirao@cuhk.edu.cn Prof. Yongfei WANG: yfwang@cuhk.edu.cn	https://www.cuhk.edu.cn/en/article/128	
	Kobilka Institute of Innovative Drug Discovery, the Chinese University of Hong Kong, Shenzhen	2	- Junior/Senior year undergraduate student; - Major in structure biology, biology, or chemistry;	Prof. Yang DU: yangdu@cuhk.edu.cn	https://www.cuhk.edu.cn/en/article/4153	
		2	- Junior/Senior year undergraduate student; - Major in physics, chemistry, or biology;	Prof. Ying-Chih CHIANG: chiangyc@cuhk.edu.cn		

Robotics & AI	Robotics and Artificial Intelligence Laboratory-Marine Robot	4	- Major in electronic and information, automation, or computer science related major; - Familiar with python and C++; - Junior year undergraduate student or above;	Prof. Huihuan QIAN hhqian@cuhk.edu.cn	https://rail.cuhk.edu.cn/article/35	
		2	- Major in robotics (such as mechanical, automation) or computer science related programme; - Strong hand-on skills;	Prof. Tin Lun LAM: tllam@cuhk.edu.cn	https://freeformrobotics.org	
	Shenzhen Institute of Artificial Intelligence and Robotics for Society (AIRS)	4	Prof. Hongyuan Zha's Lab: - Students should have a solid math background and have a topic of interest that aligns with our topics; - Prefer students who are already working on one of the topics in machine learning and applications, including reinforcement learning, online optimization, multi-agent learning and optimization, game theoretic machine learning, and applications in autonomous vehicles and diagnostic systems;	Prof. Baoxiang WANG: bxiangwang@cuhk.edu.cn	https://airs.cuhk.edu.cn/en	Hongyuan Zha works on a variety of topics in machine learning and applications, including reinforcement learning, online optimization, multi-agent learning and optimization, game theoretic machine learning, and applications in autonomous vehicles and diagnostic systems. Lab includes several assistant professors that also investigate the above topics. The students could be in AIRS or CUHK-Shenzhen.
		2-4	Dr. Xiaopu Wang's Lab: (Requirement 1 or Requirement 2) Requirement 1: (1-2students) a. Basic knowledge of hydrogels or polymers; b. Passion in working on microrobots-related research; c. Proficiency in English; d. Experience in chemical experiments is a plus; e. Experience in cell culture is a plus; Requirement 2: (1-2students) a. Theoretical knowledge of the electromagnetic field; b. Passion in working on microrobots-related research. c. Excellent programming skills in Python (C/C++ language is a plus); d. Proficiency in English; e. Prefer experience in computer vision or image processing;	Dr. Xiaopu WANG: wangxiaopu@cuhk.edu.cn		The collaboration project launched by Dr. Xiaopu Wang of AIRS and Prof. Bradley Nelson of ETH Zurich aims at fundamental and applied research in microrobots. The content of this project includes (1) Combining advanced micro-/nano processing technology and material technology to fabricate microrobots with excellent properties; (2) Studying swarm control and programmed control of microrobots; (3) Exploring the biomedical applications possibilities of microrobots, such as smart cargo delivery, thrombosis treatment, aneurysm treatment, etc. The students could be only in AIRS.
	Human Language Technology Laboratory	4	- Major in computer science, computer engineering, electrical engineering - Familiar with one or more of Python, Matlab or c++ programming languages - Foundation knowledge of signal processing is a plus	Prof. Haizhou Li: haizhouli@cuhk.edu.cn Prof. Zhizheng Wu: wuzhizheng@cuhk.edu.cn	www.colips.org/~eleliha https://drwuz.com/	