结合传统与现代 融合中国与西方

To Combine Tradition with Modernity.
To Bring Together China and the West.
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About School of Science and Engineering

The School of Science and Engineering (SSE) adheres to CUHK’s excellent academic tradition, keeps pace with the international trend of disciplinary development, cooperates with well-regarded schools in America, Australia, Canada, etc., references the successful experiences of overseas institutes, recruits high-caliber professors globally, builds a unique learning environment that embraces China and the West, and nurtures technology leaders possessing expertise, diverse talents and global visions.

Our mission is to create, advance and disseminate knowledge in science and engineering, and to train innovative, forward-thinking, globally-minded and principled scientists, engineers and leaders who strive for the betterment of industries and society, thereby serving the needs and enhancing the well-being of the citizens of the Pearl River Delta, China as a whole, and the wider world community.

To be acknowledged regionally, nationally and internationally as a first-class centre of scholarship in science and engineering whose bilingual, global and interdisciplinary dimensions of teaching and learning, scholarly output and contribution to the community consistently meet standards of excellence.
Electronic Information Engineering is a cutting-edge programme that teaches the basic knowledge and skills of electronic information and computer engineering. Students will also have many opportunities to communicate and learn with world-renowned professors and leading industry practitioners inside and outside the classroom. Also, EIE major programme will take advantages of the local industry in the Internet, Communications and other Electronic information areas to provide students with ample opportunities to interact with the local industry, which helps our students to better understand the industry trends and be equipped with entrepreneurship ability.

To cultivate innovative and entrepreneurial talents with international vision, the EIE programme is designed to teach its students modern electronic technology, the principles and practice of computer engineering, information transmission and storage, signal processing and analysis, prototype development and technology transfer to commercial products. The well-rounded education will enable graduates of this major to further their graduate studies at domestic and foreign graduate schools, as well as practice their profession in the industry such as computers, electronics, information, finance, manufacturing and government agency management.
EIE Programme provides two streams

**Computer Engineering**

Focusing on the practice and application of computer systems. Its main areas cover cloud computing, artificial intelligence, robotics, computer networks, image processing, computer-aided design, computer system security, embedded computer systems, and the Internet of Things (IoT).

**Electrical Engineering**

Through extensive hands-on training, students can develop in various fields in the future including wireless communications, integrated circuits, signal processing and robotics and so on.

**Major Required Courses**

<table>
<thead>
<tr>
<th>Computer Engineering Stream</th>
<th>Digital Logic and Systems</th>
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<tbody>
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<td>Operating Systems</td>
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<td>Database System</td>
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<td>Fundamentals of Artificial Intelligence</td>
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<table>
<thead>
<tr>
<th>Electrical Engineering Stream</th>
<th>Digital Logic and Systems</th>
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<tr>
<td>Data Structures</td>
<td>Digital Logic and Systems</td>
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<tr>
<td>Electronic Circuit Design Laboratory</td>
<td>Data Structures</td>
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<tr>
<td>Basic Circuit Theory</td>
<td>Digital Logic and Systems</td>
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<td>Digital Logic and Systems</td>
<td>Digital Logic and Systems</td>
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<tr>
<td>Digital Systems Design Laboratory</td>
<td>Digital Logic and Systems</td>
</tr>
<tr>
<td>Signals and Systems</td>
<td>Digital Logic and Systems</td>
</tr>
</tbody>
</table>

**Universities and Partners**

To combine tradition with modernity, to bring together China and the West.
学院课程 School Package

| 普通生物 | General Biology |
| 普通化学 | General Chemistry |
| 计算机科学导论: 程序设计方法 | Introduction to Computer Science: Programming Methodology |
| 计算机实验 | Computational Laboratory |
| 微积分 (一) | Calculus I |
| 微积分 (二) | Calculus II |
| 线性代数 | Linear Algebra |
| 力学 | Mechanics |
| 概率及统计 (一) | Probability and Statistics I |

选修科目 Major Elective courses

- 生物信息学
- 离散数学
- 计算机科学导论: 程序设计方法
- 计算机体系结构
- 操作系统
- 数据库系统
- 人工智能之基本原理
- 多媒体系统导论
- 电子游戏设计与开发
- 软件工程
- 分布式及并行式计算
- 数据挖掘技术
- 机器学习之基础课程
- 算法设计及分析
- 物联网移动计算
- 社交网络
- 编译器设计
- 互联网编程与应用
- 云端计算
- 工程产品设计审美与人类价值
- 仿真
- 生产策划与项目管理
- 组织行为学
- 基本个体经济学
- 信号与系统
- 通信系统原理
- 微电子电路导论
- 模拟集成电路
- 网络技术、经济和社会
- 数字信号处理
- 数字通信
- 无线通信系统
- 初级光通信
- 编码及密码学导论
- 通信网络性能分析
- 计算机及网络安全
- 电信业务与网络系统
- 网络软件之程序设计
- 多媒体编码与网络
- 射频集成电路
- 数字图像处理
- 工程伦理、安全及实务
- 创业原则
- 常微分方程
- 最优化
- 信息论专题
- 偏微分方程
- 电磁学
- 电动力学
- 随机过程
- Bioinformatics
- Discrete Mathematics
- Introduction to Computer Science: Programming Paradigms
- Computer Architecture
- Operating Systems
- Database System
- Fundamentals of Artificial Intelligence
- Introduction to Multimedia Systems
- Video Games Design and Development
- Software Engineering
- Distributed and Parallel Computing
- Techniques for Data Mining
- Fundamentals of Machine Learning
- Design and Analysis of Algorithms
- Mobile Computing and Applications Development
- Social Networks
- Compiler Construction
- Internet Programming and Applications
- Cloud Computing
- Aesthetic and Human Values in Engineering Product Design
- Simulation
- Production Planning and Project Management
- Organizational Behaviour
- Basic Microeconomics
- Signals and Systems
- Principles of Communication Systems
- Introduction to Microelectronic Circuits
- Analog Integrated Circuits
- Networks: Technology, Economics and Society
- Digital Signal Processing
- Digital Communications
- Wireless Communication Systems
- Introduction to Optical Communications
- Introduction to Coding and Cryptography
- Performance Evaluation of Communication Networks
- Computer and Network Security
- Telecommunication Switching and Network Systems
- Network Software Design and Programming
- Multimedia Coding and Networking
- Radio Frequency Integrated Circuits
- Digital Image Processing
- Digital Communications
- Software Engineering
- Distributed and Parallel Computing
- Techniques for Data Mining
- Fundamentals of Machine Learning
- Design and Analysis of Algorithms
- Mobile Computing and Applications Development
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- Social Networks
- Compiler Construction
- Internet Programming and Applications
- Cloud Computing
- Aesthetic and Human Values in Engineering Product Design
Mathematics standardizes different phenomena in the world with rigorous scientific language. It is an indispensable basic tool for studying and scientific research, and plays an irreplaceable role in the development of human history and social life. Entering the information age, in the screening of big data, Smart city, financial analysis, risk management, economic regulation and other aspects, this long-standing discipline still plays an increasingly important role.

The programme is designed to educate students to acquire both a solid understanding of mathematics and the ability to use it. In addition to fundamental mathematical theory, students will be trained in applying mathematical modelling and computational methods to formulate and solve practical problems arising in business, finance, government, engineering, physical science, life science, and social science.

本专业提供三个专修方向：MAT Programme provides three streams:

**理论数学方向**
Pure Mathematics

Working on mathematics itself, including geometric studying the spatial form, algebra studying discrete systems and analysis studying continuous phenomena.

**应用数学方向**
Applied Mathematics

Studying the basic theories and methods of mathematics, using mathematic models, computer and digital software to solve realistic problems.

**金融数学方向**
Financial Mathematics

Using mathematics tools studying finance and conducting quantitative analysis such as mathematical modelling, theoretical analysis and numerical calculation.
**必修科目 Major Required courses**

### 理论数学 Pure Mathematics Stream

<table>
<thead>
<tr>
<th>常微分方程</th>
<th>Ordinary Differential Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>基础分析</td>
<td>Elementary Real Analysis</td>
</tr>
<tr>
<td>基础分析（二）</td>
<td>Elementary Real Analysis II</td>
</tr>
<tr>
<td>抽象代数（一）</td>
<td>Abstract Algebra I</td>
</tr>
<tr>
<td>實分析</td>
<td>Real Analysis</td>
</tr>
<tr>
<td>复变函数</td>
<td>Complex Variables</td>
</tr>
<tr>
<td>几何与拓扑学导论</td>
<td>Introduction to Geometry and Topology</td>
</tr>
<tr>
<td>微分几何</td>
<td>Differential Geometry</td>
</tr>
<tr>
<td>偏微分方程</td>
<td>Partial Differential Equation</td>
</tr>
</tbody>
</table>

### 应用数学 Applied Mathematics Stream

<table>
<thead>
<tr>
<th>常微分方程</th>
<th>Ordinary Differential Equation</th>
</tr>
</thead>
<tbody>
<tr>
<td>基础分析</td>
<td>Elementary Real Analysis</td>
</tr>
<tr>
<td>基础分析（二）</td>
<td>Elementary Real Analysis II</td>
</tr>
<tr>
<td>最优化</td>
<td>Optimization</td>
</tr>
<tr>
<td>實分析</td>
<td>Real Analysis</td>
</tr>
<tr>
<td>复变函数</td>
<td>Complex Variables</td>
</tr>
<tr>
<td>数学建模</td>
<td>Mathematical Modeling</td>
</tr>
<tr>
<td>数值分析</td>
<td>Numerical Analysis</td>
</tr>
<tr>
<td>偏微分方程</td>
<td>Partial Differential Equation</td>
</tr>
</tbody>
</table>

### 金融数学 Financial Mathematics Stream

<table>
<thead>
<tr>
<th>计量经济学导论</th>
<th>Introductory Econometrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>投资分析和投资组合管理</td>
<td>Investment Analysis and Portfolio Management</td>
</tr>
<tr>
<td>常微分方程</td>
<td>Ordinary Differential Equation</td>
</tr>
<tr>
<td>最基础分析</td>
<td>Elementary Real Analysis</td>
</tr>
<tr>
<td>最基础分析（二）</td>
<td>Elementary Real Analysis II</td>
</tr>
</tbody>
</table>

### 选修科目 Major Elective courses

- 生物信息学
- 物理化学
- 高数代数
- 计算机科学导论：程序设计方法
- 数据结构
- 机器学习基础课程
- 微观经济学
- 货币与金融机构经济学
- 财务管理
- 期货期权
- 固定收益证券分析
- 金融数据与分析
- 财务计算
- 抽象代数（一）
- 抽象代数（二）
- 实分析
- 最优化
- 高等线性代数
- 数学建模
- 信息论专题
- 数值分析
- 几何与拓扑学导论
- 数论
- 图论
- 编码及密码学导论
- 泛函分析
- 微分几何
- 偏微分方程
- 微分方程数值解
- 随机微分方程
- 物理实验
- 电磁学
- 电动力学
- 理论力学
- 量子物理
- 统计力学
- 风险管理及衍生工具
- 金融及风险管理模拟方法
- 金融与风险管理微积分
- 概率及统计
- 随机过程
- 精算学
- Bioinformatics
- Physical Chemistry
- Discrete Mathematics
- Introduction to Computer Science: Programming Paradigms
- Data Structures
- Fundamentals of Machine Learning
- Microeconomics
- Economics of Money and Financial Institutions
- Financial Management
- Futures and Options
- Fixed Income Securities Analysis
- Financial Data Analysis
- Financial Computation
- Abstract Algebra II
- Abstract Algebra I
- Real Analysis
- Optimization
- Advanced Linear Algebra
- Fourier Analysis
- Optimization II
- Probability Theory
- Mathematical Modeling
- Selected Topics in Information Theory
- Numerical Analysis
- Introduction to Geometry and Topology
- Number Theory
- Graph Theory
- Introduction to Coding and Cryptography
- Functional Analysis
- Differential Geometry
- Partial Differential Equation
- Numerical Methods for Differential Equations
- Stochastic Differential Equation
- Physics Laboratory
- Electricity and Magnetism
- Electrodynamics
- Theoretical Mechanics
- Quantum Physics
- Statistical Mechanics
- Risk Management with Derivatives
- Simulation Methods for Risk Management and Finance
- Stochastic Calculus for Finance and Risk
- Probability and Statistics II
- Stochastic Processes
- Actuarial Science
With the scientific and technological progress and further development of energy, how to promote clean and efficient use of energy, improve the comprehensive efficiency of energy, and accelerate the opening of energy market and industry upgrading have become the new concerns of energy field. Meanwhile, interconnected technologies are changing the social mode of operation. Therefore, the academia has proposed to “build a smarter planet”, and projects it into the energy area, creating the cutting-edge notion, “smart energy”. It deeply merges internet with energy production, transmission, storage, consumption as well as energy market.

This trans-disciplinary programme aims to explore “smart energy system”, the emerging new form of energy development. It combines the traditional training of physics and materials science with modern element of biological engineering, photochemistry and electrochemistry. Courses are designed to integrate new energy study to data computation technique so that students could balance the training between energy and internet technique required by the smart energy system, and adapt the needs for energy-oriented composite talents in current job market.

**New Energy Science and Engineering**

新能源科学与工程

随着科技的发展以及人类对于能源的进一步开发，如何促进能源清洁高效利用，提升能源综合效率，推动能源市场开放和产业升级成为能源领域的新的关注点。同时，互联互通的科技正在改变社会运行方式，学术界提出要“构建一个更有智慧的地球”，投射到能源领域，产生了“智慧能源”这一前沿理念，将互联网与能源生产、传输、存储、消费以及能源市场深度融合。

本专业为跨学科专业，旨在探索“智慧能源系统”这一新兴能源发展新形态，结合了物理与材料科学的传统训练，以及生物分子工程、光化学及电化学的现代元素。除新能源课程外，课程设置还将能源学习与数据计算技术结合，让学生能够平衡智慧能源系统所需的能源与互联网技术方面的训练，同时适应目前就业市场对能源方向复合型人才的需求。
### Major Required courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Science and Engineering Laboratory</td>
<td>Energy Science and Engineering Laboratory</td>
</tr>
<tr>
<td>Electrical Power Systems</td>
<td>Electrical Power Systems</td>
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<tr>
<td>Energy Conversion Processes</td>
<td>Energy Conversion Processes</td>
</tr>
<tr>
<td>Power Electronics</td>
<td>Power Electronics</td>
</tr>
<tr>
<td>Ordinary Differential Equations</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>Physics Laboratory</td>
<td>Physics Laboratory</td>
</tr>
<tr>
<td>Electricity and Magnetism</td>
<td>Electricity and Magnetism</td>
</tr>
<tr>
<td>Electronic Circuit Design Laboratory</td>
<td>Electronic Circuit Design Laboratory</td>
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<tr>
<td>Basic Circuit Theory</td>
<td>Basic Circuit Theory</td>
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<tr>
<td>Signals and Systems</td>
<td>Signals and Systems</td>
</tr>
<tr>
<td>Probability and Statistics II</td>
<td>Probability and Statistics II</td>
</tr>
</tbody>
</table>

### Major Elective courses

- Organic Chemistry
- Physical Chemistry
- Introduction to Computer Science: Programming Paradigms
- Operating System
- Fundamentals of Machine Learning
- System & Control
- Principles of Energy Engineering
- Heat and Mass Transfer for Energy Systems
- Design of Solar Energy Conversion Systems
- Electrochemical Energy Conversion
- Materials for Energy Applications
- Green Engineering and Environmental Compliance
- Energy Resources and the Environment
- Energy Economics
- Power System Stability and Control
- Power System Planning
- Smart Grid
- Electricity Market
- Electrical Machines
- Introduction to Data Analytics
- Optimization
- Optimization II
- Microstructural Evolution of Materials
- Electronic, Optical, and Magnetic Properties of Materials
- Nanoscale Materials
- Thermodynamics
- Fluid Mechanics
- Optoelectronics
- Stochastic Processes

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**Undergraduate Programmes 09**
The programme is set up to meet the finance industry’s demand for graduates with strong quantitative and analytical skills who have the potential to become leaders in the finance industry. Graduates are equipped with sound financial modelling and forecasting skills, and are ideally suited to positions and tasks that require strong quantitative and analytical skills such as valuation, portfolio analysis, asset allocation, credit analysis, risk modelling, and structured finance. The programme also provides a good foundation for careers in investment banking, commercial and corporate banking and financial services.

**Financial Engineering**

*由经管学院、理工学院和数据科学学院联合开设中
Jointly offered with SME and SDS

**本专业提供两个专业方向**

**Quantitative Finance**

**FinTech**

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**学院课程 School Package**

| 财务会计导论 | Introductory Financial Accounting |
| 微观经济学基础 | Basic Microeconomics |
| 财务管理 | Financial Management |
| 金融风险管理 | Introduction to Computer Science: Programming |
| 金融基金与金融基金 | Methodology |
| 计算机科学导论:程序设计方法 | Computational Laboratory |
| 计算机实验 | Calculus I |
| 微积分 (一) | Calculus II |
| 微积分 (二) | Linear Algebra |
| 线性代数 | Probability and Statistics I |

*Undergraduate Programmes*
必修科目 Major Required courses

量化金融 Quantitative Finance Stream

<table>
<thead>
<tr>
<th>金融工程导论</th>
<th>Introductory Econometrics</th>
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</thead>
<tbody>
<tr>
<td>投资分析与投资组合管理</td>
<td>Investment Analysis and Portfolio Management</td>
</tr>
<tr>
<td>期权与期货</td>
<td>Options and Futures</td>
</tr>
<tr>
<td>固定收益债券分析</td>
<td>Fixed Income Securities Analysis</td>
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<tr>
<td>常微分方程</td>
<td>Ordinary Differential Equations</td>
</tr>
<tr>
<td>最优化</td>
<td>Optimization</td>
</tr>
<tr>
<td>数学建模</td>
<td>Mathematical Modeling</td>
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<tr>
<td>概率及统计 (二)</td>
<td>Probability and Statistics II</td>
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</tbody>
</table>

金融科技 FinTech Stream

<table>
<thead>
<tr>
<th>离散数学</th>
<th>Discrete Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>数据结构</td>
<td>Data Structures</td>
</tr>
<tr>
<td>计量经济学导论</td>
<td>Introductory Econometrics</td>
</tr>
<tr>
<td>数据分析学概述</td>
<td>Introduction to Data Analytics</td>
</tr>
<tr>
<td>投资分析与投资组合管理</td>
<td>Investment Analysis and Portfolio Management</td>
</tr>
<tr>
<td>程序化交易与市场微观结构</td>
<td>Market Microstructure and Algorithm Trading</td>
</tr>
<tr>
<td>机器学习之基础</td>
<td>Basic Machine Learning</td>
</tr>
<tr>
<td>最优化</td>
<td>Optimization</td>
</tr>
</tbody>
</table>

选修科目 Major Elective courses:

- 中国法律环境、商业道德与企业社会责任
- 动态数学
- 数据结构
- 操作系统
- 人工智能之基本原理
- 数据挖掘技术
- 应用概率与随机过程
- 博弈论与商业战略
- 计算机与网络安全
- 数据与知识管理
- 网络分析与智能
- 金融科技理论与实践
- 中国与世界的金融市场
- 行为金融学
- 期权与期货
- 固定收益证券分析
- 公司金融
- 资产定价
- 程序化交易与市场微观结构
- 金融数据分析
- 财务计算
- 金融科技规则与法律
- 数据挖掘技术
- 金融工程实习
- 概率论
- 随机微分方程
- 大数据分析
- 风险管理及衍生品的应用
- 回归分析
- 随机过程
- 时间序列
- Legal Environment, Business Ethics and CSR in China
- Discrete Mathematics
- Data Structures
- Operating System
- Database System
- Fundamentals of Artificial Intelligence
- Techniques for Data Mining
- Applied Probability and Stochastic Process in Business
- Game Theory
- Computer and Network Security
- Data and Knowledge Management
- Web Analytics and Intelligence
- Fintech Theory and Practice
- Financial Markets in China and the World
- Behavioral Finance
- Options and Futures
- Fixed Income Securities Analysis
- Corporate Finance
- Asset Pricing
- Market Microstructure and Algorithm Trading
- Financial Data Analysis
- Financial Computation
- Fintech Regulation and Legal Policy
- Data Mining for FinTech
- Internship
- Probability Theory
- Stochastics Differential Equations
- Big Data Marketing
- Risk Management with Derivatives
- Regression Analysis
- Stochastic Process
- Time Series
Chemistry

化学

化学是自然科学的中心学科，是当代自然科学的轴心之一，也是自然科学之间、或者自然科学与工程技术之间的联系所需要的中介媒介。化学的核心知识已经应用于自然科学的各个区域，化学是创造自然，改造自然的强大动力的重要支柱。化学与其他学科的交叉与渗透，产生了很多边缘学科，如生物化学、地球化学、宇宙化学、海洋化学、大气化学等等，使得生物、电子、航太、镭射、地质、海洋等科学技术迅猛发展。

本课程旨在为本科学生提供组织严谨并完整的现代化学基本训练。课程设计重视学生的实验技能训练，化学必修科目均将配上相关的实验科目。完成本课程的学生将具备扎实的理论及其应用，扎实的实际操作动手能力及相关的分析问题、解决问题的能力。

Chemistry is a central subject of natural science and one of the influential areas of modern natural science necessary for connecting scientific and engineering technology. With its core knowledge applied to various areas of natural science, chemistry is the key to harnessing and the power of nature. It integrates and interacts with other disciplines, complementing one another. Numerous “boundary disciplines” are thus created, such as biochemistry, geochemistry, cosmochemistry, marine chemistry and atmospheric chemistry, accelerating technology development in biology, electronics, aerospace, lasers, geology and marine science.

This programme intends to provide undergraduates with well-structured, exhaustive, and fundamental training in modern chemistry. The programme will place a considerable emphasis on cultivating students’ laboratory skills and supplement compulsory chemistry courses with relevant laboratory courses. When the students successfully complete the programme, they will have acquired a rigorous foundation in the theory and application, a solid command of the practical experimental and the ability to tackle simple applications of theoretical analysis and practical experimental operation, to explain and understand, solve problems.

本专业提供两个专修方向 CHM Programme provides two streams:

► 化学科学
Chemistry Science

► 材料科学与工程
Materials Science and Engineering
## Major Required courses

### Chemistry
- General Chemistry
- General Biology
- Introduction to Computer Science: Programming Methodology
- Computational Laboratory
- Calculus I
- Calculus II
- Linear Algebra
- Mechanics
- Probability and Statistics I
- Physical Chemistry
- Analytical Chemistry
- Inorganic Chemistry
- Inorganic, Analytic
- Organic Chemistry I (equal to CHM2001)
- Organic Chemistry II
- Physical Chemistry Laboratory
- Organic Chemistry Laboratory
- Introduction to Materials Science and Engineering
- Principles of Chemical Engineering
- Biochemistry

### Chemical Science
- Advanced Analytic Chemistry and Experiments
- Fundamentals of Spectroscopy, Microscopy, and Chromatography
- Advanced Inorganic Chemistry
- Advanced Structure Elucidation in Organic Molecules
- Advanced Organic Chemistry: Reactivity, Structures, Mechanisms, and Experiments
- Advanced Physical Chemistry (Quantum Chemistry)
- Introduction to Functional Materials
- Transition Metals and Coordination Chemistry
- Organometallic Chemistry and Catalysis
- Selectivity and Efficiency in Synthetic Chemistry
- Solid State Chemistry
- Chemical Kinetics and Catalysis
- Undergraduate Special Project (alternative)
- Undergraduate Thesis (alternative)
- Medicinal Chemistry
- Chemical Biology

### Materials Science and Engineering
- Introduction to Functional Materials
- Chemical Kinetics and Catalysis
- Materials for Energy Application
- Electrical, Optical, and Magnetic Properties of Materials
- Introduction to Structural Materials
- Materials Analysis and Experiments
- Surface Science and Interfacial Engineering
- Polymer Reaction Engineering and Processing
- Undergraduate Thesis
- Solid-State Physics
- Quantum Mechanics
- Product Engineering and Process Modelling
- Separation Engineering and Unit Operations
- Semi-conductors and Devices
- Industrial Capstone
- Quantum Mechanics

### Undergraduate Programmes

- Physical Chemistry
- Analytical Chemistry
- Comprehensive Chemistry Laboratory (Inorganic, Analytic)
- Inorganic Chemistry
- Organic Chemistry I (equal to CHM2001)
- Organic Chemistry II
- Physical Chemistry Laboratory
- Organic Chemistry Laboratory
- Introduction to Materials Science and Engineering
- Principles of Chemical Engineering
- Biochemistry
Master of Science in Communications Engineering
通信工程理学硕士专业

Master of Science in Communications Engineering (MSc.CE) is a two-year full-time programme offered by CUHK-Shenzhen revolving around the area of communications engineering. The Programme aims to equip students with essential knowledge and skills that enable them to develop and implement solutions to harvesting, transmission, and processing of data and information, with a wide coverage of emerging technology such as 5G and beyond communications and networks, wireless communications, machine learning, Internet of Things, cloud computing, edge computing, big data, and analytic processing.

The Programme aims to educate professionals with both theory and practice of communications engineering. Students who graduate from this two-year Master’s Programme will learn the fundamental theory and cutting-edge methods of communications engineering over a wide range of emerging topics such as 5G and beyond communications and networks, Internet of Things (IoT), and machine learning. Students will also complete research projects demonstrating that they can use the fundamental concepts to solve problems in various communications applications.

### Curriculum

<table>
<thead>
<tr>
<th>Required Course (17 units)</th>
<th>Random Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Theory and Channel Coding</td>
<td></td>
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<tr>
<td>Convex Optimization for Communication Systems</td>
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<tr>
<td>Wireless Communications</td>
<td></td>
</tr>
<tr>
<td>5G and Beyond Communications and Networks</td>
<td></td>
</tr>
<tr>
<td>Research on the Theory and Practice of Socialism with Chinese Characteristics</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Elective (21 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine Learning and Intelligent Communications</td>
</tr>
<tr>
<td>Artificial Intelligence and Applications in Communications</td>
</tr>
<tr>
<td>Dynamic Programming and Applications in Communications</td>
</tr>
<tr>
<td>Image Processing and Computer Vision</td>
</tr>
<tr>
<td>Optical Communications and Networks</td>
</tr>
<tr>
<td>Network Economics</td>
</tr>
<tr>
<td>Big Data Systems and Information Processing</td>
</tr>
<tr>
<td>Network Coding Theory</td>
</tr>
<tr>
<td>Internet of Things</td>
</tr>
<tr>
<td>Cloud Computing and Edge Computing</td>
</tr>
<tr>
<td>Distributed Systems and Parallel Computing</td>
</tr>
<tr>
<td>System-on-Chip (SOC) Design</td>
</tr>
<tr>
<td>Cryptography, Information Security and Privacy</td>
</tr>
<tr>
<td>Research Project I</td>
</tr>
<tr>
<td>Research Project II</td>
</tr>
</tbody>
</table>

### Taught Master’s Programmes

港中文大学（深圳）通信工程理学硕士项目围绕通信工程领域开设的为期两年的全日制硕士项目，涵盖5G和后5G通信与网络、无线通信、机器学习、物联网、云计算、边缘计算、大数据系统和分析处理等多种新兴热门技术领域知识，旨在培养学于信息数据采集、传输和处理的全方位能力。

本项目顺应时代发展趋势，开设了包括通信基础理论和行业前沿科技在内的课程，同时在每个学期均设立循序渐进的研究项目，引导学生将专业知识融会应用于科学研究和实践当中，充分发挥自主能动性与创新思维，综合培养服务科技发展、工业生产与社会生活的能力。毕业生将成为兼具行业理论与实践的专业型复合人才，以开拓的国际视野和扎实的实操技能快速适应瞬息万变的行业形势与市场需求。
Executive Master of Science in Supply Chain and Logistics Management*

供应链与物流管理高级管理人员理学硕士专业*

* 理工学院与经管学院联合开办 (joint programme of SSE & SME)

香港中文大学（深圳）供应链与物流管理高级管理人员理学硕士课程（EMSc-SCLM）是围绕供应链与物流管理领域开设的为期两年的在职硕士课程，以供应链与物流管理的专业理论和实践为主，兼顾企业领袖所应具备的一般管理理论和方法论，并通过商业案例分析以及决策技能训练等，帮助学生建立全面的知识结构，培养实际运作管理理论的能力与技巧，成为供应链与物流领域的专业型人才和优秀的企业领导者。自2003年第一次招生以来，EMSc-SCLM已经走过了近20个年头，取得了广泛认可和良好声誉，先后已向社会输送了500多位毕业生，为供应链与物流领域乃至各行各业输送了大量优秀人才。

Logistics has become a fast-growth industry in China, especially in the Pearl River Delta. Given the huge demand for talents with specialized knowledge and practical experience, EMSc Programme in Supply Chain and logistics Management (EMSc-SCLM) aims to educate senior executives in the supply chain and logistics industry, helping companies design creative solutions for critical issues in their supply chain and logistics. This part-time master programme can teach them the state-of-art of techniques for cutting down logistics costs and improving supply chain efficiencies while keeping key employees on-the-job. EMSc-SCLM is a joint programme of CUHK’s School of Science and Engineering and School of Management of Economics. Experienced professors from CUHK, CUHK(SZ) and famous overseas university will serve as instructors together, EMSc-SCLM’s study time is on weekend at Shenzhen Finance Institute, with 2-year’s study period (2 terms per year) or 3 years in maximum.

申请条件

A. 大学本科毕业并获得学士学位或同等学历。
B. 相关行业管理工作经验满三年（物流/制造/零售/运输/采购/管理/咨询/销售等，不限行业）。

Application Requirements

A. Graduated from a university with a bachelor’s degree or equivalent qualifications.

B. Three years of management experience in related industries (logistics/ manufacturing/retail/transportation/ purchasing/management/consulting/sales, etc., regardless of industry).
The MPhil-PhD programme in Mathematics aims to educate and cultivate research students with a broad foundation in mathematics and specialized knowledge in selected concentrations. The research focus in Partial Differential Equations, Computational Mathematics, Financial Mathematics, Algebra, Geometry, Topology and related interdisciplinary fields. They are expected to become leading academics and researchers in universities, research institutes, and industries, making an original and substantial contribution to selected fields. An applicant with a research Master’s degree should apply for admission to the PhD Stream, while an applicant with a bachelor’s degree can apply for admission to either MPhil or PhD Stream. Students who satisfy prescribed requirements will receive degree of CUHK.
The School of Science and Engineering at CUHK(SZ) has designed the programme for students who wish to pursue a higher degree in the broad area of Computer and Information Engineering (CIE), with research focus in artificial intelligence, communications and networking, computer vision, control, data science, digital signal processing, intelligent systems and robotics, operations research, optimization, optoelectronics, photonics, physics on optics and related domains. An applicant with a research Master’s degree should apply for admission to the PhD Stream, while an applicant with a bachelor degree can apply for admission to either MPhil or PhD Stream. Applicants should have education background in science and engineering. Students who satisfy prescribed requirements will receive degree of CUHK.

**Course Setting Curriculum**

**Course Group A Lecture Courses Group A**

<table>
<thead>
<tr>
<th>matrix analysis</th>
<th>Matrix Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>随机过程</td>
<td>Stochastic Process</td>
</tr>
<tr>
<td>优化理论与算法</td>
<td>Optimization Theory and Algorithms</td>
</tr>
<tr>
<td>高级计算机体系结构</td>
<td>Advanced Computer Architecture</td>
</tr>
<tr>
<td>图像处理与计算机视觉</td>
<td>Image Processing and Computer Vision</td>
</tr>
<tr>
<td>社会计算</td>
<td>Social Computing</td>
</tr>
<tr>
<td>数据分析</td>
<td>Data Analytics</td>
</tr>
<tr>
<td>机器学习</td>
<td>Machine Learning</td>
</tr>
<tr>
<td>人工智能专题</td>
<td>Selected Topics in Artificial Intelligence</td>
</tr>
<tr>
<td>光通讯与互联</td>
<td>Optical Communication and Interconnects</td>
</tr>
<tr>
<td>信息论</td>
<td>Information Theory</td>
</tr>
<tr>
<td>计算机与网络安全</td>
<td>Computer and Network Security</td>
</tr>
<tr>
<td>移动网络</td>
<td>Mobile Networking</td>
</tr>
<tr>
<td>高级无线通信</td>
<td>Advanced Wireless Communications</td>
</tr>
<tr>
<td>信号处理高级专题</td>
<td>Advanced Topics in Signal Processing</td>
</tr>
<tr>
<td>增强学习</td>
<td>Introduction of Reinforcement Learning</td>
</tr>
<tr>
<td>CIE专题 I</td>
<td>Selected Topics in CIE I</td>
</tr>
<tr>
<td>应用数学中的多变量函数</td>
<td>Functions of Several Variables for Applied Mathematical Sciences</td>
</tr>
<tr>
<td>深度学习基础及其应用</td>
<td>Deep Learning Foundations and Their Applications</td>
</tr>
<tr>
<td>正规化方法和核方法：使用者的理论</td>
<td>Regularization/Kernel Methods: Theory for the Users</td>
</tr>
<tr>
<td>网络经济学</td>
<td>Network Economics</td>
</tr>
</tbody>
</table>

**Course Group B Lecture Courses Group B**

| 进阶凸优化 | Advanced Convex Optimization |
| 计算机辅助几何设计 | Topics in Computer-Aided Geometric Design |
| 控制系统 | Control Systems |
| 机器人与智能系统 | Robotics and Intelligent Systems |
| 能源系统高级专题 | Advanced Topics in Energy Systems |
| 检测与估计的理论及应用 | Introduction to Detection & Estimation Theory & Application |
| 纳米科技 | Nanoscience |
| CIE专题 II | Selected Topics in CIE II |
| 云计算 | Cloud Computing |
| 区块链系统 | Selected Topics in Blockchain Systems |
| 计算机与通信系统性能分析 | Performance Analysis of Computer and Communication Systems |
| 电信交换与网路系统 | Telecommunication Switching and Network Systems |
| 从理论角度理解深度学习 | Understanding Deep Learning from a Theoretical Perspective |
| 物联网移动计算 | Mobile Computing with Internet of Things |
| 文本表征学习 | Selected topics in Text Representation Learning |
| CMOS模拟集成电路设计 | CMOS Analog IC Design |
| 高斯过程在机器学习和信号处理中的应用 | Gaussian Process for Machine Learning and Signal Processing |
| 射频电路与系统 | RF Circuits and Systems |
| 多天线无线通信 | Multi-Antenna Wireless Communications |
| 自动编码及其在信号处理中的应用 | The Bootstrap and Its Applications in Signal Processing |

MPhil/Ph.D. Programmes 17
MPhil-Ph.D. Programme in Materials Science and Engineering

MPhil-PhD Programme in Materials Science and Engineering is designed for students who wish to pursue a higher degree in the broad area of Materials Science and Engineering (MSE), with a research focus on advanced structure materials, functional materials, smart materials, polymer materials, magnetic materials, Optical and optoelectronic materials and devices, many body quantum-mechanic problem, non-equilibrium thermodynamics, biomaterials, nanomaterials, composites, surface chemistry and interfacial engineering, materials modelling and simulation, materials production and processing, energy materials, materials for environmental purification, aerosol and nanoparticle engineering, green chemistry and materials life cycle. An applicant with a research Master’s degree should apply for admission to the PhD Stream, while an applicant with a bachelor degree can apply for admission to either MPhil or PhD Stream. Applicants should have education background in science and engineering. Students who satisfy prescribed requirements will receive degree of CUHK.

课程设置 Curriculum

必修课程 Lecture Required Courses

<table>
<thead>
<tr>
<th>高级材料科学与工程</th>
<th>Advanced Materials Science and Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>工程经济与管理</td>
<td>Engineering Economics and Management</td>
</tr>
</tbody>
</table>

选修课程 Lecture Elective Courses

- 普通实验
- 工程建模与模拟
- 材料专业实验
- 计算材料
- 材料科学与工程专题
- 纳米材料
- 复合材料与介面工程
- 能源材料
- 构件材料及其机械性能
- 环境材料
- 高分子材料
- 材料与器件
- 材料化学
- 功能材料及其光电磁性能
- Laboratory-General
- Modelling and Simulation in Engineering
- Lab Special in Materials
- Computational Materials
- Selected Topics in MSE
- Nanomaterials
- Composite Materials and Interfacial Engineering
- Energy Materials
- Structure Materials and Mechanical Properties
- Environmental Materials
- Polymeric Materials
- Materials and Devices
- Chemistry of Materials
- Functional Materials and Optical, Electrical and Magnetic Properties
Academic Activities
学术活动

重大论坛
Significant Forum

中国工程院院士论坛—智能与网络
Academic Forum of Chinese Academy of Engineering—Intelligence and Network

第四届全球人工智能与机器人峰会
2019 Global AI and Robotics Conference, CCF-GAIR

研究会议
Academic Seminar

2017.12
数据科学国际研讨会
International Workshop on Mathematical Issues in Information Sciences

2018.12
医学健康科技创新研讨会
Symposium on Innovations in Medical and Health Sciences

2018.12
统计学和数据科学研讨会
Workshop on Statistics and Data Science

2019.01
工业数据科学深圳研讨会
Industrial Data Science Seminar

2019.07
综合化学与材料科学论坛
Academic Forum on Frontier Chemistry and Materials

2019.10
“大湾区高分子新材料及聚合物产品工程”高端论坛
High End Forum of “Polymer New Materials and Polymer Products Engineering in Dawan District”

2020.01
国际智能网络和通信系统研讨会
International Conference on Intelligent Networks and Communication System

大师讲坛
Master Forum

图1. 菲尔兹奖得主、美国科学院院士、中国科学院外籍院士 丘成桐
Pic 1. Fields Medal Laureate, Foreign academician of Chinese Academy of Sciences, Academician of the American Academy of Sciences YAU, Shing-Tung

图2. 图灵奖获得者John E. Hopcroft
Pic 2. Turing Award Laureate John E. Hopcroft

图3. 图灵奖获得者Joseph Sifakis
Pic 3. Turing Award Laureate Joseph Sifakis

图4. 中国科学院院士, 北京大学“博雅讲席教授”席振峰
Pic 4. Academician of Chinese Academy of Sciences, Peking University Boya Chair Professor Zhenfeng XI
SSE Faculty
师资力量

* 以下数据更新于 2021 年 3 月 (Updated on March 2021)

### 丘成桐
**Fields Medal Laureate (1982), Foreign academician of Chinese Academy of Sciences, Academician of the American Academy of Sciences, APS Fellow, AAAS Fellow, SIAM Fellow**

**Research field:** Differential Equations, Mathematical Physics

### 姚期智
**Turing Award Laureate (2000), Academician of Chinese Academy of Sciences, Foreign academician of the American Academy of Sciences, AAAS Fellow, ACM Fellow**

**Research field:** Computational theory, Complexity of quantum communication

### 唐本忠
**Dean, Presidential Chair Professor**

中国科学院院士、亚太材料科学院院士、发展中国家科学院院士、国际生物材料科学与工程学会联合

**Research field:** 材料科学, 高分子化学, 生物医学诊疗等; 恒教授是聚集诱导发光原创性科学概念的提出者和该

领域研究的引领者。

### 崔曙光
**Executive Dean, Presidential Chair Professor**

IEEE Fellow

**Research field:** Data Analytics and Information System

### 甘培润
**Associate Dean (Student Affairs), Professor**

IEEE Fellow

**Research field:** Communication Theory and Systems; Statistics and Applied Mathematics

### 黄建伟
**Associate Dean (Education), Presidential Chair Professor**

IEEE Fellow

**Research field:** Crowd Intelligence, Network Optimization and Economics

### 周艳
**Assistant Dean (Research), Associate Professor**

Ph.D. (Royal Institute of Technology (KTH), Sweden)

**Research field:** Spintronics; Microwave Communication; Data Storage
Vice President, President, Presidential Chair Professor

Member of the National Academy of Engineering, USA
Ph.D. (University of Minnesota, USA)

Research field:
Aerosol and nanoparticle science and engineering, especially particle instrumentation development and filtration solutions to air pollution control

Academician of the Chinese Academy of Engineering, Academician of the International Eurasian, Member of the International Academy of Astronautics, IEEE Fellow, Academician of Hong Kong Academy of Engineering Sciences, Academician of The Hong Kong Institution of Engineers
Ph.D. (University of Pennsylvania, USA)

Research field:
Robotics; Intelligent Systems and Control; Design and Manufacturing; Service and Space Robotics; Wearable Interface; Intelligent Electric Vehicles

Fellow of Royal Society of Canada (FRSC), IEEE Fellow, Fellow of the Society for Industrial and Applied Mathematics (SIAM)
Ph.D. (Massachusetts Institute of Technology, USA)

Research field:
Optimization Methods for Big Data Analytics; Complexity and Computational Issues Arising from Signal Processing; Digital Communication

Ph.D. (New York University, USA)

Research field:
Computational and applied mathematics, analysis and simulations of multiphase problems

Ph.D. (University of London, UK)

Research field:
Syntheses of natural and non-natural molecules
梁永波
LEUNG, Wing Por Kevin

教授
Professor

英国皇家化学学会院士

RSC Fellow

Ph.D. (The University of Western Australia)

Research field: Synthetic, Structural and Mechanistic Studies of Organometallic Compounds; Reactivity Studies; Catalytic Studies

潘兴斌
PAN, Xingbin

教授
Professor

山东大学博士

Ph.D. (Shandong University)

Research field: Partial differential equations, calculus of variations, mathematical theory of superconductivity, liquid crystals and electromagnetism

唐叔贤
TONG, Shuk Yin David

研究生院院长、教授
Dean of Graduate School, Professor

中国科学院院士、美国物理学会会士、世界科学院院士

Academician of Chinese Academy of Sciences, APS Fellow, Academician of TWAS

Research field: Surface Science and Technology

王学锋
WANG, Xuefeng

研究生院副院长、教授
Associate Dean of Graduate School, Professor

美国明尼苏达大学博士

Ph.D. (University of Minnesota, USA)

Research field: Partial Differential Equations and Applications

侯勇
HOU, Yong

副教授
Associate Professor

美国伊利诺伊大学博士

Ph.D. (University of Illinois, USA)

Research field: Geometric topology, Geometric Group Theory

黄川
HUANG, Chuan

副教授
Associate Professor

美国德州A&M大学博士

Ph.D. (Texas A&M University, USA)

Research field: Wireless communications and signal processing, including data/AI driven wireless networks and spectrum sensing/management

黄锐
HUANG, Rui

副教授
Associate Professor

美国罗格斯大学博士

Ph.D. (Rutgers University, USA)

Research field: Computer Vision; Image Processing; Pattern Recognition; Machine Learning

潘文安
PUN, Man On Simon

副教授
Associate Professor

美国南加州大学博士

Ph.D. (University of Southern California, USA)

Research field: AI Internet of Things; Machine Learning; Satellite Remote Sensing

彭小水
PENG, Xiao-Shui

副教授
Associate Professor

香港中文大学博士

Ph.D. (The Chinese University of Hong Kong)

Research field: Novel "bio-inspired" strategies and methodologies for the total synthesis of structurally complex and biologically significant natural products; Natural product enabled discovery and application

沈颖祺
SHUM Wing Ki, Kennet

副教授
Associate Professor

美国南加州大学博士

Ph.D. (University of Southern California, USA)

Research field: Information and Coding Theory
Associate Professor

Research field: Polymer chemistry and materials, organic optoelectronics, nanomedicine, biomedical engineering

Ph.D. (University of Science and Technology of China)

Wireless Communications, wireless power transfer, UAV communications, and mobile edge computing and machine learning

Associate Professor

Research field: Signal Processing; Wireless Communication; Optimization Methods; Smart Grid; Data Analysis

Ph.D. (National Tsing Hua University)

Signal processing, optimization and game theory, communication theory, information theory, control, and machine learning

Associate Professor

Research field: Nanophotonics; Organic Light Emitting Devices; Perovskite Optoelectronics; Thin Film Solar Cells

Ph.D. (Caltech, USA)

Semiconductor Lasers; Nanophotonics; Organic Light Emitting Devices; Perovskite Optoelectronics; Thin Film Solar Cells

Associate Professor

Research field: Power System Analysis and Computation; Smart Grid; Data Mining; Artificial Intelligence; Electricity Market

Ph.D. (The University of Queensland, Australia)

Cloud Systems, Human-Computer Interaction, Blockchain, Edge Systems, Crowd Intelligence, Game Systems

Assistant Professor


Ph.D. (The University of Hong Kong)

Computer Vision, Computer Graphics, Human-Computer Interaction, Medical image analysis, Machine Learning

Assistant Professor

Research field: Nanophotonics; Organic Light Emitting Devices; Perovskite Optoelectronics; Thin Film Solar Cells

Ph.D. (Caltech, USA)

Semiconductor Lasers; Nanophotonics; Organic Light Emitting Devices; Perovskite Optoelectronics; Thin Film Solar Cells

Assistant Professor

Research field: Cloud Systems, Human-Computer Interaction, Blockchain, Edge Systems, Crowd Intelligence, Game Systems

Ph.D. (The University of British Columbia, Canada)

Cloud Systems, Human-Computer Interaction, Blockchain, Edge Systems, Crowd Intelligence, Game Systems

Assistant Professor

Research field: Signal processing, optimization and game theory, communication theory, information theory, control, and machine learning

Ph.D. (University of Alberta, Canada)

Intelligent soft robots, Bioinspired robots, Smart materials and structures

Associate Professor

Research field: Signal Processing; Wireless Communication; Optimization Methods; Smart Grid; Data Analysis

Ph.D. (National Tsing Hua University)

Signal processing, optimization and game theory, communication theory, information theory, control, and machine learning

Associate Professor

Research field: Polymer chemistry and materials, organic optoelectronics, nanomedicine, biomedical engineering

Ph.D. (University of Science and Technology of China)

Wireless Communications, wireless power transfer, UAV communications, and mobile edge computing and machine learning

Associate Professor

Research field: Signal Processing; Wireless Communication; Optimization Methods; Smart Grid; Data Analysis

Ph.D. (National Tsing Hua University)

Signal processing, optimization and game theory, communication theory, information theory, control, and machine learning

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Research field: Polymer chemistry and materials, organic optoelectronics, nanomedicine, biomedical engineering

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Ph.D. (University of Science and Technology of China)

Wireless Communications, wireless power transfer, UAV communications, and mobile edge computing and machine learning

Assistant Professor

Research field: Signal processing, optimization and game theory, communication theory, information theory, control, and machine learning

Ph.D. (University of Alberta, Canada)
**Ph.D. (City University of Hong Kong)**

**Research field:** Numerical Methods for Partial Differential Equations, Mathematical Modelling and Scientific Computing, Computational Fluid Dynamics, Applied Asymptotic Analysis

---

**Ph.D. (York University, Canada)**

**Research field:** Numerical Methods for Partial Differential Equations, Mathematical Modelling and Scientific Computing, Computational Fluid Dynamics, Applied Asymptotic Analysis

---

**Ph.D. (Cornell University, USA)**

**Research field:** Representation Theory of Lie Groups

---

**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Synthetic Organic Chemistry; Methodologies; Organocatalysis; Green Chemistry

---

**Ph.D. (University of Hong Kong)**

**Research field:** Deep Learning, Computational Biological and Computer Vision

---

**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Robotics, Intelligent Systems

---

**Ph.D. (University of Toronto, Canada)**

**Research field:** Optimization, multi-user information theory, wireless communications, data science, machine learning

---

**Assistant Professor**

**Ph.D. (York University, Canada)**

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Assistant Professor**

**Ph.D. (University of Toronto, Canada)**

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Assistant Professor**

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**Ph.D. (The Chinese University of Hong Kong)**

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**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Robotics, Intelligent Systems

---

**Assistant Professor**

**Ph.D. (University of Toronto, Canada)**

**Research field:** Optimization, multi-user information theory, wireless communications, data science, machine learning

---

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Representation Theory of Lie Groups

---

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Numerical Methods for Partial Differential Equations, Mathematical Modelling and Scientific Computing, Computational Fluid Dynamics, Applied Asymptotic Analysis

---

**Assistant Professor**

**Ph.D. (The Chinese University of Hong Kong)**

**Research field:** Deep Learning, Computational Biological and Computer Vision
孙正隆
SUN, Zhenglong

助理教授
Assistant Professor
新加坡南洋理工大学博士
研究领域：医疗设备研发；系统建模；力传感与控制；
人机交互
Ph.D. (Nanyang Technological University, Singapore)
Research field: Medical Devices Development; System Modelling; Force Sensing and Control; Human-machine Interaction

唐晓莹
TANG, Xiaoying

助理教授
Assistant Professor
香港中文大学博士
研究领域：算法设计，智能网络、人工智能，机器学习
Ph.D. (The Chinese University of Hong Kong)
Research field: Online scheduling and distributed algorithm design and optimizations for smart grid, edge computing and other cyber-physical systems; Fundamental research in machine learning algorithm and artificial intelligence

王东
WANG, Dong

助理教授
Assistant Professor
香港科技大学博士
研究领域：计算流体力学，计算材料科学，图像处理，优化，机器学习
PhD (Hong Kong University of Science and Technology)
Research field: Computational fluid dynamics, computational material science, image processing, optimization, machine learning

王瑾
WANG, Lu

助理教授
Assistant Professor
新加坡南洋理工大学博士
研究领域：光热催化与电催化
Ph.D. (Nanyang Technological University, Singapore)
Research field: Photothermal catalysis and electrocatalysis

王方鑫
WANG, Fangxin

助理教授
Assistant Professor
加拿大西蒙弗雷大学博士
研究领域：计算机网络，多媒体系统及应用，云计算与边缘计算，机器学习，物联网
Ph.D. (Simon Fraser University, Canada)
Research field: Computer Networking; Multimedia Systems and Applications; Cloud and Edge Computing, Machine Learning, and Internet-of-Things

吴辰晖
WU, Chenye

助理教授
Assistant Professor
清华大学博士
研究领域：智能能源系统
Ph.D. (Tsinghua University)
Research field: Smart Energy Systems

吴亮
WU, Liang

助理教授
Assistant Professor
香港中文大学博士
研究领域：信息论;编码理论;网络编码;网络计算
Ph.D. (The Chinese University of Hong Kong)
Research field: Information Theory; Coding Theory; Network Coding; Network Computation

杨升浩
YANG, Shenghao

助理教授
Assistant Professor
德国达姆施塔特工业大学博士
研究领域：统计信号处理（统计估计理论）；机器学习（机器高斯过程）；传感器数据融合（分布式信息传递）；室内定位与追踪的应用；无线电频带网络应用
Ph.D. (Technical University of Darmstadt, Germany)
Research field: Statistical Signal Processing with Emphasis on Estimation Theory; Machine Learning with Emphasis on Gaussian Processes; Sensory Data Fusion; Applications to Cooperative and/or Distributed Target Localization and Tracking in Wireless Networks

尹峰
YIN, Feng

助理教授
Assistant Professor
香港中文大学博士
研究领域：凝聚态理论和统计物理，平衡态和非平衡态量子多体问题
Ph.D. (The Chinese University of Hong Kong)
Research field: Theoretical condensed matter physics and statistical mechanics, Many-body physics in and out of equilibrium, Thermodynamics of small-scale system

SEF Faculty 25
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Education</th>
<th>Research Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>YU, Jiangfan</td>
<td>Assistant Professor</td>
<td>Ph.D. (The Chinese University of Hong Kong)</td>
<td>Financial Engineering, Monte Carlo Simulation, Applied Probability, Credit Risk, Machine Learning</td>
</tr>
<tr>
<td>ZHANG, Qi</td>
<td>Assistant Professor</td>
<td>Ph.D. (Zhejiang University)</td>
<td>Smart polymers, polymerization reaction engineering, colloid and interfaces</td>
</tr>
<tr>
<td>ZHENG, Qingbin</td>
<td>Assistant Professor</td>
<td>Ph.D. (Hong Kong University of Science and Technology)</td>
<td>Nanocarbon materials, Transparent conductors, Multifunctional sensors, Surfaces and interfaces of materials, Nanocomposites reinforced with nanofillers, Molecular simulations</td>
</tr>
<tr>
<td>CHEN, Yi</td>
<td>Research Assistant Professor</td>
<td>Ph.D. (The Chinese University of Hong Kong)</td>
<td>Wireless Communications; Resource Allocation and Optimization; Big Data Systems</td>
</tr>
<tr>
<td>ZHU, He</td>
<td>Research Assistant Professor</td>
<td>Ph.D. (McMaster University, Canada)</td>
<td>Metal-organic frameworks, polymers, porous materials</td>
</tr>
<tr>
<td>ABEYNAIKE, Arjan</td>
<td>Senior Lecturer</td>
<td>Ph.D. (University of Cambridge, UK)</td>
<td>Biofuel Production</td>
</tr>
<tr>
<td>ZHU, He</td>
<td>Research Assistant Professor</td>
<td>Ph.D. (McMaster University, Canada)</td>
<td>Metal-organic frameworks, polymers, porous materials</td>
</tr>
</tbody>
</table>
黄俊波
HUANG, Junbo Mario

加拿大滑铁卢大学博士
研究领域：代数组合学；图论
Ph.D. (University of Waterloo, Canada)
Research field: Algebraic Combinatorics; Graph Theory

纪冬旭
JI, Dongxu

新加坡南洋理工大学博士
研究领域：新能源科学与工程，能源管理，能源经济学，热分析与热设计，机器学习，热电发电机
Ph.D. (Nanyang Technological University, Singapore)
Research field: new energy science and engineering, energy management, energy economics, thermal analysis and design, machine learning and thermoelectric generator

凌晗
LING, Han

新加坡南洋理工大学博士
研究领域：电致变色的材料与器件，及其在智能窗、柔性显示器等方面的应用
Ph.D. (Nanyang Technological University, Singapore)
Research field: electrochromic materials and devices for thermal management of buildings

饶广
RAO, Guang

西澳大利亚大学博士
研究领域：代数图论；置换群
Ph.D. (The University of Western Australia)
Research field: Algebraic Graph Theory, Permutation Groups
Scientific Honors (selected)

- 唐荣杰教授团队获得2020 IEEE Transactions on Network Science and Engineering - TNSE 杂志的编辑工作。
  Prof. Xiaoguang HAN won the 2020 Chinagraph Award for Graphical Open Source Datasets for “Deep Fashion3D”.
- 林天鹏教授团队的三篇研究论文被IEEE智能机器人与系统国际会议(IROS 2020)接收，其中一篇论文更是获得了机器人机构设计最佳论文奖。论文由Prof. Tin Lun LAM’s team won IROS Best Paper Award on Robot Mechanisms and Design; three papers by his team were also accepted by the conference.
- 赵俊华教授团队完成的“能源期现现货与人民币跨境业务协同发展研究”科研成果荣获深圳经济特区金融学会重点课题评选二等奖。
  Prof. Junhua ZHAO won the Second Prize in the key Projects of The Financial Society of Shenzhen Special Economic Zone for “Research on the Synergetic Development of the energy spot market, energy futures and cross-border RMB transactions”.

- Shenzhen Institute of Artificial Intelligence and Robotics for Society (Prof. Yangsheng XU)
- Shenzhen Research Institute of Big Data (Prof. Zhi-Quan LUO)
- Future Network of Intelligence Institute (Prof. Shuguang CUI)
- Institute of Robotics and Intelligent Manufacturing, the Chinese University of Hong Kong, Shenzhen (Prof. Yangsheng XU)
- Shenzhen Key Laboratory of Advanced Materials Product Engineering (Prof. Shiping ZHU)
- Shenzhen Key Lab of IoT Intelligent System and Wireless Network Technology (Prof. Xiaoqiang CAI)
- Shenzhen Key Laboratory of Big Data and Artificial Intelligence (Prof. Shuguang CUI)
- Shenzhen Key Laboratory of Semiconductor Laser (Prof. Zhaoyu ZHANG)
### 科研力量

#### 重点研究项目/团队
**Key Research Program/Team**
- **珠江团队**
  - 先进材料产品工程团队 (朱世平教授)
  - 数据驱动的未来智能网络演进团队 (崔曙光教授)
  - 高效光催化材料基础研究创新团队 (邹志刚教授)

- **Pearl River Plan Team**
  - Advanced Materials Product Engineering Team (Prof. Shiping ZHU)
  - Data Driven Future Intelligent Network Evolution Team (Prof. Shuguang CUI)
  - Foundational Research on Hydrogen Energy Application Based on High-Efficiency Photocatalysis Team (Prof. Zhigang ZOU)

- **孔雀团队**
  - 大数据信息处理及应用创新团队 (罗智泉教授)
  - 环境净化先进材料的开发与应用 (朱世平教授)
  - 磁电阻随机存取存储器及应用 (周艳教授)

- **Peacock Plan Team**
  - Big Data Information Processing and Application Innovation Team (Prof. Zhi-Quan LUO)
  - Development and Application of Advanced Materials for Environmental Purification (Prof. Shiping ZHU)
  - Magnetoresistance Random Access Memory and Application (Prof. Yan ZHOU)

#### 国家重点研发计划
**National Key Research Project**
- 基于数据驱动和人工智能的未来新型网络演进 (崔曙光教授)

- **Guangdong Key Research Project**
  - Brain-Like Device and System (Prof. Shuguang CUI)
In May of 2020, the second batch of SSE graduates completed study, for a total of 320 students. Under the pandemic outbreak and complex international situation, the overall employment rate is 95%.

73.44% students pursue postgraduate studies
20.94% students enter the job market
0.63% students choose to start their own business
部分就业单位（含2019届、2020届毕业生）
Partial Notable Companies and Organizations (Class of 2019, 2020 are both included)

毕业生代表及就业单位（含2019届、2020届毕业生）
Notable Companies that SSE Graduates Working (Class of 2019, 2020 are both included)

- CHEN Sibo and YE Xiaoxing work for Microsoft.
- SHA Yuancai works for Huawei.
- DU Jingxin works for Baidu.
- LI Zhijie works for Deloitte.
- LI Xing works for Procter & Gamble.
- XIE Yewang works for SenseTime.
- HUANG Zhiwei works for Alibaba.
- LAN Yifan works for ByteDance.
- SHI Tianyu works for PwC.
- CHEN Sibo and YE Xiaoxing work for Microsoft.
- SHA Yuancai works for Huawei.
- DU Jingxin works for Baidu.
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- XIE Yewang works for SenseTime.
- HUANG Zhiwei works for Alibaba.
- LAN Yifan works for ByteDance.
- SHI Tianyu works for PwC.
Among the first graduate cohort, 82.69% students decided to pursue postgraduate studies in the well-known universities around the world, and they received more than 440 offers from top universities including Massachusetts Institute of Technology, Columbia University, Cornell University, Yale University, University of Chicago, Carnegie Mellon University, University of California, Berkeley, Imperial College London, The University of Sydney, The University of Hong Kong, National University of Singapore, etc. 13.02% of them have received Ph.D. offers. This is to say, one student, out of eight who pursued postgraduate studies, has successfully enrolled in Ph.D. Programme.

Among the second batch of graduates, 73.44% students chose to pursue further studies, and they received more than 605 university offers. 11.06% of them have received Ph.D. offers from top universities, including Stanford University, Columbia University, University of California, Berkeley, Cornell University, Carnegie Mellon University, Georgia Institute of Technology, The Chinese University of Hong Kong. According to rough statistics, 13.19% students pursuing postgraduate studies have received more than 5 university offers.

### Partial Notable Universities - Master Programme (Class of 2019, 2020 are both included)

<table>
<thead>
<tr>
<th>University Name</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia University</td>
<td>22</td>
</tr>
<tr>
<td>University of Michigan-Ann Arbor</td>
<td>16</td>
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<tr>
<td>Carnegie Mellon University</td>
<td>15</td>
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<tr>
<td>University of Minnesota, Twin Cities</td>
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<tr>
<td>University of Southern California</td>
<td>14</td>
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<tr>
<td>National University of Singapore</td>
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</tr>
<tr>
<td>The Chinese University of Hong Kong</td>
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<tr>
<td>Cornell University</td>
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<tr>
<td>New York University</td>
<td>10</td>
</tr>
<tr>
<td>University of Illinois at Urbana-Champaign</td>
<td>9</td>
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<tr>
<td>Nanyang Technological University</td>
<td>8</td>
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<tr>
<td>Georgia Institute of Technology</td>
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<tr>
<td>University of Pennsylvania</td>
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<tr>
<td>The University of Melbourne</td>
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<tr>
<td>The London School of Economics and Political Science</td>
<td>5</td>
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<tr>
<td>Catholic University of Leuven</td>
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</tr>
<tr>
<td>The Hong Kong University of Science and Technology</td>
<td>4</td>
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<tr>
<td>The Hong Kong University</td>
<td>4</td>
</tr>
<tr>
<td>Swiss Federal Institute of Technology in Zurich</td>
<td>4</td>
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<tr>
<td>University of Pennsylvania</td>
<td>3</td>
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<tr>
<td>University of Chicago</td>
<td>3</td>
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<tr>
<td>University of Oxford</td>
<td>2</td>
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</tbody>
</table>
### Notable Programmes that SSE Graduates Attending (Class of 2019, 2020 are both included)

<table>
<thead>
<tr>
<th>University</th>
<th>Number of Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Chinese University of Hong Kong, Shenzhen</td>
<td>24</td>
</tr>
<tr>
<td>The Chinese University of Hong Kong</td>
<td>5</td>
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<tr>
<td>Carnegie Mellon University</td>
<td>3</td>
</tr>
<tr>
<td>University of Wisconsin-Madison</td>
<td>2</td>
</tr>
<tr>
<td>University of Minnesota, Twin Cities</td>
<td>2</td>
</tr>
<tr>
<td>Stanford University</td>
<td>1</td>
</tr>
<tr>
<td>Massachusetts Institute of Technology</td>
<td>1</td>
</tr>
<tr>
<td>Georgia Institute of Technology</td>
<td>1</td>
</tr>
<tr>
<td>University of California, Berkeley</td>
<td>1</td>
</tr>
<tr>
<td>Columbia University</td>
<td>1</td>
</tr>
<tr>
<td>University of Michigan-Ann Arbor</td>
<td>1</td>
</tr>
<tr>
<td>Queen Mary University of London</td>
<td>1</td>
</tr>
</tbody>
</table>

### SSE Career

- LIN Zhen enrolled in the Ph.D. programme of Operations Research in Massachusetts Institute of Technology with full scholarship.
- LIU Zhuoyang enrolled in the Ph.D. programme of Operational Research in Stanford University with full scholarship.
- JIANG Shunan enrolled in the Ph.D. programme of Industrial Engineering & Operations Research in University of California, Berkeley with full scholarship.
- WANG Jie enrolled in the Ph.D. programme of Industrial Engineering in Georgia Institute of Technology with full scholarship.
- XU Linning enrolled in the Ph.D. programme of Information Engineering in The Chinese University of Hong Kong with full scholarship.
- LI Mincheng enrolled in the Master’s programme of Financial Economics in Oxford University.
- LI Jie enrolled in the Master’s programme of Statistics in The University of Hong Kong.
- TU Yilei received an offer from Master in Data Science in Swiss Federal Institute of Technology in Zurich (ETH Zurich).
Students’ Achievement

学生成就

香港中文大学(深圳)2018霍特杯创新挑战大赛
CUHK-Shenzhen Hult Prize Campus Final Competition 2018:
- 大一学生李一与其队员组成的Sleener队夺冠，并将代表我校晋级霍特奖区域赛；
- 大二学生李钟赫(Jong Hyuk Lee)与其队员获得亚军及“最受大众评审欢迎奖”；
- 大二学生Maghan Kapessov、大三学生Kevin Lawu与其队员组成的国际团队获得季军。

Three SSE teams won the Champion, Second Prize and Third Prize respectively in the competition, among which the third prize team were international students.

天池IEEE ICDM 2018全球气象AI挑战赛：冠军
SSE undergraduate team won the champion in Tianchi IEEE ICDM 2018 Global AI Challenge on Meteorology.

Smart City Datathon 比赛：冠军
Smart City Datathon: Champion

Hackathon#Smart City比赛：季军
Hackathon#Smart City: Third Prize

2019年AI-Trans全球智能网络传输竞赛“最佳非机器学习奖”3人，“最佳演示答辩奖”3人
Two student teams from SSE were bestowed the Best Non-Machine Learning Award and the Best Demonstration Award respectively in the final of the Global AI Transmission Competition (AI-Trans).

2019图像处理前沿比赛(AIM 2019)中，本院研究生团队获比赛冠军
SSE postgraduate team won the champion in AIM 2019

2020年第六届全国大学生能源经济学术创新大赛：16级宋怡同学获三等奖
Yi SONG won the third prize in The Sixth China National College Students Competition on Energy Economics, CNCEE

全国大学生集成电路创新创业大赛全国总决赛：三等奖5人
Both of student teams of SSE won the third prize in RISC-V

理工学院历来鼓励并支持本科生参加国内外各种竞赛，包括美国大学生数学建模竞赛，全国大学生数学竞赛、全国大学生数学建模竞赛等，每年，理工学生都斩获颇丰：

SSE has always encouraged undergraduates to participate in domestic and international competition by organizing them to sign up, including ACM/MCM and etc.

2020年美国大学生数学建模竞赛中，共74名理工学生分别获Meritorious Winner奖(6人)、Honorable Mention奖(18人)、Successful Participant奖(50人)。
In 2020 American College Students Mathematical Modeling Competition, 74 SSE students won Meritorious Winner (6), Honorable Mention (18), and Successful Participant (50).

2020年全国大学生数学建模竞赛广东赛区中，本科组一等奖3人，本科组二等奖27人，本科组三等奖21人。
In 2020 Contemporary Undergraduate Mathematical Contest in Modelling, 3 students won the first prize, 27 second and 21 third respectively in Guangdong Division.

2020年第十二届全国大学生数学竞赛广东赛区暨第十届广东省大学生数学竞赛，共5名理工学子获奖，其中一等奖1人，二等奖3人，三等奖1人。
In 2020 National College Students Mathematical Competition. A total of 5 students from SSE have won awards, including 1 first prize, 3 second prizes, and 1 third prize.
理工学院学生在本科阶段就有机会参与科研。SSE undergraduates have opportunities to conduct scientific research.

截至2021年3月 Until March 2021

理工学院本科学生发表论文共在各类国际会议和学术期刊上发表论文50余篇
SSE undergraduates has published more than 50 papers on various international conferences and journals.

50+

博士研究生已在学术期刊、杂志上发表文章共计75篇
SSE Ph.D. has published 75 papers on academic journals.

75

15级
15Cohort

- 闫子正同学为第一作者的论文被2019 IEEE生物医学成像国际会议收录
Zizheng YAN’s paper, as first author, was accepted by IEEE INFOCOM 2019-IECCO

16级
16Cohort

- 李津津同学的多篇论文分别被CVPR 2020 & 2019所收录；
Jinjin GU’s several papers were accepted by CVPR 2020 & 2019.
- 徐霖同学参与的论文被CVPR 2020所收录；
Linning XU’s paper was accepted by CVPR 2020.
- 陈思亮同学的论文被IEEE 2020 ICC所收录；
Siliang ZENG’s paper was accepted by IEEE 2020 ICC.
- 王捷同学与杨升浩教授的学术论文被2019年信息论国际研讨会(ISIT 2019)接收，并获邀在该会议上进行演讲；
Siliang ZENG’s paper was accepted by IEEE 2020 ICC.
- 闵天明同学2篇一作论文分别被IEEE CoG 2019和IEEE GEM 2019录用；
Tian MIN’s two papers, as first author, were accepted by IEEE CoG 2019 and IEEE GEM 2019 respectively.
- 梁杰贤同学的一作论文在国际学术期刊 JPCL上发表, 并获邀进行在线演讲。
Jiechun LIANG’s paper, as first author, was published on international journal JPCL and he was invited to conduct online speech.

17级
17Cohort

- 17级张博韬同学的论文被无线通信信号处理进展国际研讨会 (IEEE SPAWC 2020) 接收；
Botao ZHANG’s paper was accepted by IEEE SPAWC 2020.
- 李雪纯同学的论文被ICNS 2020所收录；
Xuechun LI’s paper was accepted by ICNS 2020
- 王少宇同学的论文被ICNS 2020所收录；
Shaoyu WANG’s paper was accepted by ICNS 2020.
- 王思凡同学的论文被《纳米光子学》杂志所接受。
Yifan WANG’s paper was published on Nanophotonics.
- 肖博英同学的论文被计算机网络顶级会议IEEE INFOCOM 2019附属研讨会录用；
Bowan XIAO’s paper was accepted by IEEE INFOCOM 2019.
- 王腾飞同学的论文被2019年度电子游戏基础会议 (FDG 2019) 展示环节录用；
Tengfei WANG’s paper was accepted by FDG 2019.
- 高伟东同学以理工学院为发表单位参与完成的论文被ICCSIP2020接收。
Weidong GAO’s paper, SSE as publishing unite, was accepted by ICCSIP 2020.

18级
18Cohort

- 郑文军同学的论文被2020 物联网，嵌入式系统和通信国际会议接收
Wenjun ZHENG’s paper was accepted by IINTEC 2020.

- 15级吕培维同学与张自然同学成功获得《一种无人帆船动力及转向装置》的专利，其指导老师为徐扬生教授。
Yiwei LU and Ziran ZHANG acquired a patent supervised by Prof. Huihuan QIAN and Prof. Yangsheng XU.
- 15级张浩同学与16级何瀚泽同学成功获得《门禁管理方法、门禁解锁方法及门禁管理解密系统》的专利,其指导老师为黄锐教授。
Xiang ZHANG and Haoze HE acquired a patent supervised by Prof. Rui HUANG.
- 16级曾思亮同学与许行飞同学成功获得《基于多智能强化学习路径策略控制路径动作的方法》的专利，其指导老师为陈海教授。
Siliang ZENG and Xingfei XU acquired a patent supervised by Prof. Yi CHEN.
## International Programmes

School of Science and Engineering has established partnerships with more than 70 universities around the world (among all international programmes that SSE students could attend). The programmes include combined Bachelor-Master degree programmes, exchange programmes, visiting programmes, international summer programmes, etc.

### SSE Joint BS-MS Degree Programme

<table>
<thead>
<tr>
<th>项目类型</th>
<th>合作院校</th>
<th>项目专业</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+1+1</td>
<td>明尼苏达大学（美国）</td>
<td>电子工程  &lt;br&gt; 机械工程</td>
</tr>
<tr>
<td></td>
<td>加州大学伯克利分校（美国）</td>
<td>核能工程  &lt;br&gt; 材料科学与工程</td>
</tr>
<tr>
<td></td>
<td>加州大学尔湾分校（美国）</td>
<td>电子工程</td>
</tr>
<tr>
<td></td>
<td>新加坡国立大学</td>
<td>工学学部</td>
</tr>
<tr>
<td>3.5+1.5</td>
<td>密歇根大学（美国）</td>
<td>生物信息学</td>
</tr>
<tr>
<td>3+0.5+0.5+X</td>
<td>多伦多大学（加拿大）</td>
<td>电气与计算机工程系</td>
</tr>
<tr>
<td>4+1</td>
<td>哥伦比亚大学（美国）</td>
<td>公共管理与环境科学政策硕士 &lt;br&gt; 专业研究学院</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programme Types</th>
<th>Host Institutions</th>
<th>Programme Agreed</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+1+1</td>
<td>University of Minnesota</td>
<td>Electrical Engineering  &lt;br&gt; Mechanical Engineering</td>
</tr>
<tr>
<td></td>
<td>University of California, Berkeley</td>
<td>Nuclear Engineering  &lt;br&gt; Materials science and engineering</td>
</tr>
<tr>
<td></td>
<td>University of California, Irvine</td>
<td>EECS Electrical Engineering Stream</td>
</tr>
<tr>
<td></td>
<td>National University of Singapore</td>
<td>Faculty of Engineering</td>
</tr>
<tr>
<td>3.5+1.5</td>
<td>University of Michigan</td>
<td>Bioinformatics</td>
</tr>
<tr>
<td>3+0.5+0.5+X</td>
<td>University of Toronto</td>
<td>Department of Electrical and Computer Engineering</td>
</tr>
<tr>
<td>4+1</td>
<td>Columbia University</td>
<td>Master of Public Administration in Environmental Science and Policy  &lt;br&gt; School of Professional Studies</td>
</tr>
</tbody>
</table>
Students from SSE and Stanford working together to complete project together.

Maker Lab of SSE is aimed to build a “zero threshold” innovative platform for the students and to integrate their wisdoms, skills and craftsmanship. Based on Maker Lab, SSE has organized a series of workshops, and held the very first “3D Printing Competition” themed on “My Life in CUHK-Shenzhen”.

There are in total three partnership programs between Tsinghua University Yao Class and CUHK-Shenzhen SSE.

The third partnership program between CUHK-Shenzhen SSE and Tsinghua Yao Class, also as the 2019 social practice in Yangtze River Delta.
SSE Undergraduate Office

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