

# Research & Knowledge Exchange

University of Nottingham Ningbo China

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# A global university with local impact







UK 1881

China 2004

Malaysia 2000

- > UNNC is a key member of the University of Nottingham global educational system across the UK, China and Malaysia.
- ➤ We have 150 University partners worldwide.
- > We recruit world-renowned academics to contribute to local research development in key strategic areas.

### **University of Nottingham Ningbo China**

### The 1<sup>st</sup>

Sino-foreign university in China

**6 subjects**ranked in the 2023 Shanghai Ranking's
Global Ranking of Academic Subjects

### **Highest**

of research quality in the 2019 ARWU China's Best Universities Ranking

### 21

academics selected into "World Top 2% Scientists" in the single-year database and 8 in the career-long database of 2022

### 1.52

for impact factor of scientific research output in the past 5 years, higher than 1.41 of C9 alliance

### 65%

of international and HMT staff

### **University of Nottingham**

### 140+

years of history

### **Russel Group**

of universities, the founding member

### **Universitas 21**

the founding member

### **—**th

in research in the UK ranked by REF

### **Nobel Laureates**

in Economics, Physiology or Medicine

### **TOP 100**

in QS World University Rankings 2024



## **Faculty of Science and Engineering**

Providing a world-class, research-led science, technology, engineering and mathematics education.

# Nottingham University Business School China

Cultivating future business elites with international vision, innovative spirit and leadership to inject a steady stream of vitality into the social and economic development of the world.



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## **Faculty of Humanities and Social Science**

Creating future global learners in FHSS, where a truly global experience is offered, a global mindset is cultivated, and global challenges are addressed.



# Our vision



A university without borders, where we embrace the opportunities presented by a changing world, and where ambitious people and a creative culture will enable us to change the world for the better.



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# Key research area

### **Electrical Engineering**

### Discipline overview:

EEE was awarded the first batch of first-class undergraduate majors in Zhejiang Province in 2019, and has passed IET accreditation, carrying out UG and PhD talent cultivation in the direction of electric motors and electrical appliances, power electronics, intelligent electronics and medical electronics, with distinctive international characteristics.

### Research strength:

- Electric drive
- Medical electronics

### Research platform:

- Key Laboratory of Multi-Electric Aircraft Technology of Zhejiang Province
- Zhejiang Engineering Research Centre for Aviation Electrification Technology

### Impact case:

### State-level innovative MRI devices:

The 1.5T cryogen-free clinical Magnetic Resonance Imaging (MRI) scanner co-developed by the University of Nottingham Ningbo China (UNNC) was awarded the national Innovative Medical Device registration certificate from National Medical Product Administration and was granted for listing on market. This innovative MRI scanner is bearing fruit from the research project funded by the Ministry of Science and Technology of the People's Republic of China. This is a world first and the first national Class III innovative medical device was approved in the history of Ningbo City.

### **Chemical Engineering & Technology**

### Discipline overview:

Based on the four main research directions of chemical engineering, environmental engineering, industrial catalysis and green chemical engineering, this discipline develops a multi-track parallel talent training model and provides technical support for green chemical engineering, pollution and carbon reduction and circular economy.

### Research strength:

- Green chemical industry
- Pollution and carbon reduction
- Circular economy

### Research platform:

- Zhejiang Canada Joint Laboratory on Green Chemicals and Energy
- Zhejiang Provincial Key Laboratory of Organic Waste Conversion and Process Enhancement Technology

### Impact case:

### Help the local industry to build a new green and lowcarbon business model:

Through cooperation with Honorwood, based on the basic research of mineral processing technology and resource recovery application, optimisation of raw material selection technology and automatic supervision of production process, help the local wood plastic industry to enter into sustainable and rapid development.

# Key research area

### **Mechanical Engineering**

### Discipline overview:

This discipline not only has international leading advantages, but is also closely integrated with Ningbo's industrial structure. It has accumulated many years of technology in precision/ultra-precision processing, non-traditional processing (ultrafast laser, water jet, electron beam processing) and additive manufacturing, and has achieved fruitful teaching and research results.

### Research strength:

- Precision Optical Manufacturing
- High-end equipment manufacturing

### Research platform:

- Ningbo Key Lab on Product Green Manufacturing Evaluation and Reconfigurable Manufacturing Technologies
- ACC TECH UNNC Joint Lab in Sustainable Composites Materials

### Impact case:

# Innovation of green composite materials for the clean sky:

Jointly with Airbus and AVIC Composite Materials, we focus on the technological development needs of aviation composite materials, researching advanced technologies of composite materials, carrying out R&D and application of green composite materials technology, recycling and reuse of carbon fibre composite materials and other technological research to provide low-cost and environmentally friendly solutions for the aerospace sector.

### **Computer Science & Technologies**

### Discipline overview:

The discipline has been accredited by BCS and has been selected as a key construction discipline and an advantageous major in Ningbo. Its exploration in the frontier field of computing has gradually developed into a high-end digital talent training base in Ningbo, with fruitful teaching and research results.

### Research strength:

- Computer science and operations
- Artificial intelligence and machine learning
- Computer vision

### Research platform:

• Ningbo Key Lab on Digital Port Technologies

### Impact case:

# Save costs for the world's largest port by cargo throughput:

In the field of intelligent decision making and optimisation, the development and optimisation of the vehicle optimisation deployment system in the port has been completed. It has been operating for more than one year at the second container terminal of Ningbo Zhoushan Port. The stand alone efficiency of the shore bridge increased by 2.2% on average, the efficiency of the collection card operation increased by 14%, and the reload rate increased by 10%. According to conservative estimates, the annual cost savings could be as high as 10 million yuan.



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# Key research area

### **Applied Economics**

### Discipline overview:

The discipline combines Western economics with digitalisation, focusing on the application of economics to smart health, the digitalisation of labour markets, tourism and the industrialisation of cultural heritage, embedding non-technical requirements in the design of products and services, and addressing the barriers to application posed by socio-economic issues.

### Research strength:

- Smart Health
- Digital Industry

### Research platform:

- Ningbo Community Research Centre
- Ningbo Municipal Government Development Research Centre Institute of International Cooperation

### Impact case:

# Innovative smart healthcare solutions for community health development:

A series of smart home healthcare solutions were developed, including innovative solutions for heart monitoring, hypertension monitoring and sleep monitoring using wearable devices, as well as a secure data transfer framework to empower and drive the development of community health care.

### **Journalism and Communications**

### Discipline overview:

The discipline focuses on the study of media in industry and community, providing theoretical and practical support to the news media, film and television industries, multinational communications companies, communities and various self-media industries.

### Research strength:

- Journalism
- Communication Studies

### Research platform:

 Ningbo Research Base for the International Development of Film, Television, Culture and Creative Industries

### Impact case:

### Building a film bridge for international communication:

UNNC research base on Internationalizing Ningbo's Screen Industries was selected in the Ningbo Social Science Research Base. Through engagement with the public, industry, government and research communities, the base creates and develops a screen production culture in Ningbo. Partnered with the Ningbo Micro-film Association and Ningbo TV & Radio Bureau, we supported the development of the Ningbo International Micro-film Festival since 2017 and co-organised the 7th Ningbo Micro Film Festival, promoting international short film academic research, fostering local short film talent, supporting local quality film projects and building a global short film database.

# Key research area

### **Business Administration**

### Discipline overview:

This discipline focuses on the strategy and management of multinational enterprises, investment and financing strategies, supply chain management, Belt and Road, smart manufacturing, digital transformation, digital economy, marketing and brand strategy, providing Chinese and Western theoretical support for export-oriented enterprises in strategic planning and overcoming investment and financing shortcomings.

### Research strength:

- Marketing and innovation and entrepreneurship
- Digital Transformation
- Corporate Management
- Technology Economics and Management

### Research platform:

- Innovation Policy Research Base, University of Nottingham Ningbo
- Ningbo Social Science Research Base on International Talent Development
- Ningbo Social Science Research Base on Socio-economic Resilience and Regeneration in Rural Areas

### Impact case:

# From local to global, helping local enterprises to transform digitally:

Together with "Amazon Global Store", we provide customized consulting services to eight local enterprises for their digital transformation and branding needs to go overseas, solving practical business problems for them.

## **Discover more**

# A wide range of research areas are being explored by our globally networked faculties:

### **Faculty of Humanity and Social Science**

IInternational Relations, International Higher Education, Applied Linguistics, Interpreting and Translation, English and other languages

### **Nottingham University Business School China**

Business economics, Globalising Business, Digital Marketing, Financial Risk Management, Innovation & Entrepreneurship, Strategy, Leadership, China & the World Economy, Operations Management, Humane Resources Management, Big Data and Decision-making

### **Faculty of Science and Engineering**

Advanced Energy and Environmental Materials & Technologies, Advanced Intelligent Manufacturing, Artificial Intelligence and Optimisation, Composites, Fluids and Thermal Engineering, Geospatial and Geo-hazards, Natural Resources and Environment, Partial Differential Equations, Power Electronics, Machines and Control, Sensor, Senor Networks, and Instrumentation, Sustainable Built Environment and Science and Engineering Education

# Nottingham Ningbo China Beacons of Excellence Research and Innovation Institute

Combining a world-class university with advanced science and innovation with national development strategies to meet local needs for social and economic development.

### Vision

€7 To

To create a Sustainable Innovation Eco-system with the integration of advanced technology research, outstanding talent cultivation and research knowledge transfer to turn ideas and dreams into reality



- Recruiting top global talent with the potential for scientific and scholarly breakthroughs
- Building an international PhD innovation training base and Postdoc work stations
- Deepening international cooperation between China, the UK and globally
- Producing high-quality scientific research outputs, so as to accelerate knowledge exchange transformation













# **Innovation and Entrepreneurship**

# Li Dak Sam Incubator - the only "International talent" focused incubator in Ningbo

To be a bridge connecting international talent and business resources with local needs in Ningbo

- Incubate creatideas and innovative technologies into business
- Accelerate student and alumni start-up and University spinout
- Build an international entrepreneurial community
- Provide soft-landing service for international businesses in China

# Engagement with students, staff, alumni and global entrepreneurs

Through delivering of curriculum education such as MSc Entrepreneurship & Innovation Management offered by NUBS China, student-led activities supported by Ingenuity Lab, and experiential learning and commercial activities supported by the Incubator



李达三创新基金

Li Dak Sum Innovation Fellowship

# IP Commercialisation – delivering the commercial impact of our research

We encourage and support our leading researchers to commercialise our research and translate it into real world applications. We innovate and collaborate with different industries helping them to solve problems and identify opportunities

- Research and Knowledge Exchange Office assists our researchers with the identification, protection and commercial exploitation of University Intellectual Property (IP) as well as accessing advice on IP-related matters. It searches for the most appropriate exploitation partner to collaborate in the process.
- Ningbo Nottingham Technology Co. Ltd manages
   University spin-out portfolio and advises on investments from
   University to support the formation, development and growth
   of spin-out companies

















Through collaboration with research institutions, industry partners, policy-makers and the general public, we can deliver impactful research and knowledge exchange activities to make a difference to the community.

- Email: Research@Nottingham.edu.cn
- **Phone:** 0574-88180000-8019
- Official Website: www.nottingham.edu.cn

UNNC WeChat Official Account



LDS Incubator WeChat Official Account



### **Research collaboration**

We are committed to gathering, cultivating and collaborating with a diversity of top-level talents on our mission to achieve excellence in research and innovation.

### **Industry engagement**

Research and innovation are the pillars of your productivity and profitability enabled by our sector-leading researchers can help enhance the competitiveness of your business. The Research and Knowledge Exchange Office can work closely with you to understand your business opportunities and challenges and help you access our expertis, utilising our research, knowledge and inventions to enter new markets, reach new customers and improve your business performance.

### **IP Commercialisation**

We have a global reputation for pioneering inventions and turning them into commercial success stories across multiple industries, including technology licensing and spin-out companies.

### Policy/Public engagement

We can use the findings of our global research to provide policy advice to the government, and engaging in outreach activities such as science popularisation to the public.

### **Engage with our global-minded graduate talent**

Our students are highly-sought after by some of the world's top companies, innovative start-ups, and third-sector organisations and their global mindset can bring fresh thinking and insights to your busines.





# 宁波诺丁汉大学

University of Nottingham

Ningbo China