



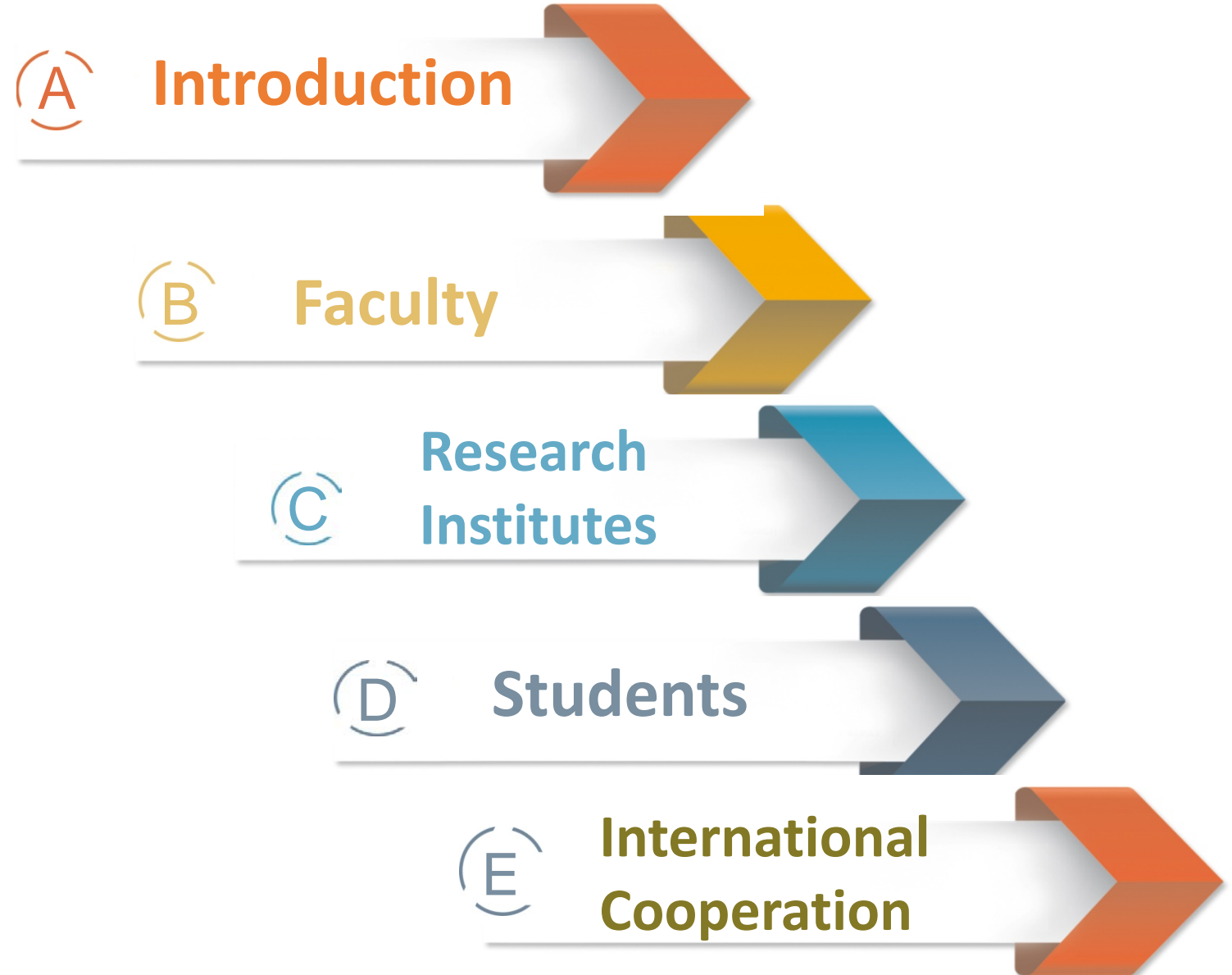
# SMEE

School of Mechanical and Electrical Engineering  
University of Electronic Science and Technology of China

电子科技大学 机械与电气工程学院



# CONTENTS



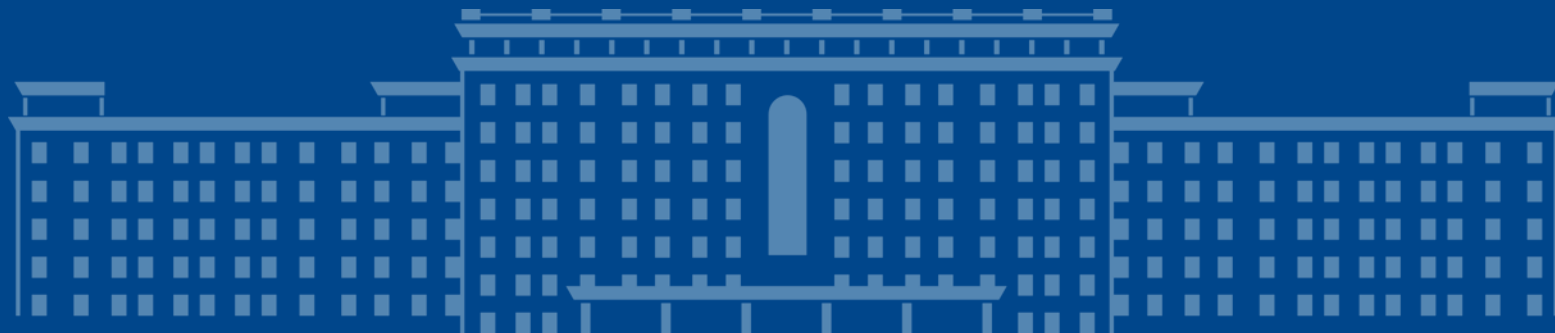


电子科技大学机械与电气工程学院

School of Mechanical and Electrical Engineering

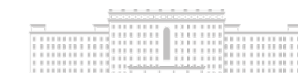
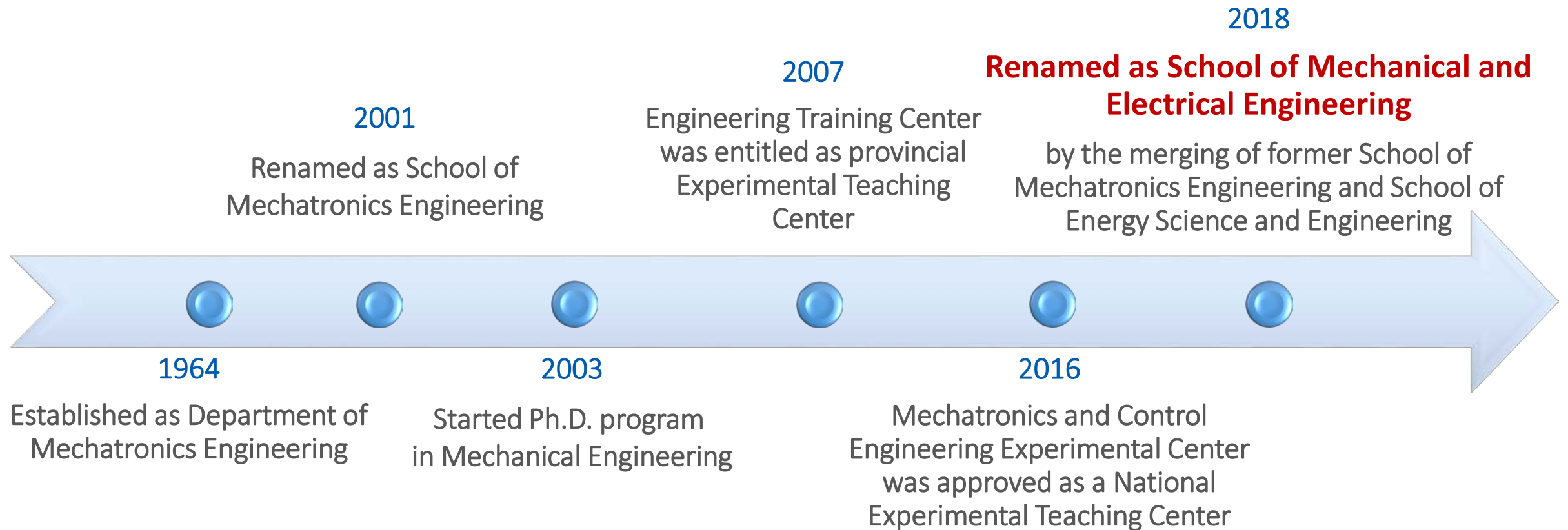


# INTRODUCTION



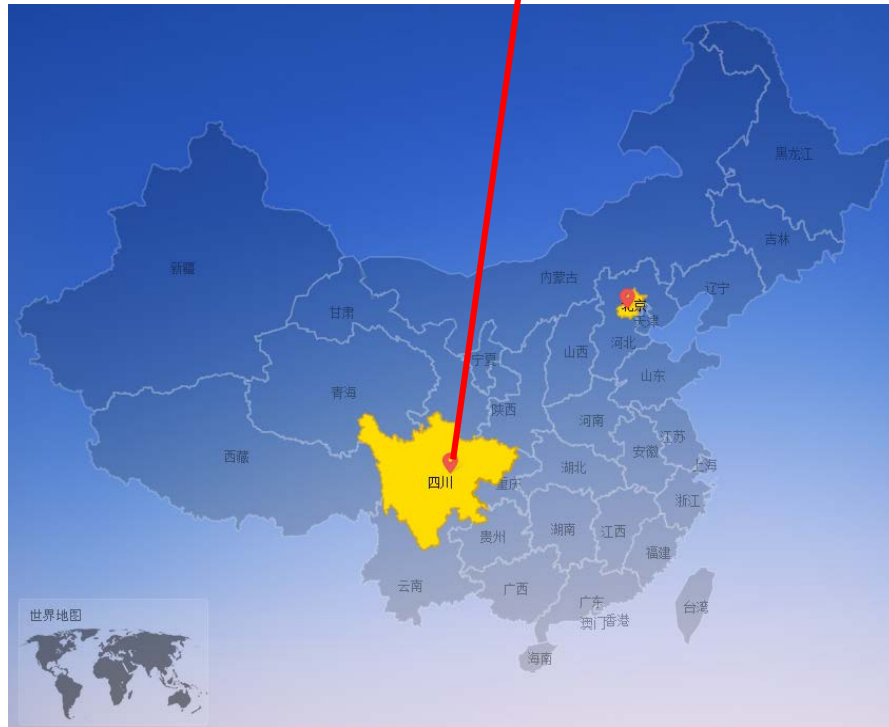


# History



# Location

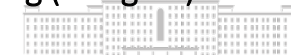
*Chengdu ,  
where UESTC is located*



Qingshuihe Campus of UESTC



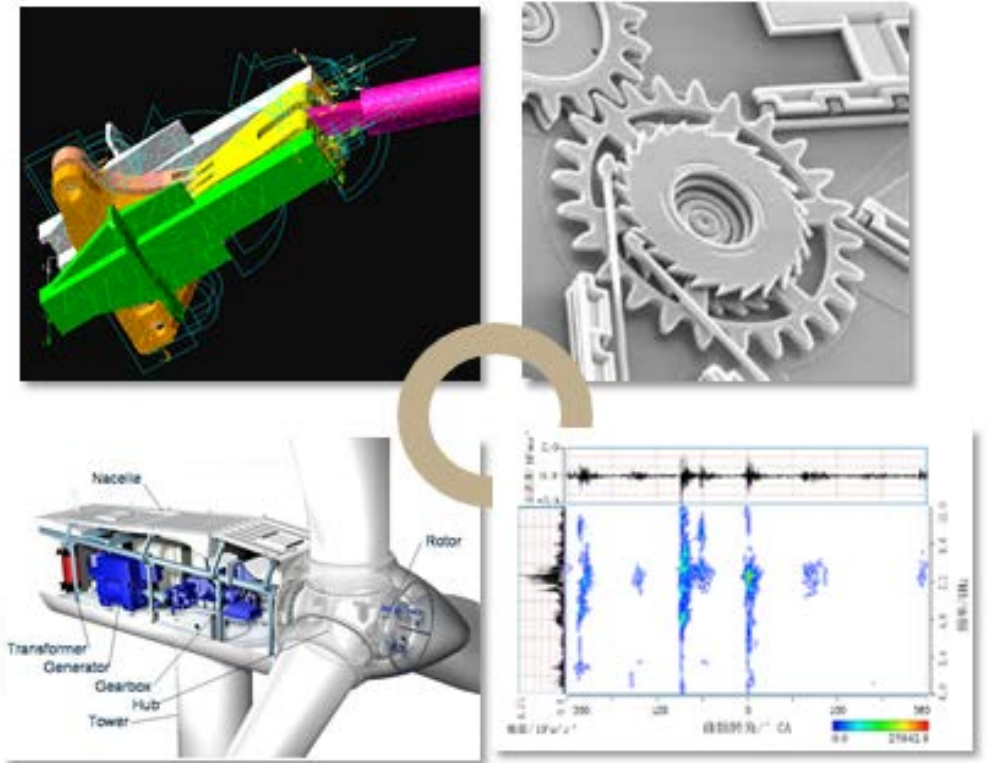
Location of the School in  
the Main Buliding (Wing C1)



# Departments

## Department of Mechanical Engineering

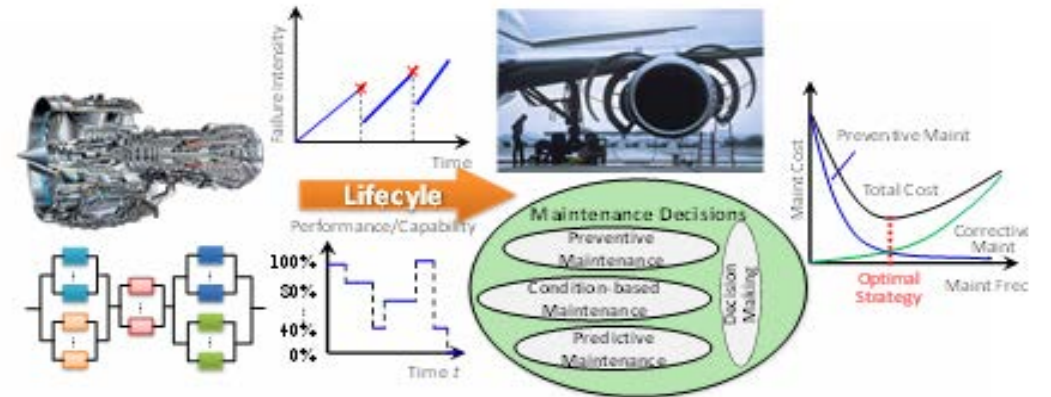
The Department of Mechanical Engineering (ME) reflects the broad aspects of the mechanical engineering fields. As exhibited by traditional fields such as manufacturing and design, to new enabling technologies of **micro- and nano-technology**, **robotics**, **intelligent manufacturing system**, **simulation-based design**, **fault diagnosis and prognosis**. Undergraduate and graduate students are well positioned for the research, design, development and manufacture of a diverse set of systems and products.



# Departments

## Department of Industrial Engineering

The Department of Industrial Engineering (IE) focuses on the design, analysis and implementation of any production or service system with the goal of improving its quality and productivity. The concerned systems could be a manufacturing plant, a transportation or a distribution network. The strengths of the department in the fields of IE include: **reliability engineering, maintenance planning, quality control, human factors, manufacturing planning, logistics**. We are striving to bridge engineering technologies and management tools to improve the quality of our daily life.



# Departments

## Department of Electrical Engineering

The Department of Electrical Engineering focuses on electrical power generation, transmission, distribution and utilization technologies, power conversion using power electronic technologies and advanced analog/digital electronics. The concerned systems could be power electronic converters for renewable systems such as **photovoltaic (PV), wind power, the electric drives, and the smart grid applications**. The strengths of department in the fields of EE include: power electronics, power conversion, renewable power, motor control, electric drive, smart detection and smart grid. We are striving to bridge the gap between technology and application to improve the efficiency of the electrical power conversion and utilization.







# Experimental Teaching Centers



**National Experimental Teaching Center of Mechatronics and Control Engineering**



**Provincial Engineering Training Center**

# Disciplines

## Mechanical Engineering

- ShanghaiRanking's Global Ranking of Academic Subjects: **201-300**
- Ranking in China's 2017 Discipline Assessment: **B (top30%)**
- Provincial Key Discipline

## Electrical Engineering

- ShanghaiRanking's Best Chinese Subjects Rankings: No. **15 (top25%)**
- ShanghaiRanking's Global Ranking of Academic Subjects: No. **23 (electrical and electronic engineering)**



# International Programs

## Undergraduate Programs

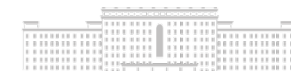
Chinese  
Instructed

English  
Instructed

Chinese-instructed courses are offered in **Mechanical Design Manufacture and Automation, Electrical Engineering and Automation, Industrial Engineering, Smart Grid Engineering (4 years)**

English-instructed courses are offered in **Mechanical Design Manufacture and Automation(4 years)**

- High Quality Teaching Resources
- Practical Training both in and outside the Lab
- Scientific Innovation Activities
- Monitoring System of Teaching Quality





# International Programs

## Graduate Programs

Chinese  
Instructed

English  
Instructed

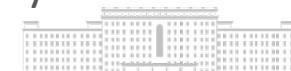
**Master Programs** MSc in Mechanical Engineering, Electrical Engineering, MEng in Mechanical Engineering (3 years)

**Ph.D Programs** in Mechanical Engineering, Control Science and Engineering(4~6 years)

**Master Programs** MSc in Mechanical Engineering, Electrical Engineering (2 years)

**Ph.D Programs** in Mechanical Engineering, Control Science and Engineering(3~6 years)

- High Quality Teaching Resources
- Scientific Innovation Activities
- Practical Training both in and outside the Lab
- Monitoring System of Teaching Quality

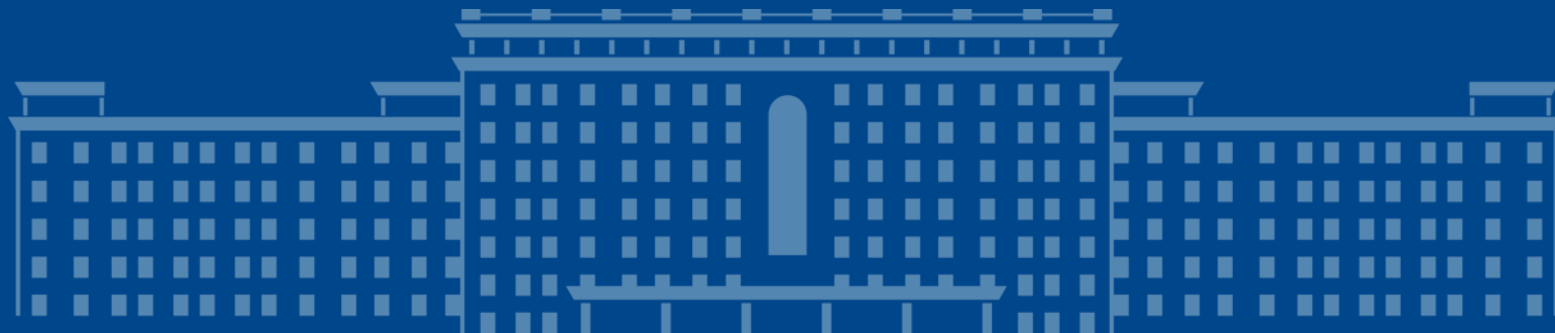




电子科技大学机械与电气工程学院  
School of Mechanical and Electrical Engineering



**FACULTY**




# SMEE Academic Faculty: 119 Staffs: 43

24 Full Professors

52 Associate Professors

28 Doctoral Advisors

80% more than one-year  
overseas research experience



Faculties  
119

2 Academician of Chinese Academy of Engineering

11 National Distinguished Experts (Young Experts 7)

3 Chang Jiang Chair Scholars

4 Highly Cited Researchers

2 High Education Advisory Committee of the China  
Ministry of Education

2 IET Fellows

1 National Youth Top-Notch Talent

# Core Academic Faculties

---



**Prof. Weiren Wu**

**Academician of Chinese Academy of Engineering**



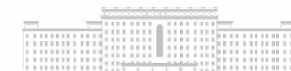
# Core Academic Faculties

---



**Prof. Jianrong Tan**

**Academician of Chinese Academy of Engineering**





# Core Academic Faculties

---



**Prof. Ming J. Zuo**

- National Distinguished Expert
- Changjiang Chair Professor
- EIC Fellow, ISEAM Fellow, IIE Fellow
- Ralph A. Evans / P. K. McElroy Award
- Department Editor, IIE Transactions
- Associate Editor, *IEEE Trans. on Reliability*



**Prof. Liangfeng Xu**

- National Distinguished Expert
- The Principal Scientist of Nokia
- The CEO of PICOHOOD

# Core Academic Faculties

---



## Prof. Horacio Dante Espinosa

- Changjiang Chair Professor
- Member, Russian Academy of Engineering
- AAAS Fellow, ASME Fellow, AAM Fellow
- President, Society of Engineering Science
- Founding Principal Editor, Materials Research Communications
- Editor-In-Chief, Journal of Experimental Mechanics



## Prof. Liudong Xing

- Changjiang Chair Professor
- Associate Editor, International Journal of Systems Science
- Editorial Board, Reliability Engineering and System Safety

# Core Academic Faculties



**Prof. Hong-Zhong Huang**

- ISEAM Fellow
- The Founder of QR2MSE Conference
- The Co-Editor-in-Chief of *International Journal of Reliability and Applications*, Editorial Board of 10 Journals
- William A. J. Golomski Award



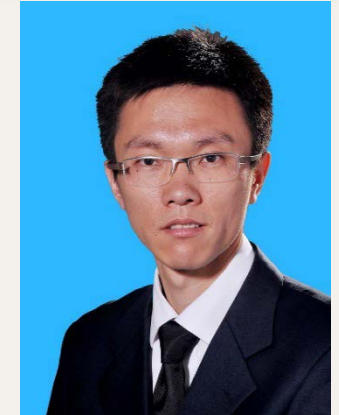
**Prof. Ping Yang**

- Education Advisory Committee of the China Ministry of Education
- National Teaching Achievement Award
- Vice Chairman, The Mechanical Engineering Society of Sichuan Province



**Prof. Qi Huang**

- IET Fellow
- Senior Member of IEEE and the Secretary in Chief of IEEE PES Chengdu Chapter
- The director of Sichuan State Provincial Lab of Power System Wide-area Measurement and Control



**Prof. Bei Peng**

- National Youth Top-Notch Talent
- The Director of the Institute of Micro/Nano-Electro-Mechanical Systems
- New Century Excellent Talent of Ministry of Education



# Core Academic Faculties

## National Distinguished Young Experts



**Prof. ShaoTing Zhang**



**Prof. Weihao Hu**



**Prof. Kang Li**



**Prof. Zhaojun Li**



**Prof. Siming Pan**



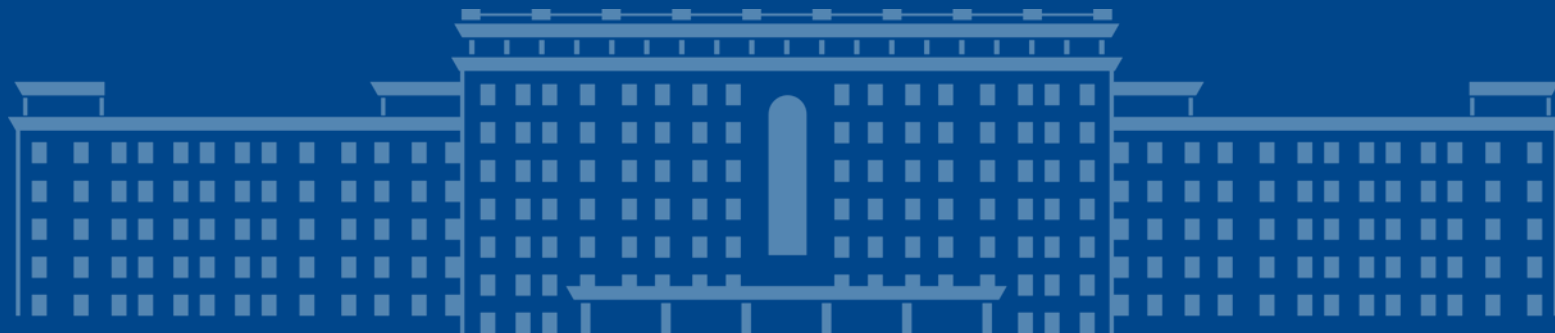


电子科技大学机械与电气工程学院

School of Mechanical and Electrical Engineering

3

RESEARCH  
INSTITUTES



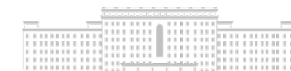


# Research Institutes



## 5 RESEARCH UNITS

- Institute of Intelligent Manufacturing and Robotics
- Institute of Intelligent Perception and Control
- Institute of Intelligent Design and Simulation
- Institute of Reliability and Equipment Health Management
- Institute of Smart Power and Energy Systems



# Research Institutes

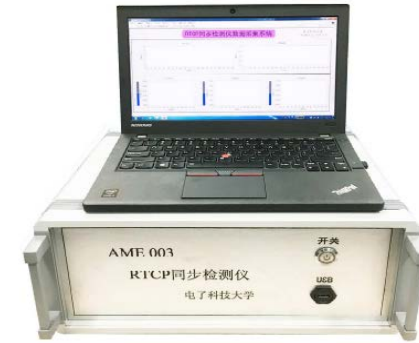
## Institute of Intelligent Manufacturing and Robotics

### RESEARCH FIELDS:

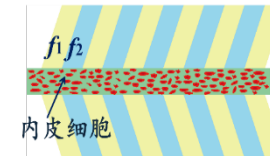
Robots and unmanned systems

Intelligent equipment and its control technology

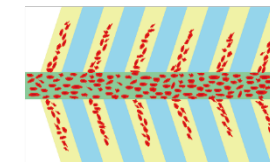
Micro-nano biological manufacturing and sensing



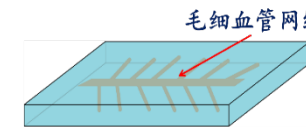
(a) 准备构建毛细血管



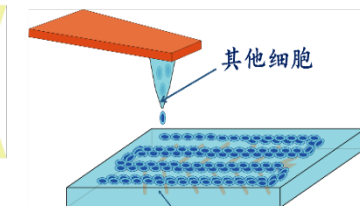
(b) 内皮细胞定向迁移



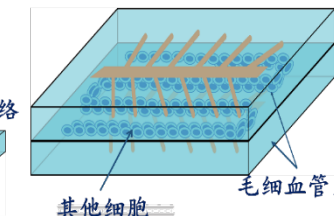
(c) 培育为毛细血管片



(d) 3D打印其他细胞



(e) 毛细血管片与其他细胞交替堆叠构成组织

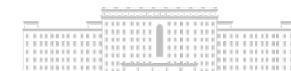
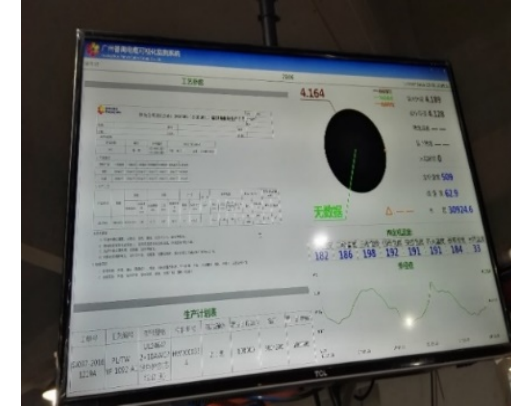


# Research Institutes

## Institute of Intelligent Perception and Control

### RESEARCH FIELDS:

- Wireless-based industrial interconnected sensor cloud technology system
- Industrial IoT
- Machine vision
- Industrial scheduling and control
- Industrial Robotic Technology
- Industrial big data technology





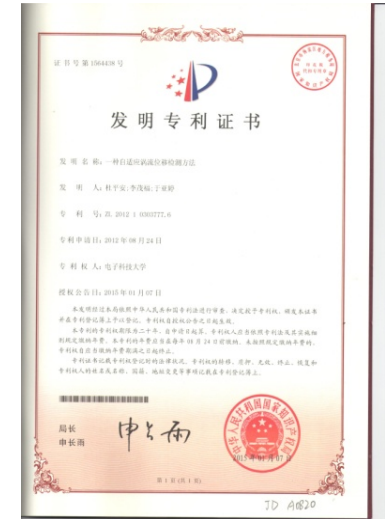
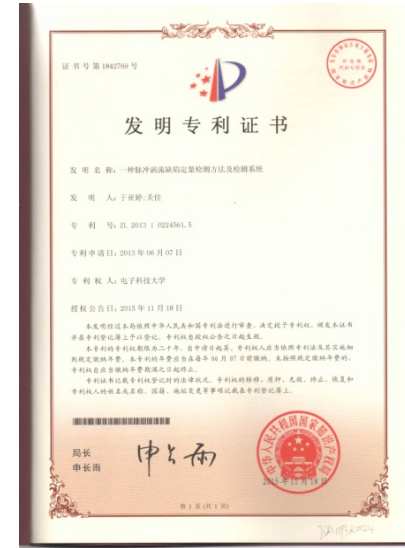
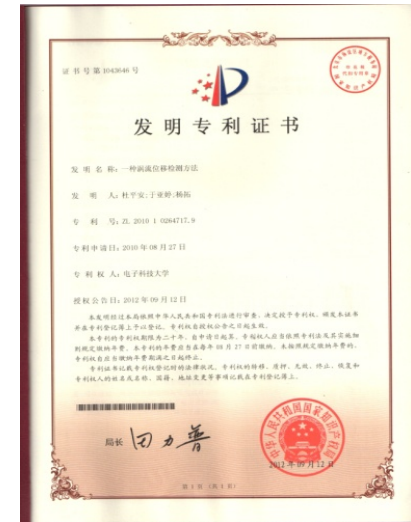
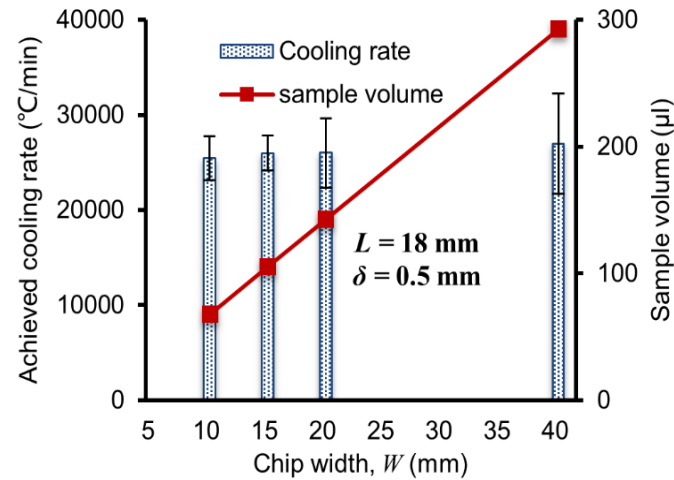
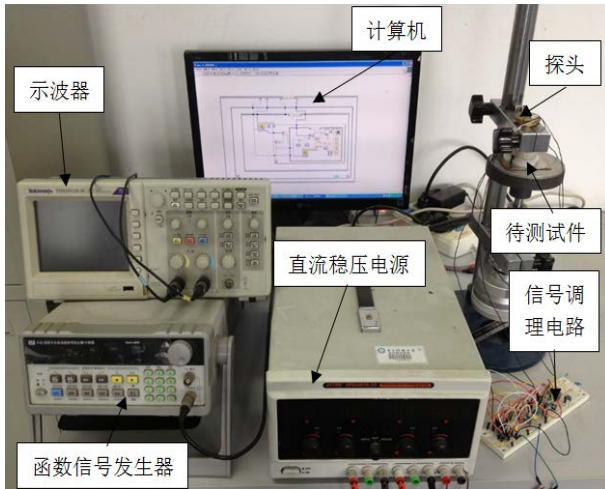
# Research Institutes

## Institute of Intelligent Design and Simulation

### RESEARCH FIELDS:

Digital design and simulation

Advanced thermal control and intelligent management

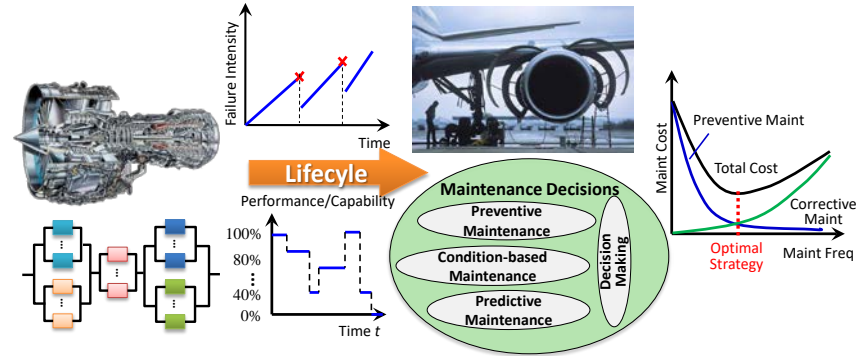


# Research Institutes

## Institute of Reliability and Equipment Health Management

### RESEARCH FIELDS:

Reliability Engineering  
Equipment Monitoring and Health Management



复杂系统和装备的维修建模及决策



IE Magazine专题报道和“上银优博”奖



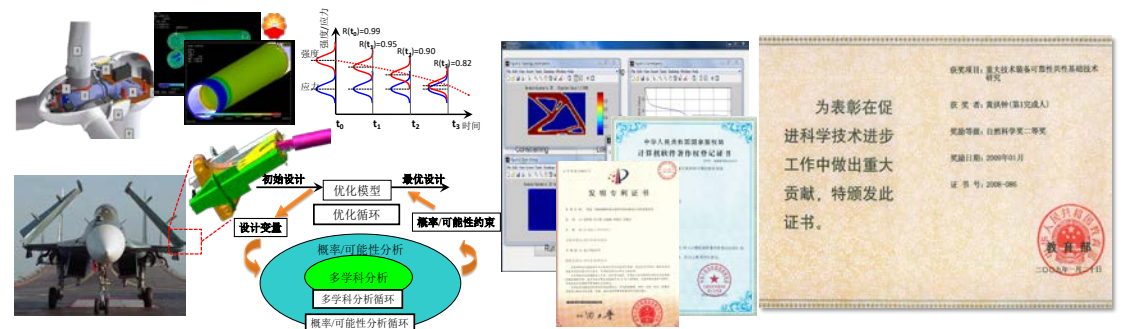
应用于国家重大装备和工程



可靠性分析软件平台



奖励和荣誉



应用于国家重大装备和工程

荣誉、专利和软件



# Research Institutes

## Institute of Smart Power and Energy Systems

### RESEARCH FIELDS:

- Power Systems
- Smart Grid Infrastructure
- Renewable Energy
- Smart Grid Information Technology



# Scientific Research Centers

## 6 Provincial and Ministerial Centers

Provincial Research Center of Digital Manufacturing Engineering Technology

Provincial 2011 Collaborative Innovation Center of Intelligent Service Robot

Provincial Research Center of Intelligent Service Robot Engineering Technology

Provincial Laboratory of Safety Production Intelligent Service Robot Engineering

Provincial International Scientific and Technological Cooperation Base of Robotics and Artificial Intelligence

Provincial Key Laboratory of Electric Power System Wide Area Measurement and Control

## 3 University-level Research Centers

## 4 School-level Research Centers





# Research Funding and Achievements

---

Annual Research Funding : **20+** million RMB

Annual Journal Publications : **80+**

Annual Patents : **100+**



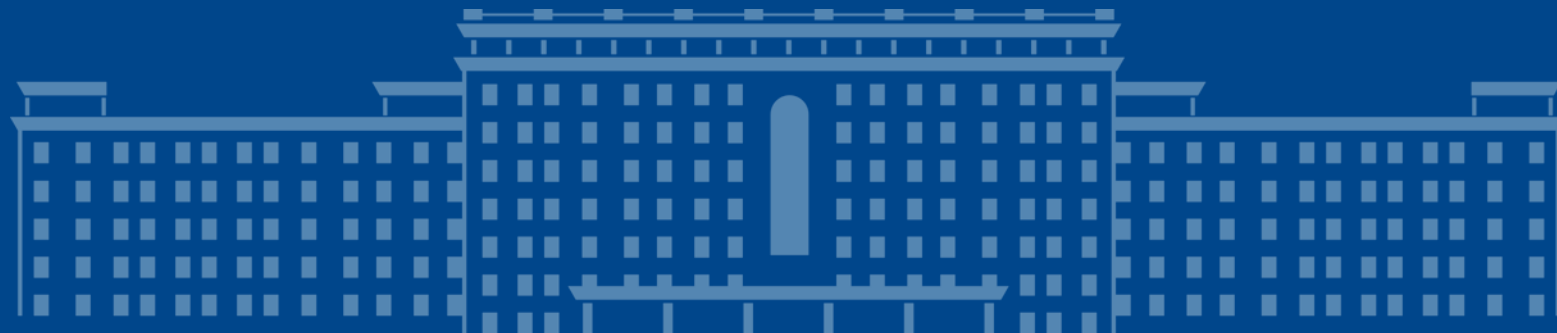


电子科技大学机械与电气工程学院

School of Mechanical and Electrical Engineering



**STUDENTS**



# Students

---

**Student population: 2180**

Undergraduates **1370**

Master Students **600**

Ph.D. Students **90**

International Students **80**

**2017, 47 undergraduates from 5 countries**



# Student Innovation and Entrepreneurship

- Robomintoner was innovated and developed by Champion Robot, an entrepreneurial company founded by UESTC students.
- Yuefan Innovation Technology Co. Ltd. (EVENTEC) by SMEE students.
- Product: Robot Vendor (FANBOT)



The World's First Robomintoner

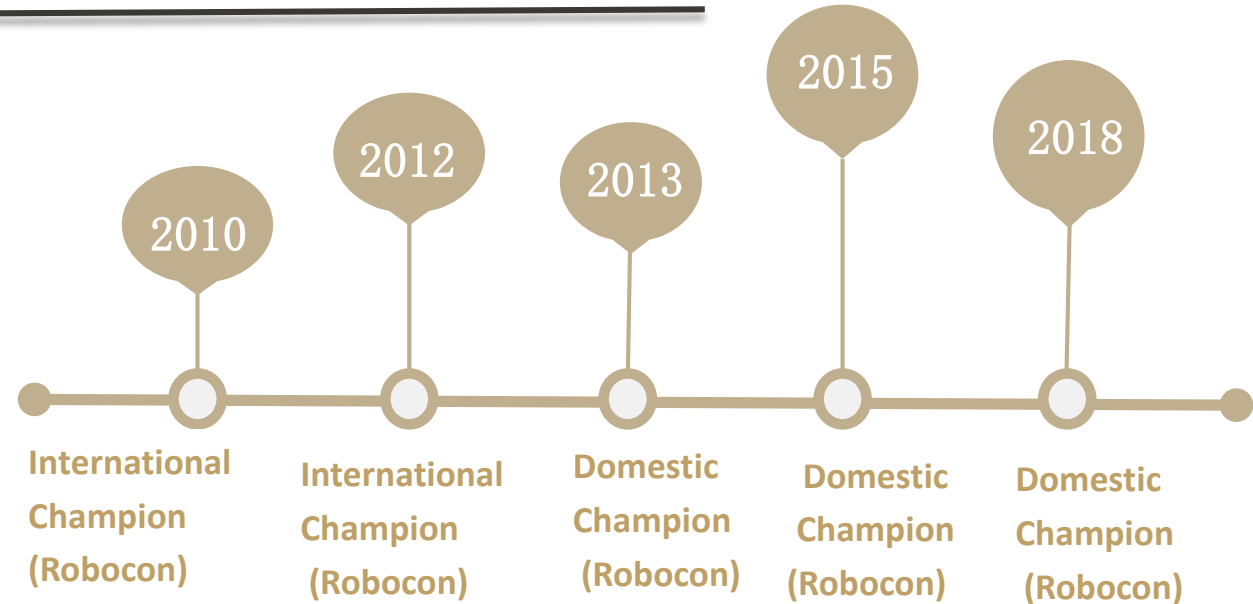




# Robotic Competition



Asia-Pacific Collegiate Robotic Competition  
(Robocon)



- **Champion in ABU Robocon (China-site), 2018; 2015; 2013; 2012;2010**
- **Champion in ABU Robocon (final in Egypt), 2010**
- **Champion in ABU Robocon (final in HK), 2012**
- **Champion of RoboMasters Robotics Contest ,2016, 2015**

# Achievements

The achievement of students and scientific and technological innovation was highly appreciated by Premier LI Keqiang, Vice-President LI Yuanchao and Vice-Premier LIU Yandong



Competitions	National first prize	National second prize
National Collegiate Robotic Competition (ROBOCON)	5	1
National Collegiate Robotic Competition (ROBOMASTERS)	2	1
National Collegiate Electronic Design Competition	9	14
National Collegiate Entrepreneurship Competition	2	3
National Collegiate Innovation and Entrepreneurship Competition( Internet +)	1	2
National Collegiate Mathematical Modeling Contest	7	4
National Collegiate Mechanical Innovation Design Competition	5	19
National Collegiate Engineering Training Comprehensive Ability Competition	2	4

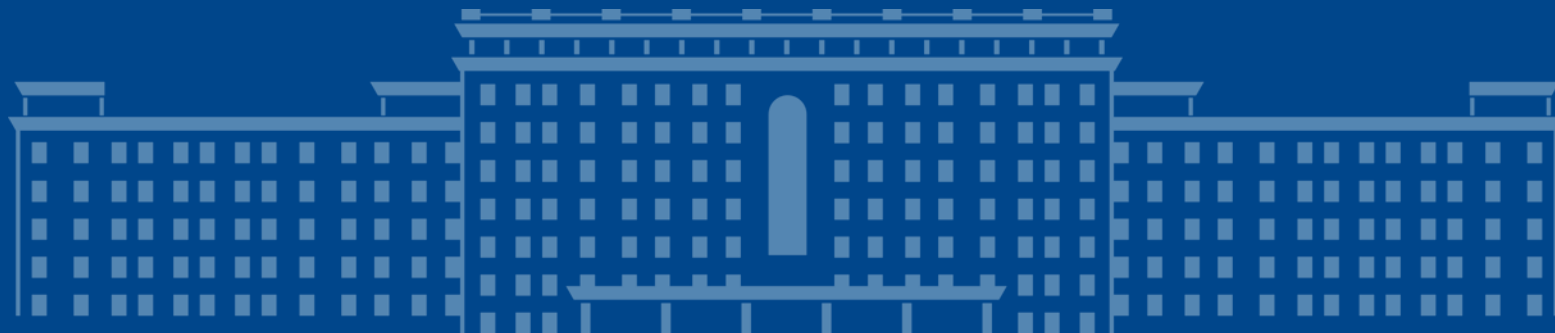


电子科技大学机械与电气工程学院

School of Mechanical and Electrical Engineering

5

INTERNATIONAL  
COOPERATION





# International Cooperation

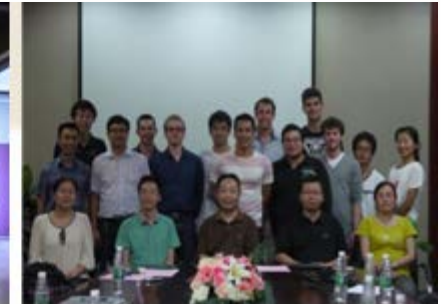
**Collaborative relationships with over 10 universities and research institutes**

**Visits for academic purposes**

**Joint research and joint application of research projects**

**Joint academic conferences and workshops**

**Student exchange programs**



# International Cooperation

## Long-Term Exchange Program 3+1, 3+2, 3+1+2, 4+2



- Rutgers University, USA  
Department of Industrial and Systems Engineering



- University of Michigan – Dearborn, USA  
Industrial and Manufacturing Systems Engineering



CentraleSupélec

- CENTRALESUPÉLEC, France



- Steinbeis-Hochschule Berlin, Germany



- Ecole Centrale De Nantes, France



- École Nationale Supérieure de l'Électronique et de ses Applications ENSEA, France



- Karlsruhe University of Applied Sciences, Germany

- CENTRALESUPÉLEC, France

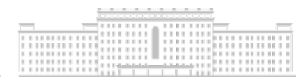


## Short-Term Exchange Program

- University of Alberta, Canada



- Ngee Ann Polytechnic, Singapore
- Hong Kong Polytechnic University, Hong Kong



# International Cooperation (ongoing)

## Non-Degree Programs:



### Universidade do Porto

- Postgraduate long-term exchange program



### Newfoundland & Labrador

- Postgraduate long-term exchange program



### University of Strathclyde

- Undergraduate program 2+2

## Degree Programs:



### École Centrale de Nantes

- Dual Masters Degree program
- Undergraduate program 3+1+2



### University of Strathclyde

- Undergraduate program 3+1+1
- Postgraduate program 4+1; 1+1+1





# International Cooperation



Hochschule Karlsruhe  
Technik und Wirtschaft  
UNIVERSITY OF APPLIED SCIENCES

## Karlsruhe University of Applied Sciences

### Summer School :

- Mercedes-Benz Museum Tour
- Experiments
- Lectures on academic topics
- Lab Tour
- Cultural immersion(such as BBQ)
- Sightseeing

Since 2016, 24 undergraduate students from UESTC per year have attended the summer school in July for one week.



Study in Karlsruhe University of Applied Sciences

# International Cooperation

## International Academic Conferences



- IEEE PES Innovative Smart Grid Technologies, 2019
- International Workshop on Industry 4.0, 2018
- International Conference on Power and Renewable Energy, 2017
- International Conference on Smart Grid and Clean Energy Technologies, 2016
- IEEE International Conference on Mechatronics and Automation, 2012
- International Conference on Quality, Reliability, Risk, Maintenance, and Safety Engineering (QR2MSE) (Annual Event Since 2011)





# Thanks



[www.smee.uestc.edu.cn](http://www.smee.uestc.edu.cn)

谢谢