



# ZJU-UIUC INSTITUTE

 Zhejiang University - University of Illinois at Urbana-Champaign Institute

 浙江大学伊利诺伊大学厄巴纳香槟校区联合学院



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A REPORT OF

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#### Alternative formats

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#### Li Er-Ping Dean

**Distinguished Professor IEEE Fellow** 

I'm privileged to lead ZJU-UIUC Institute in its mission to produce engineers of top quality, alumni of both Zhejiang University and UIUC, a group of young people with technological excellence, innovative mindset, and global vision, who will contribute to the development of engineering, industry and society. To produce such young talents will be my greatest pride and delight .

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#### Philip T. Krein **Executive Dean**

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**Distinguished Professor** Grainger Emeritus Chair Professor at UIUC Member, U.S. National Academy of Engineering Fellow of U.S. National Academy of Inventors **IEEE** Fellow

For a long time, it has been my personal conviction that top quality engineering is the key to the future, especially in China. Cooperation and collaboration across cultures and oceans are things we need to strongly accelerate the creative process and energy of our students. The joint institute, I believe, will be a global model for how to achieve excellence in engineering education and learning.



## **ZJU-UIUC INSTITUTE**

The Zhejiang University/University of Illinois at Urbana-Champaign Institute (the ZJU-UIUC Institute, ZJUI) is a cooperatively-run engineering college on the Zhejiang University (ZJU) International Campus in Haining, China. By introducing top engineering curricula and resources from UIUC, complemented with contributions from counterpart colleges and departments from ZJU, ZJU-UIUC Institute will provide a world-class engineering education. The institute was officially launched on April 11, 2016. At present, ZJUI has 329 undergraduates and 31 PhD candidates. The ZJUI Faculty is composed of talent recruited from top-tier international universities and outstanding professors from ZJU and UIUC.

The ZJU-UIUC Institute offers undergraduate and graduate programs. The undergraduate programs including mechanical engineering, electrical engineering, computer engineering, and civil and environmental engineering. ZJUI is building interdisciplinary teams of graduate students. The Institute enrolls both M.S. and Ph.D. candidates and continues to grow its research programs, including mechanical engineering, electrical engineering, computer engineering, and civil and environmental engineering etc. Applications are welcome from relevant engineering disciplines, physics, materials science, and computer science and so on.

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# WORLD-CLASS





## Structure

Dean 院长 Executive Dean Vice Dean 副院长	int Management Committee 合管理委员会	
Assistant Dean	Office Director	Lab Director
院长助理	办公室主任	实验室主管
Human Resources	Publicity	ECE Lab Technician
人事管理岗	宣传管理岗	计算机实验室工程师
Academic Affairs	Admission	ME Lab Technician
教务管理岗	招生管理岗	机械实验室工程师
Financial Affairs	Research Affairs	EE Lab Technician
财务管理岗	科研管理岗	电气实验室工程师
Administration	Outreach	CEE Lab Technician
综合行政岗	外事岗	土木实验室工程师
Development&Liaison		Physics Lab Technician
发展联络岗		物理实验室工程师

## **Joint Management Committee**

The Joint Management Committee plays the role of executive oversight and institute decision-making. It comprises three senior leaders from ZJU and three senior leaders from UIUC. Members have high-level roles at the partner universities, and bring their vision for international cooperation.



Prof. He is the Vice President of Zhejiang University, Dean of International Campus, Zhejiang University. She got her Master's degree from the University of Birmingham (1992) and her PhD degree in language testing from Guangdong Foreign Studies University, China (1998). She was a senior visiting scholar at University of California at Los Angeles in 2004 and was local chair of the 2008 Language Testing Research Colloquium (LTRC) held at Zhejiang University. She was the Benjamin Meaker Visiting Professor at University of Bristol in 2014. She has also been a key-note speaker at several international conferences. Her main research interests are language testing and English language teaching.





by Experiment Station Committee on Organization and Policy, Academic Committee on Organization and Policy, and the USDA Cooperative State Research Service during 1993-94. He was on the faculty of the University of Houston during 1980-85, Rutgers University, New Jersey during 1985-2000, and The Ohio State University during 2000-2004.



K.C. Ting

Prof. Zheng Yao is the Vice Dean of Faculty of Engineering at Zhejiang University. He was the founding Vice Dean (2007-2013) of School of Aeronautics and Astronautics, Zhejiang University. His main research interests include Aerospace Propulsion Theory and Engineering, Flight Vehicle Design, Fluid Mechanics, Engineering Mechanics, Aerospace Information Technology etc.

**Zheng Yao** 



Prof. Andreas C. Cangellaris is the Provost and Vice Chancellor for Academic Affairs and M.E. Van Valkenburg Professor in Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign. From 2013 until 2017, he was Dean of the College of Engineering at Illinois. He is a Fellow of IEEE. He received his B.S. in Electrical Engineering from the Aristotle University of Thessaloniki, Greece in 1981, and his M.S. and Ph.D. degrees in Electrical Engineering from the University of California, Berkeley, in 1983 and 1985, respectively.

Cangellaris



Prof. Rashid Bashir is the Dean of Grainger College of Engineering at the University of Illinois at Urbana-Champaign. He completed his BSEE from Texas Tech University as the highest ranking graduate in the College of Engineering in Dec 1987. He completed his MSEE from Purdue University in 1989 and Ph.D. from Purdue University in 1992. He joined Purdue University in Oct 1998 as Assistant Professor and was later promoted to Professor of Electrical and Computer Engineering and a Courtesy Professor of Biomedical Engineering and Mechanical Engineering.

**Rashid Bashir** 



Prof. Philippe H Geubelle is the Executive Associate Dean of of Grainger College of Engineering at the University of Illinois at Urbana-Champaign. He got his M.S. and Ph.D. in Aeronautics at Caltech in 1989 and 1993, respectively. After a year as Postdoctoral Research Associate at Harvard, he joined the University of Illinois at Urbana-Champaign in January 1995, where he is currently Bliss Professor in the Department of Aerospace Engineering, with joint appointments in Mechanical Science and Engineering, in Civil and Environmental Engineering, at the National Center for Supercomputing Applications and at the Beckman Institute of Advanced Science and Technology.



## **International Advisory Board**

The International Advisory Board plays the role of "Think Tank" for high-level advice on education policies for the ZJU-UIUC Institute. These experts provide strategic advice and insights to support the development and plans of the Institute. The broad representation has been selected by the Joint Management Committee to advance the international strategic framework of the institute.



Prof. Yang is an academician of the Chinese Academy of Sciences, a member of the Third World Academy of Sciences, and a Foreign Member of the U.S. National Academy of Engineering. From 2013 to 2017, he served as the Director of the National Science Foundation, China. He was President of Zhejiang University from 2006 to 2012. Prior to joining Zhejiang University, he served as a member of the China Ministry of Education. In 2009, he was elected President of the Association of Pacific Rim Universities. Prof. Yang is a pioneer in the fields of fracture mechanics, meso-/micro- mechanics, and mechatronic reliability.



Thomas

Magnanti

Prof. Magnanti is a member of the U.S. National Academy of Engineering and the American Academy of Arts and Sciences and an Institute Professor and former Dean of Engineering at Massachusetts Institute of Technology (MIT). He is a past President of the Singapore University of Technoloigy and Design (SUTD). At MIT, he was a founding co-director of the Leaders for Manufacturing Program and the System Design and Management Program. He is a past President of the Operations Research Society of America (ORSA), and of the Institute for Operations Research and Management Sciences (INFORMS). He has received honorary doctorates from Linköping University, the Université de Montréal, and the Université Catholique de Louvain.



Prof. Kwong is the Executive Director of the Institute for Infocomm Research (I2R) and Institute of Microelectronics (IME), Agency for Science, Technology and Research (A\*STAR), Singapore and a Chair Professor at the National University of Singapore (NUS). He is a Special Advisor on the Asia-Pacific Leadership Council of the Global Semiconductor Alliance (GSA) and serves on the Board of Advisors of the Singapore Semiconductor Industry Association (SSIA). Prof. Kwong is an IEEE Fellow, and the author or co-author of more than 1100 refereed archival publications.

**Dim-Lee Kwong** 



Prof. Narayanamurti is the former Dean of Engineering at Harvard University, USA. He is a member of the U.S. National Academy of Engineering, the American Academy of Arts and Sciences and the Royal Swedish Academy of Engineering Sciences, and He is a fellow of the American Physical Society, the American Association for the Advancement of Science, IEEE, and the Indian Academy of Sciences.

Narayanamurti



Prof. Huang is an academician of the Chinese Academy of Sciences and a foreign academician of the Russian Academy of Sciences. He is the Executive Vice President of North-West Polytechnic University, China. Prior to joining NWPU, he served as the President of Nanjing Technological University from 2012-2017. He is a Distinguished professor, a winner of the National Outstanding Young Scientists Fund, and the chief scientist of the National "973" Project.

**Huang Wei** 



Prof. Shyy is the President of the Hong Kong University of Science and Technology (HKUST). He is also a Chair Professor of Mechanical and Aerospace Engineering. Prior to joining HKUST in August 2010, he was a Clarence L. "Kelly" Johnson Collegiate Professor and Chairman of the Department of Aerospace Engineering at the University of Michigan. He was previously employed by the University of Florida and GE Research and Development Center in Schenectady, New York. Prof. Shyy is a Fellow of the American Institute of Aeronautics and Astronautics (AIAA) and the American Society of Mechanical Engineers (ASME).

Wei Shyy

## **Milestones**



# **201**4 June 30

Construction begins on the International Campus.



**2016** April 11 ZJU-UIUC Institute launch ceremony is held in Hangzhou.



# **2017** September 15

Class of 2021 arrives on campus, including 144 undergraduates and 12 doctoral students.



# **2018** June 6

The International Advisory Board holds its first meeting





# **2019** March 4

Unveiling ceremony for the ZJUI new building. ZJU and UIUC sign Memoranda of Understanding on a new joint research center.

# **2013** September

### Zhejiang University and the University of Illinois at Urbana-Champaign sign a strategic cooperation agreement.

## 2016 February 1

Ministry of Education approves the ZJU-UIUC Institute. **2016** September 10

> Class of 2020 arrives on campus, including 30 undergraduates.





# **2017** October 21

The International Campus holds its Grand Opening ceremony in Haining.



# **2018** September 10

Class of 2022 arrives on campus, including 155 undergraduates and 14 doctoral students.



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#### **Zhejiang University**

Founded in 1897, Zhejiang University is one of China's oldest and most prestigious institutions of higher education. Laying claim to several areas of research strength, ZJU currently ranks among the top three on Chinese mainland and within the top 100 in the Times Higher Education World Reputation Rankings and QS World University Rankings. Eighteen disciplines of ZJU have been selected for China's "Double First-class" Initiative (3rd in China) and 39 disciplines graded A in the recent national assessment (1st in China). The engineering programs of Zhejiang University ranked 4th in the World Best Global Universities Rankings published by US News & World Report in 2016.

ZJU have 21 Members of Chinese Academy of Sciences and 20 Members of Chinese Academy of Engineering.

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## University of Illinois at Urbana-Champaign

Founded in 1867, the University of Illinois at Urbana–Champaign (UIUC) is a public researchintensive university in the U.S. It is a founding member of the Big Ten Conference and a member of the Association of American Universities. The university is considered to be a "Public Ivy" institution. Illinois is a global leader for engineering education and research, it ranked 4th in the Academic Ranking of World Universities in Engineering/Technology and Computer Sciences, published in 2015.

24 Nobel Laureates and 27 Pulitzer Prize Winners from UIUC faculty and alumni.



The ZJU-UIUC Institute offers four undergraduate programs, including mechanical engineering, electrical engineering, computer engineering, and civil and environmental engineering.

The engineering curricula follow both those of UIUC and of ZJU. Strong emphasis on teamwork, creative problem solving, and laboratory instruction are examples of this state-of-the-art engineering education program. Students who complete the programs are fully prepared for engineering careers or for advanced graduate education.

#### **Electrical Engineering**

#### **PROGRAM OVERVIEW**

Electrical engineering is a multifaceted discipline and has produced an astounding progression of technological innovations that have shaped virtually every aspect of modern life. It is a rapidly evolving discipline based on the application of math, physics, and computation to address the needs of our networked information-age society.

#### CAREER PROSPECTS

Graduates will work in a variety of fields including: - communications and wireless networks

- electromagnetics, optics, remote sensing
- energy, power and transportation
- signal, image, and speech processing
- robotics and control systems
- semiconductor materials and integrated circuits
- nanotechnology and quantum devices
- lasers, biomedical sensing and probing, acoustics
  operating systems and software engineering
- networking and information security

#### DISTINCTIVE CHARACTERISTICS

A broad and solid foundation in mathematics and physics

An emphasis on innovation and design of sensing, communication, computing, and decision-making systems of increasing complexity in various application domains

#### **Computer Engineering**

#### **PROGRAM OVERVIEW**

Computer engineering develops students understanding of a computer system from top to bottom – from application software to operating systems to hardware and circuits. It prepares students to create the wide array of computing systems and devices that we all use and depend

#### upon every day.

#### CAREER PROSPECTS

Graduates will work in all segments of the broad and thriving computer industry, including:

- software engineering
- programming
- computer system architecture
- microprocessor/hardware design
   realtime and embedded systems
- realtime and embed
- operating systems
- human machine interfaces
- artificial intelligence
- image and speech processing
- cloud computing and large-scale data

#### **DISTINCTIVE CHARACTERISTICS**

A broad and solid foundation in mathematics, and computing skills

A large degree of flexibility in the curriculum that enables students to pursue topics of interest among the many sub-disciplines in computing

#### **Mechanical Engineering**

#### **PROGRAM OVERVIEW**

Mechanical engineering is one of the most diverse programs in the field of engineering. It affects almost all aspects of our lives and embraces many areas of specialization: automotive systems; bioengineering; combustion and propulsion; design methodology and tribology; dynamic systems and controls; energy systems and thermodynamics; fluid mechanics; heat transfer; manufacturing and production; materials behavior and processing; and micro-scale and nano-scale phenomena and systems.

#### CAREER PROSPECTS

Graduates will work in technical leadership and management positions in such fields as:

- Manufacturing, energy and transportation.
- Aerospace
- Defense and security
- Computer software and electronics
- Automotive
- Environment
- Health and biological engineering
- Research and development
- Robotics
- Thermal systems
- Industrial automation

#### **DISTINCTIVE CHARACTERISTICS**

The curriculum is designed as a sequence of increasingly specialized experiences. 1st Year: mastering the basics of science 2nd Year: taking fundamental engineering courses 3rd Year: taking specialized mechanical engineering courses in the subfields of mechanical engineering, e.g. mechanical design, and manufacturing 4th Year: broadening and deepening knowledge of the field through technical elective courses Engineering design, communication, teamwork, and laboratory experiences are integrated throughout the curriculum.

#### **Civil and Environmental Engineering**

#### PROGRAM OVERVIEW

This program produces civil and environmental engineers who are responsible for the design and construction of the nation's civil and marine infrastructure (buildings, bridges, and offshore structures; highway systems, airports, and energy transport systems; dams, locks, levees, and canals; all water treatment and distribution systems; and all aspects of environmental management and pollution prevention and remediation.

#### CAREER PROSPECTS

- Graduates work in areas such as:
- construction and project management
- pollution and ecology
- water quality and treatment
- hydrology
- biohazards and contamination
- underground dynamics and waste containment
- transportation
- urban planning and management
- highway and traffic engineering
- structural behavior, analysis, and design
- smart cities and intelligent infrastructure
- disaster prevention and mitigation
- and many other emerging areas

#### **DISTINCTIVE CHARACTERISTICS**

An emphasis on fundamental knowledge, transferable skills, and lifelong learning The core and secondary area courses assure adequate breadth in civil engineering subjects, while the primary area courses allow the student to study a certain subject in great depth.



Dual Degree from Two Prestigious Universities







Students admitted to each undergraduate program, successfully complete the program and meet the requirements of both universities will receive two bachelor's degrees in their respective major fields:

•Bachelor of Science from the University of Illinois at Urbana-Champaign

•Bachelor of Engineering from Zhejiang University

## **Graduate Programs**

The ZJU-UIUC Institute is building interdisciplinary teams of graduate students. The Institute enrolls both M.S. and Ph.D. candidates and continues to grow its research programs, including mechanical engineering, electrical engineering, computer engineering, and civil and environmental engineering etc. Applications are welcome from relevant engineering disciplines, physics, materials science, and computer science and so on.

Institute aims to bring together the best practice from ZJU and UIUC, the graduate programs combine toptier research and innovation at ZJU with intensive collaborations at UIUC. The ZJU-UIUC Institute aims at fundamentally multidisciplinary challenges and leverages collaboration. The institute seeks to explore fundamental science-based solutions, comprehensive innovation, and world-class research practices as it carries out its objectives toward the most important global issues in engineering and science.

The ZJU-UIUC Institute recruits world-class scholars as faculty, research leaders, and project investigators. The Institute explores long-term challenges, and seeks to solve the problems of tomorrow. During graduate study, students have the opportunity to work and collaborate at the partner universities and serve as leaders on the International Campus. Doctoral students have joint supervisors from China and from the U.S.







## **Research Overview**

The ZJU-UIUC Institute breaks down boundaries between traditional engineering disciplines, and does not plan to establish disciplinebased departments. Instead, it creates crossdisciplinary teams and activities, and encourages multidisciplinary knowledge convergence and collaboration. Corresponding to this crossdisciplinary emphasis, experimental classes across systems sciences, data sciences, and sustainability sciences are organized for advanced students. Courses that emphasize entrepreneurship and creative problem solving are incorporated throughout the curriculum. Design courses include students from multiple degree programs, working together. These activities nurture innovators with cross-cutting, multidisciplinary knowledge.

## ZJUI Research Themes

The ZJU-UIUC Institute Research, at the Zhejiang University International Campus is a unique research enterprise for the crucial global challenges of the 21st century. In contrast to a conventional collection of single-investigators, the collaborative culture of the center will enable a world-class program. It will attract interest among leading scholars, particularly young stars with high potential. It will link tightly to industry partners, leading to significant economic development. It will complement existing capabilities on other ZJU campuses and those at UIUC in research areas that demand synergetic multidisciplinary research. The capabilities and organizational structure are intended to serve as a world-leading model for deep multidisciplinary projects and for unique academic education and research training for students in multicultural teams, ready for future research leadership.

In the 21st century, we face challenges related to air and water quality, sustainable development, lowcarbon energy production, enhancing quality of life in an aging population, improving urban infrastructure, and unleashing the full capabilities of the information age without compromise of privacy and security. Conventional work within isolated disciplines cannot cope with the most exciting opportunities. Solving major challenges requires revolutionary change throughout the research process. For example, clean water resources and freshwater management require innovations in materials, biology and pathogens, real-time flow and contaminant monitoring, water recycling, urban infrastructure, and massive data handling. Water quality monitoring, in turn, requires new classes of electrochemical sensors, electronics and wireless communications, and large-scale data processing. Water, energy, and infrastructure systems are closely linked, with opportunities for co-design and collaborative invention. This is an example that will benefit from new thinking from top to bottom, framing the issues in full context and considering the most fundamental aspects that must be solved.



## **Strategic Research**

The research organization is uniquely structured to avoid artificial barriers. For example, research challenges will be linked based on themes rather than on disciplines. Conventional colleges and departments will not be formed. Faculty members with different backgrounds will have adjacent offices to facilitate in-depth interactions. Students, at all levels, with a wide range of backgrounds, will cooperate in teams to achieve multidisciplinary cross-project training and enhance their collaborative abilities. ZJUI Research center, unique as a peer partnership across research, education, service, and economic development. The first projects of the center will be organized within three frontier interdisciplinary areas (Fig. 1): advanced materials and devices engineering systems sciences; information and data sciences; and energy, environment, and sustainable development sciences.

# a. Advanced materials and devices engineering sciences

Emerging materials take advantage of properties and structures at nano- and atomic scales. A grand challenge is to bring these innovations into a systems science framework, applying them at all scales to enable a technology revolution. Sensors and devices that can detect specific molecules or individual blood cell types must be integrated into applications that include biosensors, environmental sensors, structural sensors, and other purpose-linked sensors.

This interdisciplinary research program focuses on the design and fabrication of nanoscale devices for an intelligent, active medical device or probe, medical rototics, aerodynamics, nanomaterial for thermal conductivity, nano-photonic & plasmonics devices ,quantum electronics, millimeter and THz technologies for advanced wireless communication systems, metasurface and its applications, 3-D integrated circuits and high speed interconnects.

Strong global leadership exists within ZJU and UIUC in nanotechnology, compound semiconductors, nano-photonics, nanoelectromagnetics, low-dimensional materials, and biointeractive materials and devices.



Global data networks are less than a generation old, and new application ideas (and products) appear on a daily basis. A fundamental challenge is to bring the complete built environment, and the past few centuries of technology advances, into a comprehensive and fully linked data network. The emerging "Internet of Things" is a superficial popular perspective on the challenge. The reality is the opportunity to link billions of sensors, actuators, and computational devices into a global system. Grand challenges within this domain include digital management of transportation, new types of machine learning and artificial intelligence, highperformance computing technologies, and large-scale data integration. A tightly coupled grand challenge relates to privacy and security. In a world with billions of networked sensors and massive sets of interlinked datasets, how do we protect people from accidental or malicious data loss or misuse? Topics of emphasis include information trust, efficient data collection, secure storage, highperformance technology development, and digital manufacturing. Data acquisition will emphasize integrated nanosensors, sparse data acquisition, efficient transmission, and secure storage.

Data have value only when they are interpreted and acted upon. Central efforts in data sciences will address decision support, rapid large-scale data analysis, and data mining for prognostics and diagnostics. One example is agile digital manufacturing, by which a factory can produce small runs or even oneoff products as easily and cheaply as million-unit commodities. Agile digital manufacturing will revolutionize industrial production in Zhejiang Province and the Hangzhou Bay region.

## c. Energy, environment, and sustainable development sciences

Energy, environment, and sustainable development sciences integrate the infrastructure that supports civilization. Renewable energy, for instance, has far-reaching environmental impact, but requires new approaches for interconnection and control. Electric transportation couples the power grid with urban infrastructure in novel ways. Within this area, research activities include renewable energy integration and high-efficiency utilization, ways to harness data and energy coupling into an "energy Internet," infrastructure intelligence, and the integration of energy and environment. In the long run, human development must be sustainable and resilient. Multidisciplinary challenges of sustainability and resiliency form the heart of this research area. Linked environmental and energy issues are constraining the development of China and other developing countries. They are impacting the future of even the most developed nations, and aging infrastructure demands proper maintenance and a cycle of rebuilding.

The broad area of energy, environment, and sustainable development sciences combines long-established strengths of ZJU and UIUC. Research conducted within this area strives to study and design energy infrastructure, healthy and safe built environments, and facilities to maximize productive power while minimizing damage to natural environments. At the component and subsystem level, the center will emphasize intelligent building technologies, such as composite materials for insulation and thermal management, components and modular energy-conversion blocks to manage and enhance indoor air quality and comfort, and harvesting of sunlight and solar energy. Heterogeneous system behavior, as well as coupled energy and information flows, will be modeled.

## **Faculty Overview**

ZJU-UIUC Institute recruits outstanding scholars established in their fields and top young scientists globally. In line with international practices, ZJUI implements a tenure-track appointment system.

## **Faculty Composition**

Talent recruited from top-tier international universities that include UIUC, ZJU, MIT, UC Berkeley, CalTech, Carnegie Mellon, Johns Hopkins, Tsinghua, HKUST, Cambridge, etc.

## **Faculty Recruiting**

Outstanding scholars established in their fieldsProfessors of international stature

• Top young scientists and engineers



## **Faculty Directory**



LI Er-Ping Dean, ZJUI Distinguished Professor Fellow, IEEE

Prof. LI Er-Ping is the Dean of ZJUI, Director for RF and Nanoelectronic Research Center at Zhejiang University, China. He received the Ph.D. Degree in Electrical Engineering from Sheffield Hallam University, Sheffield, U.K, in 1992. In late 1992, he started to work in Singapore as a Senior Research Fellow, Principal Research Engineer at the Singapore Research Institute and Industry. In 2000, he joined the Singapore A\*STAR National Research Institute of High Performance Computing as a Principal Scientist and Director of the Electronic and Photonics Department, and then as Senior Director for Research of the Institute. Concurrently, he worked as Associate Professor at the Department of Electrical and Computer Engineering(ECE) of National University of Singapore from 2002 to 2007. In 2010, he joined Zhejiang University. His research interests include electrical modeling and design of micro/ nano-scale integrated circuits, 3D electronic package integration and nano-plasmonic technology.



Philip T. Krein Executive Dean, ZJUI Professor and Grainger Endowed Chair Emeritus, UIUC Member, U.S. National Academy of Engineering Fellow, IEEE

Prof. Philip T. Krein, Executive Dean of ZJUI, holds the Grainger Endowed Emeritus Chair in Electric Machinery and Electromechanics and is Professor Emeritus and Director of the Grainger Center for Electric Machinery and Electromechanics, UIUC. He received the M.S. and Ph.D. degrees in electrical engineering from the University of Illinois at Urbana Champaign. He published an undergraduate textbook. Elements of Power Electronics (Oxford University Press. second edition 2015). In 2001, he helped initiate the International Future Energy Challenge, a major student competition involving fuel cell power conversion and energy efficiency. He holds thirty-four U.S. patents with additional patents pending. Dr. Krein is a registered professional engineer in Illinois and in Oregon. He is a Fellow of the IEEE, and in 2003 received the IEEE William E. Newell Award in Power Electronics. In 2015-2016, he is Chair of the IEEE Transportation Electrification Community. He was elected to the U.S. National Academy of Engineering in 2016. His research interests address all aspects of power electronics, machines, drives, electric transportation, and electrical energy, with emphasis on nonlinear control approaches.



MA Hao Vice Dean, ZJUI Professor, ZJUI

Prof. MA Hao is the Vice Dean of ZJUI. He received the B.S., M.S. and Ph.D. degrees from Zhejiang University, Hangzhou, China, in 1991, 1994 and 1997 respectively, all in Electrical Engineering. Since 1997, he worked as a lecturer, associate professor and professor at Zhejiang University. He also served as Director of Academic Committee of China Power Supply Society and Vice Dean of college of electrical engineering, Zhejiang University (2013-2017), AdCom member of IEEE Industrial Electronics Society (2014-2015), Technical Program Chair of IEEE PEAC 2014, Technical Program Chair of IEEE ISIE 2012, and was served as Co-chair of Power Electronics and Energy Conversion, IEEE IECON 2010, Co-chair of Power Electronics and Energy Conversion, IEEE IECON 2013, and Special Session Co-chair of IEEE IECON 2017. His research interests include Advanced Control in Power Electronics Circuits and Systems, and Application of Power Electronics.

## Advanced materials and devices engineering sciences



K.C. Ting Professor, ZJUI



Dr. Ting is a Professor at ZJUI and Vice Dean of International Campus, ZJU. He graduated from the National Taiwan University with a B.S. degree, the University of Kentucky with an M.S., and the University of Illinois with his Ph.D. All three degrees are in agricultural engineering. Before joining Zhejiang University, he was with the University of Illinois at Urbana-Champaign as Professor and Head of the Agricultural and Biological Engineering Department.

Research interest: Precision and Information Agriculture, Agricultural and Biosystems Management, Agricultural Safety and Health, Environmental Stewardship, Bio-sensors, Bio-instrumentation, Bio-informatics and Bio-nanotechnology, Intelligent Machinery Systems, Automation of Biological Systems, Advanced Life Support Systems

Dr. Ong is an Associate Professor at ZJUI. He graduated with a B.Eng in Mechanical Engineering from the National University of Singapore (NUS) and was the valedictorian of his class and recipient of the IES gold medal and Lee Kuan Yew gold medal in 2002. He also received a M.Eng from NUS in 2004 where he developed a robot for performing experiments used in drug discovery. In 2015 he received his Ph.D. in Mechanical Engineering at Carnegie Mellon University under Prof. Jonathan Malen and Prof. Alan McGaughey, where he studied nanoscale heat transfer focusing on organic-inorganic nanostructured materials using both experimental and simulation techniques. Before becoming a faculty at ZJUI, he was a joint post-doctoral fellow at Columbia University and Carnegie Mellon University working with chemists to characterize novel hybrid materials.

Research interest: Nanoscale Heat Transfer, BioMEMS, Energy

ONG Wee-Liat Associate Professor, ZJUI



R SHAO Fangwei B Associate Professor, ZJUI



CHEN Wenchao Assistant Professor, ZJUI

Dr. Shao is an Associate Professor at ZJUI. She graduated from Fudan University with B.S and M.S in Chemistry. She then moved to USA to pursue her Ph.D. at California Institute of Technology under the supervision of Professor Jacqueline K. Barton from 2002 to 2007. She further obtained postdoctoral research training at Harvard Medical School/Massachusetts General Hospital from 2007-2010 at Professor (M.D.) Ralph Weissleder's group. She has begun her independent academic career at Division of Chemistry and Biological Chemistry at Nanyang Technological University (Singapore) as Nanyang Assistant Professor since 2010.

Research interest: Nucleic Acid Chemistry, Bioinorganic Chemistry, Chemical Biology, and DNA Nanotechnology

Dr. Chen is an Assistant Professor at ZJUI. He received the Ph.D. degree in electrical and computer engineering from University of Florida, Gainesville, FL, USA, in 2014, the M.E. degree in electronic engineering from Shanghai Jiao Tong University, Shanghai, China, in 2009, and the B.E. degree in information engineering from Xi'an Jiaotong University, Xi'an, China, in 2006. Before becoming a faculty at ZJUI, he was a research fellow at College of ISEE, Zhejiang University. Dr. Chen has published over 20 peer-reviewed journal papers as well as 1 book chapter. He has been awarded for several awards and also served as Technical Program Committee Member of IEEE MTT-S IMWS 2016, IEEE EDAPS 2017.

Research interest: Multi-physics Modeling and Computation of 3D Integrated Circuits and Device, Nano Electronics, Computational Electromagnetics



**CUI Jiahuan** 

Assistant Professor, ZJUI

Dr. Cui is an Assistant Professor at ZJUI. He received his Ph.D from the University of Cambridge in 2016 and his undergraduate degree from Xi'an Jiaotong University in 2012. He also visited the University of California, Los Angeles in 2012. Prior to joining the ZJUI institute, he worked at the University of Cambridge as a research associate on an aero-engine project sponsored by Rolls Royce and Innovate UK.

Research interests: Computational fluid dynamics, fundamental fluid mechanics and turbulence study, measurement techniques, fan and intake design. The research projects that Dr. Cui has been working on include Large eddy simulation for turbines, Low order fan/compressor modelling, and Turbulence modelling

Dr. Hu is an Assistant Professor at ZJUI and he is now leading Nanomanufacturing and Biomimetics Research Group at ZJUI. He earned the Bachelor's and Master's Degrees at Tsinghua University in China, and obtained his Ph.D. in the ECE department of UIUC working with Prof. William P. King in 2014. Before joinning ZJUI, he worked at IBM T. J. Watson Research Center as a postdoctoral research scientist for almost 3 years. He has led projects in both academia and industry, resulting to 20 peer-reviewed journal papers published in international-recognized journals including Advanced Materials, PNAS, Biomaterials and Nanotechnology. Moreover, he has a strong application-oriented mindset and filed 18 US patent disclosures (4 patents granted). In addition, he has also assisted and led several successful funded proposals including a 2 million dollars NSF EFRI award and a 200,000 dollars industrial award.

HU Huan Assistant Professor, ZJUI Assistant Dean, ZJUI

Research interests: Advanced nanomanufacturing, bio-inspired sensing, micro/nano-sensors, lab on chip. He is passionate in applying technology to the real world



TAN Shurun Assistant Professor, ZJUI

Dr. Tan is an Assistant Professor at ZJUI. He received the B.Eng. and M.Sc. from the Southeast University, Nanjing, China. He received the Ph.D. degree in Electrical Engineering from the Department of Electrical Engineering and Computer Science and the Radiation Laboratory at the University of Michigan, Ann Arbor, USA, in 2016. Before joining ZJUI, he had been affiliated with the Radiation Laboratory, and the Department of Electrical Engineering and Computer Science, the University of Michigan, Ann Arbor, as a postdoctoral research fellow since Jan. 2017 till Dec. 2018. Shurun Tan was the recipient of the Young Scientist Award in the 2018 Progress In Electromagnetics Research Symposium (PIERS) in Toyama, Japan. He constantly reviews for more than 10 renowned academic journals and international conferences. He is a member of the American Engineering Honor Society Tau Beta Pi.

Research interests: Wave propagation and scattering in random media and periodic structures, radar and radiometric geophysical remote sensing of terrestrial snow, polar ice sheet, sea ice, ocean, and vegetated land surfaces, photonic crystals and metamaterials, topological photonics, Casimir forces, electromagnetic compatibility and signal integrity, multi-scale and multi-physics analysis

## Information system and data sciences



WANG Hongwei Associate Professor, ZJUI Assistant Dean, ZJUI



Dr. Wang is a Tenured Associate Professor and the Associate Program Director of Information System and Data Science at ZJUI with the honor of specially-invited expert by Zhejiang Province. Dr. Wang conducted his PhD research at the Engineering Design Center of Cambridge University between 2007 and 2010 and he obtained his Bachelor's degree and MSc degree from Zhejiang University and Tsinghua University, respectively. Prior to joining ZJUI, Dr. Wang had been working at the University of Portsmouth for nearly 8 years, first as a Lecturer and from January 2014 as a Senior Lecturer. He has worked as PIs for over 10 projects funded by research councils, leading to the publication of one monograph and over 80 papers in SCI/EI indexed journals and conference proceedings as well as the filing of 8 patents. He is a Fellow of the Higher Education Academy and serves as a committee member of a number of key IEEE technical committees.

Research interests: Collaborative Design and Simulation, Knowledge Management and Knowledge-Based Engineering, Description and Composition of Manufacturing Resources, Condition Monitoring and Fault Diagnosis of Complex Systems, Modern Design Methods and Tools

Dr.Butala is an Assistant Professor at ZJUI. He earned his Ph.D. and M.Sc. from University of Illinois at Urbana-Champaign Department of Electrical and Computer Engineering. He then joined the technical staff at the Jet Propulsion Laboratory, California Institute of Technology as a member of the Ionospheric and Atmospheric Remote Sensing group. Before joinning ZJUI, he was a visiting research scientist at University of Illinois at Urbana Champaign.

Mark D. Butala Assistant Professor, ZJUI



Simon Hu Assistant Professor, ZJUI

Research interests: Theory of remotely sensed image formation, Monte Carlo and statistical signal processing theory and practice, and the application of rigorous Bayesian methodology to big data problems in science

Dr. Hu is an Assistant Professor at ZJUI. In 2006, he completed his Master degree in Transport and Sustainable Engineering from Imperial College London; he earned his PhD in Transport System Engineering in the same department in 2011. He is a member of Chartered Institute of Highways and Transport Engineering (CIHT) and IEEE. Before joining ZJUI, he was a research fellow at Centre for Transport Studies, Imperial College London. In the past, he obtained research grants and undertook research projects through the Royal Society, Engineering and Physical Sciences Research Council (EPSRC), UK Natural Environmental Research Council (NERC), Department for Transport (DfT), European Commission, INNOVATE UK and industry. He has published over 10 peer reviewed journal papers, 30 conference proceedings and 2 government reports.

Research interest: Transportation and Environment, Vehicle Emission Measurement and Modelling, Connected and Autonomous Vehicles, Transportation Planning and Management, Sustainable Urban Transportation Systems



YANG Liangjing Assistant Professor, ZJUI

Dr. Yang is an Assistant Professor at ZJUI. He received the B.Eng. and M.Eng. degrees in Mechanical Engineering from the National University of Singapore in 2008 and 2011, respectively. He obtained the Ph.D. degree from the University of Tokyo in 2014 with a scholarship to work in the Bio-Medical Precision Engineering Laboratory. Before joining ZJUI, he was with the Singapore University of Technology and Design, and Massachusetts Institute of Technology under a joint postdoctoral fellowship award. In SUTD and MIT, Liangjing combines his expertise in Robotics and Computer Vision to develop a vision-guided robotic micromanipulation platform which is published in IEEE Transactions on Automation Science and Engineering. He holds a US patent on a Robotic Surgical Training System. This development was named "Best Innovation in Biomedical Application" in a challenge organized by National Instrument in 2011.

Research interests: Robotics, Computer Vision, Vision-Guided Micromanipulation



Dr. Honold is a Professor(teaching) at ZJUI. He obtained the Ph.D. degree from the Technical University of Munich. Although being educated as a pure rather than applied mathematician, he has shifted his interests (especially during his stay at Zhejiang University) towards applications and done application-specific research, for example on error-detecting codes for Industrial Communication, on LDPC codes and on network coding. The current project (since 2016) on subspace codes for network coding is supported by a grant from the National Natural Science Foundation of China.

Thomas Honold Professor(Teaching), ZJUI Research interests: Algebraic coding theory and its links with abstract algebra, combinatorics and geometry



Richard Jones Senior teaching and research fellow, ZJUI

Dr. Jones is a Senior Teaching and Research Fellow at ZJUI. He got his BSc (chemical engineering) in 1981, and Ph.D. (Process Control Engineering) in 1988, both from University of Newcastle. He has many years' experience of carrying out both teaching and research in Mechanical and Electrical Engineering. Throughout his career, he worked in University of Glasgow as research fellow, in University of Auckland, Northumbria University and Massey University as senior lecturer, Southern Denmark University as Associate Professor, University of York at Research and Teaching Fellow, and University of Warwick as Teaching Fellow. Dr Jones is recognized as an excellent teacher and in 2010 got "Best Teacher in Engineering Prize" Diploma. Apart from his rich teaching experiences, Dr Jones has published extensively in the area of Modeling, Control, Identification and Instrumentation across a wide range of different applications.

Research interests: Digital Healthcare – Safe and Dependable Medical Information Systems; Diabetes Management and Automatic Blood Glucose Control; More- and All- Electric Aircraft; Body Area Networks for Continuous Health Monitoring; Actuator Design/Smart Materials

## Energy, environment, and sustainable development sciences

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XIAO Yan Program Director for Energy, Environment, and Infrastructure Sciences, ZJUI Full Professor(Tenured), ZJUI

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Dr. Xiao is the Program Director for Energy, Environment, and Infrastructure Sciences and a professor of ZJUI. Prof Xiao Yan received his PhD degree in Structural Engineering in 1989, from Kyushu University, Fukuoka, Japan. He served as the Dean in the College of Civil Engineering, Nanjing Tech University from 2015 to 2018, Dean of College of Civil Engineering at the Hunan University, from 2011 till May 2015, he joined the Astani Department of Civil and Environmental Engineering, University of Southern California from since 1994, where he had been a tenured full professor till 2011. He has more than 400 technical publications including more than ninety refereed journal papers. Many of these papers are pioneering in the relevant areas and are highly cited by scholars around the world.

Research interests: Design of structures against extreme loads, structural concrete, steel, hybrid or composite systems, structural materials, and experimental equipment development



Dr. Zhu is a Tenured Associate Professor at ZJUI. He graduated from the University of California, Davis with a Ph.D. in Civil and Environmental Engineering in 2004. Prior to that, he earned his B.S.E. and M.S.E. degrees in Hydrology and Water Resources from Wuhan University and Tsinghua University, respectively. Before joiningZJUI, from 2005 to 2018, he worked at the International Food Policy Research Institute in Washington, D.C. as a Postdoctoral Fellow, Senior Scientist and Research Fellow, conducting interdisciplinary research at the interface of hydrology, engineering, and economics for addressing real-world problems concerning sustainable water resource management, food security and associated socioeconomic outcomes under changing environment.

ZHU Tingju Associate Professor, ZJUI

Research interest: Water Resource Systems Engineering, Water-Energy-Food Nexus, Integrated Modeling of Global Water-Food Systems, Flood Protection Planning, Climate Change Adaptation, Water Economics and Policy



Cristoforo Demartino Assistant Professor, ZJUI

Dr. Demartino is an Assistant Professor at ZJUI. His B.Sc. (2008) and M.Sc. (2010) full marks with honors in Civil Engineering at Mediterranea University of Reggio Calabria. 2nd level University Master degree at University of Rome "La Sapienza" with a thesis on "Evaluation of the seismic economic losses of precast concrete industrial buildings" in 2012. Ph.D. in Structural Engineering at the University of Naples "Federico II" with a thesis on "Aerodynamics and aeroelastic behavior of ice-accreted bridge cables" in 2014. Before joinning ZJUI, he was a Postdoc of the College of Civil Engineering at the Nanjing Tech University. He is the author of more than 65 publications in international journals (30) and conferences (36) mainly on the topics of Structural Engineering, Wind Engineering, Earthquake Engineering, and Structural Dynamics.

Research interest: Structural Engineering, Wind Engineering, Earthquake Engineering, Structural Dynamics, Bridge Engineering



LI Binbin

Assistant Professor, ZJUI

Dr. Li is an Assistant Professor at ZJUI. He obtained his Ph.D. in Civil Engineering from the University of California-Berkelev in 2016. Before joining ZJU, he worked as a research associate at the University of Liverpool. Dr. Li is a member of the American Society of Civil Engineers (ASCE), the International Society for Structural Health Monitoring of Intelligence Infrastructure (ISHMII), the International Association for Structural Safety and Reliability (IASSAR), the Civil Engineering Risk and Reliability Association (CERRA) and the Society for Engineering Mechanics (SEM). He is currently serving as an active reviewer of many international journals, including Structural Health Monitoring, Structural Control and Health Monitoring, Journal of Civil Structural Health Monitoring, Journal of Sound and Vibration, and Mechanical Systems and Signal Processing.

Research interests: Structural Dynamics, Risk & Uncertainty, Structural Health Monitoring, Bayesian statistics



Dr. Li is an Assistant Professor at ZJUI. He received the B.E. degree and Ph.D. degree in electrical engineering from the Department of Electrical Engineering, Zhejiang University, Hangzhou, China, in 2008 and 2014, respectively. From April to September in 2008, he was an internship student with the Power Application Design Center in National Semiconductor (Hong Kong) Co.Ltd. From December 2010 to October 2011, he was a visiting scholar with the Freedm Center in North Carolina State University. From December 2013 to June 2014, he was a research assistant in Hong Kong Polytechnic University. Before joining ZJUI, from July 2014 to July 2017, he was a postdoctoral fellow in Department of Electrical and Computer Engineering, Ryerson University, Canada.

LI Chushan Assistant Professor, ZJUI

Research interests: High Power Density Power Converter, Multilevel Converter, Transportation Electrification, High Power Drive System



Dr. Zhou is a lecturer at ZJUI. She obtained her Ph.D. in Civil Engineering from the University of Nevada, Reno in 2016. She completed her Master degree in Structure Engineering from Dalian University of Technology. She has a background in Civil Engineering and specializes in Transport and Structure Engineering.Before joining ZJUI, she worked as a lecturer at Liverpool John Moores University.

Research interests: Traffic operation and simulation. Intelligent transportation system, Structure health monitoring

**ZHOU Cui** Lecturer, ZJUI

#### **Tenure-Track Faculty Positions**

Application materials should include a cover letter with current contact information including email address, as well as complete curriculum vitae, statements of research and teaching goals, and the names of three or more references. Please submit applications at http://zui.illinois.edu or at zjuihr@ zju.edu.cn. For more information, please visit job opportunities on http://zjui.zju.edu.cn

### **Adjunct Faculties**



**CHEN Hong** 

Professor

College of Environmental &

Resource Science, ZJU



**CHEN Wei** 

Professor

and Technology, ZJU



Engineering, ZJU



JU Bingfeng Professor College of Computer Science School of Mechanical

Lü Chaofeng Professor College of Civil Engineering and Architecture. ZJU



**QI Donglian** Professor College of Electrical Engineering, ZJU

**ZHANG Honggang** Professor College of Information Science & Electronic Engineering, ZJU

XU Yang Professor College of Information Science & Electronic Engineering, ZJU

**ZHANG** Jianbo Professor Department of Physics. UIUC



B.F. Spencer Jr. Professor **Civil and Environmental** Mechanical Science and Engineering, UIUC Engineering, UIUC



**Steven Lumetta** Associate Professor **Electrical and Computer** Engineering, UIUC



Professor

**Ryan Flanagan** 

Lecturer

Department of English.

UIUC





**Jianming Jin** Professor **Electrical and Computer** Engineering, UIUC

Marilyn Holguin Lecturer Department of English, LILLC



Xinlei Wang Professor **Mechanical Science** and Engineering, UIUC



Volodymyr Kindratenko

Associate Professor

**Electrical and Computer** 

Engineering, UIUC



#### Due to limited space, only list a few

2019 Mathematical Contest In Modeling Certificate of Achievemen

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## **Activities and Achievements**

Students have participated or led a wide range of activities, on the International campus and on other ZJU campuses. From faculty-led research projects to the Haining Poetry Festival, there are no limits to student involvement. From cooking clubs to multicultural events, there are no limits on extracurricular activities. Students have been active in several sports clubs, touring groups, global engineering competitions, and research workshops. Our students have had many opportunities to demonstrate their creativity and technical excellence.















Outstanding Winner INFORMS Award in the 2019 international MCM







**Freshmen got First Prize in structure** design competition of ZJU

学生 冯亦奇、张开航、王铮 荣获 浙江大学"中天杯"第十九届大学生结构设计竞赛 一等奖 浙江大学 二〇一八年六月



Chao published a

paper in Physical

**Metamaterial for** 

**Superscattering Light** 



**ZHANG Yu won the 1st place in China Division and 4th place** in the world in 2019 **ASCE Mid-Pacific Student Conference.** 



PhD candidate QIAN hental Observation of Superscatterin **Review Letters entitled** 



**ZJUI PhD candidate QIN** Pengfei and ZJU doctor YANG published a paper in **Nature Communications,** introduced a new type of hyperbolic metasurface

## **Features**

#### **1. Interdisciplinary Innovation Cultivation**

Today's most important engineering challenges require expert teamwork across many disciplines. ZJUI students learn the deep knowledge and fundamentals that define their core discipline, and work together across all disciplines on design projects and comprehensive problems. Advanced classes in systems-oriented topics, student teams built around major international competitions, and visitors from all over the world help to demonstrate convergence and collaboration. Students are engaged in multidisciplinary engineering challenges from their very first semester. The engagement in design and in broad engineering challenges progresses throughout the curriculum. By their final year, students are organizing and working on multidiscipline design teams to invent a solution to a problem they have chosen.

#### 2. Elite Education

•First-class faculty members are recruited worldwide. Faculty members from ZJU and UIUC also participate in our programs. The undergraduate student-faculty ratio at ZJUI is kept low to foster mentoring and active engagement.

•Faculty-student interaction is emphasized. Courses combine lectures, discussions, and experiments. Visitors and faculty are involved in an active seminar series. Laboratory facilities are built to follow the best global practices.

•We are seamlessly connected to our partners. Programs, curricula, core teaching materials, quality standards, and outcome-based evaluations are drawn from our partners. Each curriculum features a broad range of courses and meets general education requirements established by UIUC and of ZJU.

•First-term students participate in Introduction to Engineering. This course includes weekly seminars and team design project activities. Scientists and engineers from academia and industry worldwide are invited to give seminars to broaden student horizons. Student teams study broad design challenges, presenting their proposals to the full group. •We value the integration of theory and practice. We seek to build scientific foundations and address broad technology applications. We use question-oriented learning, research, and practical training. Students participate in research projects both in the classroom and alongside faculty members and graduate students. We also provide a wide range of internship opportunities, and build our students' capacity for innovation, invention, and entrepreneurship.

# 3. Residential college model and full-person education

The International Campus has a Residential College housing system. Each residential college provides a friendly and supportive learning-and-living environment. Each student has a private bedroom, shared bathroom, and common living space. Each College offers library facilities, study rooms, discussion and interactive spaces, laundry facilities, activity spaces, and fitness rooms. Each College becomes a close-knit community, serving as a microcosm of the diverse student population on the International Campus The Residential Colleges are significant in the everyday lives of ZJUI's students. The colleges provide an exceptional opportunity to meet and learn from students, tutors, and professors with different

interests – people students might not otherwise encounter in their courses or extracurricular activities.

The Master of the Residential College, Professor Lap-Chee Tsui, is a renowned educator who served as President of the University of Hong Kong for 12 years. The Fellows, Tutors and Counselors in each College seek to help students make the most of their learning experience, through general education, personal development, extracurricular activities, and events. The program seeks to help students become wellrounded people with knowledge, leadership skills, competence, creativity, morality, and individuality. A trained support team is available on campus 24 hours a day.

#### 4. First-Class Campus

The International Campus provides faculty and students with a first-class environment for living and learning.

•Support and services are provided by the Campus Operation & Service Center and the Student Center.

•Teaching facilities include classrooms equipped with interactive integrated teaching systems, classrooms with flexible furniture and configurations, small meeting and discussion rooms, and world-class laboratories.

-Academic support through the library, outstanding information technology, and access to information and study facilities.

•Sports and activity facilities include music rooms, game rooms, a massive sports center, and student activity rooms.

## **Student Education Plan**





Student Cultivation 36

Excellence Quality Impact

New models of engineering research, education, and engagement



## **Features of the curriculum**

- Engineering classes and learning from the very first day. The conventional curriculum in China enters engineering subjects after two years
- Joint courses that converge disciplines throughout the program, in every term
  Cross-discipline advanced courses to provide
- a broad perspective
- Design that transcends the disciplines
- Ongoing creativity, entrepreneurship and leadership learning and opportunities

## Features of ZJU education

- Cross-discipline education
- Enhanced interaction between faculty and students
- Evaluation and feedback throughout the process
- Extend a vision of engineering toward grand global challenges
- Combine theory and practice





Industry Experience

## **Student discuss how ZJUI change their lives**

CHEN Haonan Electrical Engineering Class of 2020

My life in ZJUI is fantastic. Our institute encourage us to try to realize our idea. It will be one of the most important experience in my whole life. I'd like to encourage my little cousins who are interested in engineering to apply for ZJUI in the future.

When most of our students want to do summer interns in labs but we haven't have one until now. Pro Li helped us to contact labs in the Yuquan Campus, Zhejiang University. These days, Prof. Krein encouraged us to join student competitions globally. Also, our institute does not only focus on professional education but also makes us aware of our responsibility, application, social implications and so on. Our courses have much more active learning class than any other universities in mainland China.

> Nóra Kovács Civil Engineering Class of 2021

Studying at ZJUI has a special atmosphere.

As a European, learning from both American and Chinese teachers is an interesting and a once in a lifetime experience. Since the university is located in China, I get to know the way they live and study here, which has definitely broadened my mind. While living in China, I can also see how the American education system works. Both of these are very different from the European universities, and it's fun to learn about these with my peers.

Living on this campus also provides me to meet people from different countries, so I can get a picture from the whole world.



and memorable. Here we can talk to the leading professors in all fields, do discussions and workshops with friends around the world and take the courses from top universities. In everyday life we balance the schoolwork with our plentiful events. The residential college serves as the home for all students to rest, study, exercise and party. This is a place where you can start building a lifelong relationship with the things you love.

> Zheng Shen Computer Engineering Class of 2022

ZJUI attracts me at the first sight for its hauntingly beauty and refined environment. Like a fictitious land of peace, it provides a distinct way from Chinese traditional education.

ZJUI never allows students to cram before the final exam. Emphasizing learning process, every part of the course including homework, quizzes, labs, several midterms and the final exam, makes up the whole grading, which enables us to study continuously and effectively.

In the freshman year at ZJUI, I am trained with engineering qualities such as collaborative and academic nicety, which broadens my international horizons. Therefore, I am able to think comprehensively and precisely. Li Jinyuan Civil Engineerin Class of 2022

If you try to image an international college in China, it must be like ZJUI. Here, you can enjoy a beautiful campus, comfortable rest space, patient professors and enthusiastic international friends. What's more, students in ZJUI are closer to the global notion. We broke the traditional education, trying to dig innovation ability. I am a shy girl before coming to ZJUI, but the specific education mode improves my oral English ability quickly and shows me the broader engineering world.



ZJUI builds a convenient bridge for me to gain knowledge and life experience from both Zhejiang University and Illinois. It offers a stage to train my expressive ability. Chinese students may be lack of creativity and feel bored under traditional teaching style, but it will never happen in ZJUI. Thanks to the mix style teaching, I found happiness in studying and is now learning actively about how to learn. ZJUI style is a challenge and chance to Chinese education, and it is also our fortune to be able to get in touch with such an advanced educational pattern.

First of all, we now have professionals from Illinois, who set us in a international atmosphere to experience the global-style teaching and learning. Their open mind gives us the chance to think more and create more. Our grading system is unlike any other Chinese university, which focuses more on the learning process rather than the result. Chinese education's biggest problem is its aim for a good result that causes the students to be eager to quick success. But this is totally different when I was study in ZJUI. This bring me the access to a global opportunity, to have more creative mind and stronger heart, thus be more international to the global situations. Also, we now have plenty of chances to listen to the famous professionals' speech. They always show us the most advanced technology and minds, and we are able to select the information about the field we are interested in from their speech. Because of this, we can easily get in touch with the global information and chances.

CHEN Yifan Computer Engineering Class of 2020

ZJUI gives us a good opportunity to explore knowledge in an English environment and a global climate. Personally speaking, I like English, and spending a whole year in ZJUI improves my English. Also, here we have international friends and teachers from all over the world with totally different teaching methods and way of thinking, which makes me more inclusive.

I think we have the access to a global opportunity within our daily class. In everyday class, we get professional knowledge in a non-conventional way. Some teacher likes to provoke our thoughts on some problems, in which way we can learn. Some teacher prefers rigorous proofs. Sometimes we will have the opportunity to have seminars with invited professors from different universities or different departments. In this way, we broaden our horizons. What's more, some global workshops held in our college and we can also attend, although can only understand little of it. But somehow there are some limits that we have few opportunities to communicate with students from UIUC or graduate students abroad. I hope after learning the bases we can have internship opportunities to top-level laboratories or companies.



Life in ZJUI has been a diverse treat for me. During my study I learned a lot from my struggles and mistakes but all of these has led to an increase in treasure of knowledge inside. However, ZJUI has taught me another great thing, that you can combine the innovation of the West with the persistency of the East to create next generation of enginners. Throughout the courses I feel like I have absorbed best of both of the East and the West. Each of the great professors have immense store of knowledge in their respective field and delivers to us in the adequate amount. Additionally, I get the labs to test my knowledge with reality.

To sum up, ZJUI's vision of next generation engineers is helping me to achieve my dreams.

## **International Campus**

The ZJU-UIUC Institute is based on the Zhejiang University International Campus. The International Campus was initiated in 2013 to explore new models of higher education that combine the best practices of the east and west. The campus draws from advanced educational experiences around the world and cultivates innovative talent with an international perspective. The campus development plan was approved by the Ministry of Education in October 2015, and the first students enrolled in September 2016.

Zhejiang University will cooperate with several world's top 20 universities(or top 5 at individual discipline level) and respectively build joint institutes with each of them. So far, ZJU-Imperial Joint Lab for Applied Data Science has opened. Institute of China Studies, ZJU-UoE Institute and ZJU-UIUC Institute have been formally established.

International Campus is located at Haining, covering a land area of approximately 66.67 hectares and has a total floor area of 399,300 square meters.

## Vision

The International Campus strives to be a work, inspire, live, and learn (WILL) campus for relevant, impactful, significant, and exciting (RISE) international education and research.

### Mission

The campus seeks to empower future international leaders and citizens with enabling scholarly progressive academic resonance kinetics (SPARK).

## Location

The International Campus is located in Haining in northeast Zhejiang province. Haining is at the heart of the Yangtze River Delta economic zone, with Hangzhou to the west, Suzhou to the north, and Shanghai only 120 kilometers to the east. There are five domestic and international airports within 2 hours' drive, The Shanghai-Hangzhou high-speed railway crosses the town. Multiple expressways in and around the city connect to Hangzhou, Suzhou, Shanghai, Ningbo, and the rest of China. An intercity railway from Hangzhou to Haining, with a station near the campus main gate, is under construction.

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**ZJU-UIUC** 

**INSTITUTE** 

Suzhou

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Hangzhou

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Life on campus











## **Support Us**

Your support is vital to enable ZJUI fulfil its mission to prepare engineers in unique ways for global leadership and impact. The Institute strives for technical and scientific excellence, innovation and creativity, and new solutions for societal needs. ZJUI relies on funding from a wide range of sources and there are many ways that you can support crossdisciplinary research and education.

Please consider supporting ZJUI today. The support of individuals, companies, and organisations help our Institute deliver world-class research and teaching. We seek to be widely recognized as one of the best engineering colleges in the world.

Contact Us: Phone: +86 571 8757 2500 Email: minglu@intl.zju.edu.cn



### **Map your Success with**





## ZJU-UIUC INSTITUTE Zhejiang University/University of Illinois at Urbana-Champaign Institute

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