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Students in the Class of 2021 Impact Intelligent Maintenance

October 21st, 2019

Writer: Wang Hongwei

Photo: Wang Hongwei, Tao Shuting



ZJUI computer engineering students Du Yangkai, Huang Jiayuan, and Tao Shuting in the ZJUI Class of 2021 presented their work on “Knowledge Graph Construction and Reasoning for Intelligent Maintenance of Power Plants” at the International Conference on e-Business Engineering (ICEBE). Their paper also will be published in “Advances in E-business Engineering for Ubiquitous Computing” in the Springer-Verlag Lecture Notes on Data Engineering and Communication Technologies. The paper was prepared during summer 2019, and Prof. Wang Hongwei advised the team. 13 papers were selected and recommended for full publication out of nearly 100 papers at the conference. The ICEBE is sponsored by the IEEE computer society, and serves as a flagship event for the IEEE Technical Committee on Business Informatics and Systems and for the National Engineering Laboratory for E-Commerce Technologies (NELECT). The 2019 conference was held at Fudan University in October.

The paper “Fault data analysis and mining for intelligent maintenance”, was selected for the Zhejiang University Student Research Training Program. The paper proposes various models to set up the process. The process involves automatic construction and reasoning about knowledge graphs to support intelligent maintenance of complex power equipment. The student team is hoping the work will lead to a new generation of intelligent maintenance systems.

Project research is a crucial part of ZJUI information system and data sciences research program. Guided by Prof. Wang Hongwei, students cooperate with China National Nuclear Power Co., Ltd., China Huadian Corporation Ltd. and other major power corporations. The focus is on knowledge-driven intelligent design, manufacturing and maintenance of large engineering equipment. In the past year, this team published about 20 papers on methods for complex systems, knowledge extraction and modeling, fault diagnosis, and manufacturing system optimization. The student teams in 2018 and 2019 are composed of undergraduates. Congratulations to these students on their impact in international forums. 🇺🇸

ZJUI welcome ceremony for the Class of 2023

September 8, 2019

Writer: Zhou Yifu, Zhang Yi
 Photo: Xia Ping, Lian Xinyu, Yu Zeduo
 Translator: Shu Yue



It was exciting to meet the new student cohort early in September at the Zhejiang University/University of Illinois at Urbana - Champaign Institute (ZJUI) welcome ceremony at the International Campus Auditorium. This group of 189 new freshmen and 18 new doctoral students began their life on the International Campus.

Prof. Li Erping, Dean of ZJUI, Prof. Philip Krein, Executive Dean, Prof. Ma Hao, Associate Dean, and ZJUI faculty and staff organized and participated in the event. Representatives from the ZJU International campus and UIUC campus also participated. With new ZJUI undergraduate students, new doctoral candidates, parents, family members, and other guests, about 400 people in total participated in the ceremony.

Prof. He Lianzhen, introduced the international campus to the participants, and delivered a message to freshmen on behalf of ZJU. She encouraged new students to thirst for knowledge, to be open to a wide range of new experiences, to pursue excellence, and to focus on the future. She encouraged the freshmen to persist in seeking truth and to serve the world.

Philippe Geubelle, Executive Associate Dean in the Grainger College of Engineering at the University of Illinois introduced Illinois to the audience. He gave perspectives about education, research, alumni, and impact.

Dean Li Erping introduced the institute's cross-disciplinary education innovations, and urged the students to pursue a set of core intellectual capabilities: developing character, pursuing rich positive experiences, and self-definition. He stressed that, in addition to having a strong grasp of specialized knowledge, students are also expected to have a broad vision, and a comprehensive understanding of knowledge across other fields. He affirmed that everyone can learn critical thinking, seek innovation and a global view, participate in independent life-long learning, gain strengths in communication and teamwork, develop leadership skills, and support positive development of the nation.

Many of the new freshmen showcased their skills in a talent show. The performances included a Cucurbit flute (a traditional Chinese instrument), classical dance, poetry recitation, singing, and multiple bands. The show was well received by the audience. The ceremony included a “parent thanks” segment, a moving tribute with students and parents on stage.

Jiang Han, the freshman representative, explained his thoughts as he enters the university. He wants to make new friends and socialize. He is determined to seize opportunities, study diligently, overcome difficulties, and forge ahead. Mo Kanya, a sophomore representative, shared his experiences as a ZJUI student, and expressed his hope that sharing his experiences will help freshmen adapt to life in college more quickly.

Professor Wee-Liat Ong gave a talk as a faculty representative. He shared some of the differences between university and high school with the students. He emphasized that students must be motivated and diligent in taking responsibility for their own learning. He encouraged students to achieve personal responsibility, and urged them to reach out to their professors for help and guidance. He emphasized the role of faculty as coaches more than teachers.

Dean Philip Krein pointed out that the 21st century will see even more acceleration of innovation and change than has been seen before. He pointed out the astounding changes in the way people live that occurred largely in the 20th century, and urged freshmen to take on their roles as creators of the future.

After the welcome ceremony, the students began their new college life in this young, creative, and vibrant institute. The whole institute and the parent partners hope that all ZJUI students will care about the world, have the courage to explore and innovate, and make contributions to the progress of global society. The future is waiting to be invented; let us forge ahead together! 🇺🇸

International Workshop on Electromagnetic Compatibility of Integrated Circuits hosted at ZJUI

October 23th, 2019

Writer: Zhou Liming
Photo: Xia Ping, Jin Xiufang, Zhang Yi
Translator: Shu Yue



A three-day Workshop on the Electromagnetic Compatibility of Integrated Circuits was launched in the Multimedia Hall on the International Campus (IC) of Zhejiang University (ZJU) in October. The conference was being held in China for the first time since its inception in 1999. More than 180 experts and scholars from home and overseas attended the conference.

Etienne Sicard, a founding scientist of Electromagnetic Compatibility of Integrated Circuits (IC EMC) Research and Standards and professor at the University of Toulouse, France, presented "Technology Trends and Electromagnetic Compatibility of Integrated Circuits" as the keynote talk. He gave an overview of EMC research challenges for the attendees.

Parallel sessions during the conference focused on the main theme and key subtopics. The activities included seminars, oral reports, and poster presentations. Internationally renowned scholars from all over the world shared their research activities and achievements. They networked on the latest developments in the field of electromagnetic compatibility.

There were 184 registered participants in the conference, 51 of whom were from overseas. The conference received 136 submissions, including 91 articles from China and 45 from overseas. Among these, 120 articles were accepted. The workshop highlighted plans for the development and technical cooperation of electronic and electrical engineering disciplines at ZJUI. 📺

— ZJUI sophomore student, Wang Chen (computer engineering), Su Yipeng (computer engineering), Li Haoran (electrical engineering), and Shen Yueqi (civil engineering), won third prize in the student paper competition at the Cross-strait Workshop on Monitoring and Control in Civil Engineering in August. Their paper "Modal identification of bridge structures based on fast Bayesian FFT method" was the only undergraduate contribution to the conference. They competed against nearly 100 graduate students. Wang Chen received the highest score in his presentation session as part of scoring for the overall award.

This essay originated from the ZJUI summer lab internship program. ZJUI helps arrange summer lab and corporate internship opportunities for students each year. Wang Chen joined the team of Professor Li Binbin during the freshman summer vacation interval in 2019. This project group is an example of ZJUI cross-disciplinary education innovation. Students from multiple programs discussed and studied together and used algorithms to solve civil engineering problems.

Nearly 100 students from Tsinghua University, Tongji University, Dalian University of Technology, Beijing University of Aeronautics and Astronautics and other universities participated in the student paper competition. Although, it was his first time to compete with graduate students, Wang Chen said he was "not nervous at all", "because there are a lot of opportunities to present in ZJUI's daily courses, and because the presentation and slides are prepared by myself, and have been practiced more than a dozen times before participation."

When it comes to cross-disciplinary education, Prof. Li said that emerging data science innovations provide new ideas for solving traditional civil engineering problems, such as the evaluation of structure safety status, that are difficult to address with conventional mechanics analysis. The solution of the problem studied in this project involved two aspects: physical modeling (positive problem) and data analysis (inverse problem).. Prof. Li's research introduces basic principles of data science into civil engineering research and combines positive and inverse analysis into the civil engineering models. This strategy is in line with ZJUI interdisciplinary and convergent research. 📺



Photo: Wang Chen provided
Translator: Shu Yue

Undergraduates competed with graduate students, and won third prize in a global paper competition

September 6, 2019

ZJUI-EEIS Professors visits UIUC to discuss sustainable systems with collaborators

September 20th, 2019

Writer: Qi Shengwei
Photo: EEIS



The ZJUI civil engineering faculty team visited the Department of Civil and Environmental Engineering (CEE) at the University of Illinois at Urbana-Champaign (UIUC) in August to discuss a major research thrust. Profs. Yan Xiao, Simon Hu, Cristoforo Demartino, and Philip Krein participated in person, with other ZJUI faculty connecting from China. The group discussed plans for the Energy, Environment and Infrastructure Sciences (EEIS) research program, communicated with UIUC faculty about collaboration, and hosted seminar talks on sustainable systems.

Sustainability is an important area of interdisciplinary research at the ZJUI Institute. Prof. Xiao is leading a new Center for Research on Sustainable Systems (CROSS) to organize research projects within this area. Seminar topics addressed environmental and sustainable energy development, and exchanged a series of questions on scientific research, student training, ZJUI laboratory construction, and relationships to other CEE research themes. Seminar presentations included academic leaders from various UIUC research activities, including the Sustainable and Resilient Infrastructure System Program, the Smart Transportation Infrastructure Initiative, and the Energy-Water-Environment sustainability program.

Some of the ZJUI junior civil engineering students at UIUC on exchange and several UIUC students participated in the seminar. A ZJUI student team reported their SRTP research results. Prof. Tingju Zhu and Simon Hu are participating in the ZJUI-UIUC Faculty Fellows Program, and will be working in CEE through January 2020 to facilitate research and teaching collaboration. 📺

Wang Jinghua, a computer engineering student in the Class of 2020, presented a paper, as the sole author, at the IEEE HONET-ICT conference (the IEEE International Conference on Smart Cities: Improving Quality of Life using ICT, IoT, and AI) held in Charlotte, North Carolina, USA in October. His paper was "A Best-Model-Selecting Hierarchical Approach for Flight Status Classification," and was selected through a peer review process.. Jinghua Wang was inspired by his summer projects and faculty interactions to carry out this work independently. The atmosphere was lively during the presentation, and the work was widely discussed by the participants.

His paper proposed a flight state predictor based on advanced machine learning technology. The results can be applied to intelligent air traffic systems to improve time prediction and support more convenient air travel management. It promises to provide airlines with more efficient flight schedules.

The IEEE HONET-ICT conference included scientific research activities and achievements on intelligent street lamps, automatic driving, urban security systems, transportation systems, buildings, farms, urban data systems, energy scheduling systems, and related topics. 📺

Student of Class of 2020 publishes at the IEEE HONET-ICT international conference

October 18th, 2019

Translator: Hu Hao



Two students in the Class of 2022 selected as winners in the UIUC Undergraduate Essay Contest

September 20th, 2019

Writer: Qi Shengwei
Photo: EEIS
Translator: Jin Xiufang



Students Xiwei Wang and Xichu Xiao in the Class of 2022 participated in the UIUC Undergraduate Essay Contest under the guidance of Prof. Professor Kent Quaney, an Adjunct Faculty member at ZJUI. Both students were selected among the winners of the contest. The UIUC Undergraduate Essay Contest is open to all students in the general writing courses. There are 12 winners annually, selected by experts from more than 3,000

submissions. Occasionally, the contest has international students among the winners, although the winners generally have been long-term U.S. residents.. Xiwei and Xichu in some sense are the first "truly international" winners, reflecting the quality of instruction provided at ZJUI. The writing courses offered at ZJUI introduce the process of university-level writing, explain how to organize the structure of paragraphs and complete essays, how to present arguments, how to make convincing arguments, and how to support viewpoints in an objective manner. The courses provide students with guidance on writing essays in English, and seek to lay a solid foundation for students to learn and develop in the international environment.

When talking about the writing courses, Xiwei Wang reported that the two courses have significantly improved his writing skills, especially English writing. "The most obvious point is that it allows me to face problems, dare to think and put forward ideas, and let me no longer be afraid of the length of the article." Xichu Xiao agreed, and pointed out that writing in English is quite different from the Chinese writing he learned in the past: "Through this course, I learned a lot about the main points of English writing, especially how to convince readers."

Prof. Kristi McDuffie, Interim Head of Rhetoric Program of UIUC English Department, presented awards to the two students during a visit to ZJUI. She invited them to sign a Permission & Use of Copyrighted Material document to authorize UIUC to use their papers in future course materials. Xichu Xiao said "By learning the examples and concepts given by Prof. Quaney in class, I have a deeper understanding of how to impress and attract readers, and how to conceive the framework of the article. In the process of writing, I feel more easily." and "Through this course, my English thinking and vocabulary have been greatly improved."

Prof. Kent Quaney, their instructor, is an Adjunct Faculty at ZJUI, on loan as a faculty member in the UIUC English Department. He is also an American novelist. During the interview for this article, he could not conceal his pride and excitement. He said, "As the instructor for Xiwei and Xichu, I noticed right away that they both did excellent work. Their writing and their contributions in class were excellent from the beginning. They both show a maturity and sophistication in both writing style and complex thinking that is advanced and admirable." Prof. Quaney added that "I believe that their award will inspire more ZJUI students to continue to write and create better works to compete in the contest."



Innovation is a key motivator at ZJUI, and the institute seeks many ways to excite students about the innovation process and develop a creative spirit. In October, the institute invited the Chairman of the IBM Greater China Group, Mr. Chen Liming, to give a seminar. He presented "Build to last: the power of innovation and transformation" to nearly 200 students in the engineering orientation class.

From his own experience and the history of IBM's establishment, innovation and transformation, Mr. Chen talked about the importance of innovation and change, and introduced the importance of artificial intelligence to the students. Mr. Chen pointed out to students that "different professions have similar principles," and that "leadership is about 'lead the change'." He stressed that the leadership he stands for is the ability to drive change. He emphasized that the most important things to keep endeavors evergreen are transformation and reconstruction. He reported that transformation and self-reinvention are "part of IBM's DNA." Transition is not always easy. Since 2000, 42 percent of companies have been eliminated. Taking Nokia, Kodak, and Yahoo as examples, Mr. Chen explained that enterprises must innovate and change if they want to survive.

Chairman of IBM Greater China Group presents seminar to ZJUI students

October 29th, 2019

Writer: Chang Long
Photo: Zhou Lejun



ZJUI-EATON Practical Education Base approved by Department of Education of Zhejiang Province

November 7th, 2019

Writer: Jin Linfeng
Translator: Lai Shuxian



Mr. Chen discussed the development prospects of artificial intelligence and the technical principles of artificial intelligence. He pointed out that artificial intelligence is improving rapidly. There have been intelligent robots which can hold debates with humans. Artificial intelligence promises to reconstruct health care, agriculture, and other industries. He emphasized that the development of artificial intelligence at IBM will adhere to technical principles of trust and transparency.

The engineering orientation course at ZJUI is a multidisciplinary course for freshmen. Senior scholars and industry leaders from China and abroad have presented a wide range of seminars to students. The course also includes team-based student design projects.



A new industry interaction has been approved as part of the "University Students Outside-School Practical Education Base List" announced by the Department of Education of Zhejiang Province. The "ZJU-Eaton Practical Education Base," conducted by Prof. Ma Hao, the ZJUI Vice Dean was approved after being recommended by Zhejiang University (ZJU).

The "ZJU-Eaton Practical Education Foundation" is a collaboration between Zhejiang University-University of Illinois at Urbana-Champaign Institute (ZJUI) and Eaton (China) Investment Company to establish a practical education base. The objective is to integrate production with education, to build school-enterprise collaboration, to catalyze college-level educational development, and to strengthen practical and innovation skills of students.

As a global company in power management, Eaton strives to provide its users with safe and effective solutions regarding electricity, fluid dynamics, and mechanical power management. Eaton and ZJU have maintained a close mutual relationship, including collaborative research projects and Eaton-based internship opportunities. Since 2017, ZJUI has been sending students to Eaton for summer research programs and internships. In 2019, 25 students from ZJUI participated.

News in Pictures

1. ZJUI party members carry out "I and my motherland" Thematic Party Day Activity to celebrate the 70th anniversary of the founding of the People's Republic of China

2. Fall semester kicks off in September. This is the first time that ZJUI has its full four cohorts of undergraduates

3. A delegation from Imperial College London Visited ZJUI for Future Collaboration in November

