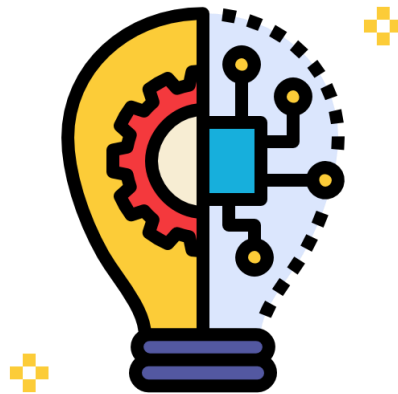


International Conference on Innovative Application Research and Education (ICIARE) &  
Creative Engineering Design Competition (CEDC)  
Jiangsu University, Zhenjiang, China  
December 22 - 26, 2023

# ICIARE & CEDC 2023.JSU



**JIANGSU UNIVERSITY**

Endorsed By Consortium for Innovative Research and Education of Asia



## Program at a Glance

Friday, Dec. 22	
09:00-19:00	Registration
	Accommodation Arrangement
19:00-20:00	Dinner (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
Saturday, Dec. 23	
International Conference of Innovative Application Research and Education (ICIARE 2023)	
7:00-8:00	Breakfast (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
08:30-09:00 (China) 09:30-10:00 (Japan)	<b>Opening Ceremony</b> (Multi-Function Hall of Qingjiao Apartment/青教多功能厅)
	Moderator: <i>Prof. Shijian Zou</i> , Vice Dean of International Office of Jiangsu University
	Welcome Speech by <i>Prof. Xudong Ren</i> , Vice President of Jiangsu University
	<b>Greeting Videos</b> 1. <i>Dr. Yukio Tanizawa</i> , President of Yamaguchi University, Japan 2. <i>Dr. Minhyon Jeon</i> , President of Inje University, Korea 3. <i>Prof. ChangSeop Koh</i> , President of Chungbuk National University, Korea
Student Representative Speech from China, Korea, Japan	
09:00-09:20 (China) 10:00-10:20 (Japan)	<b>Photo Time</b> (Online & Offline)
<b>10 min</b>	<b>Tea Break</b>
09:30-10:30 (China) 10:30-11:30 (Japan)	<b>Plenary Talk 1</b> “Skeleton-based Motion Analysis and Nursing Care Posture Assessment” by <i>Prof. Zhongwei Jiang</i> Moderator: <i>Prof. Yi Zhu</i>
10:30-11:30 (China) 11:30-12:30 (Japan)	<b>Plenary Talk 2</b> “NFV together with AI, the Foundation for the Next Generation Network” by <i>Prof. Changda Wang</i> Moderator: <i>Prof. Yi Zhu</i>

11:30-13:00 (China) 12:30-14:00 (Japan)	Lunch (No.3 Canteen/江苏大学第三食堂)	
<b>Afternoon Online Meeting Room</b> Hosted by <i>Prof. Minoru Morita</i>		
<b>Zoom MeetingID: 860 8213 7837</b> <b>PassCode: 336894</b>		
13:00-15:40 (China) 14:00-16:40 (Japan)	<b>Regular Session 1</b> 13:00-14:15 (China) 14:00-15:15 (Japan)	No.3 Meeting Room, Conference Center (China) KOKOROZASHI Innovation Dojo (Japan) Chair: <i>Prof. Hansol Kim</i> (Inje University)
	<b>10 min</b>	<b>Tea Break</b>
	<b>Regular Session 2</b> 14:25-15:40 (China) 15:25-16:40 (Japan)	No.3 Meeting Room, Conference Center (China) KOKOROZASHI Innovation Dojo (Japan) Chair: <i>Prof. Tetsuya Morisaki</i> (NIT, Ube College)
15:00-15:45 (China) 16:00-16:45 (Japan)	<b>Organized Session</b>	
	Yamaguchi University, Japan (Online)	
<b>10min</b>	<b>Tea Break</b>	
15:50-17:05 (China) 16:50-18:05 (Japan)	<b>Regular Session 3</b> 15:50-17:05 (China) 16:50-18:05 (Japan)	No.3 Meeting Room, Conference Center (China) KOKOROZASHI Innovation Dojo (Japan) Chair: <i>Prof. Tianhong Pan</i> (Anhui University)
18:00-20:00	<b>Welcome Dinner</b> (Da Zhai Men Hotel/大宅门大酒店)	



Sunday, Dec. 24	
Creative Engineering Design Competition ( <b>CEDC2023</b> )	
7:00-8:00	Breakfast (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
<b>Online Meeting Room</b> <b>Zoom MeetingID: 860 8213 7837</b> <b>PassCode: 336894</b>	
<b>Offline Meeting Room</b> Multi-Function Hall of Qingjiao Apartment/青教公寓多功能厅	
08:00-09:50 (China) 09:00-10:50 (Japan)	<b>Oral Presentations Session 1</b> (Offline, 6 Minutes Each Team, 15 Teams) C-1、K-1、K-2、C-2、K-3、K-4、C-3、K-5、 K-6、C-4、K-7、K-8、C-5、K-9、K-10 Chair: <i>Prof. Beomkeun Kim</i> (Inje University)
<b>10 min</b>	<b>Tea Break</b>
10:00-11:50 (China) 11:00-12:50 (Japan)	<b>Oral Presentations Session 2</b> (Offline, 6 Minutes Each Team, 14 Teams) C-6、K-11、K-12、C-7、K-13、C-8、K-14、 C-9、K-15、C-10、K-16、C-11、K-17、C-12 Chair: <i>Prof. Bongjae Kim</i> (Chungbuk National University)
12:00-13:00	Lunch (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
13:00-13:40 (China) 14:00-14:40 (Japan)	<b>Oral Presentations Session 3</b> (Online, 10 Minutes Each Team including Product Demonstration, 4 Teams) J-1、J-2、J-3、J-4 Chair: <i>Prof. Minoru Morita</i> (Yamaguchi University)
13:40-14:50 (China) 14:40-15:50 (Japan)	<b>Product Examination</b>
	<b>Group A (10 teams):</b> <i>Prof. Zhongwei Jiang, Prof. Yi Zhu,</i> <i>Prof. Bongjae Kim, Prof. Zimu Zhang, Prof. Minoru Morita</i> <b>Teams:</b> C-1、K-1、K-2、C-2、K-3、K-4、C-3、K-5、 K-6、C-4
	<b>Group B (10 teams):</b> <i>Prof. MiHye Kim, Prof. Tianhong Pan,</i> <i>Prof. Bonyong Koo, Prof. Jeakoo Kang, Prof. Tetsuya</i> <i>Morisaki</i> <b>Teams:</b> K-7、K-8、C-5、K-9、K-10、C-6、K-11、

	K-12、C-7、K-13
	<b>Group C (9 teams):</b> <i>Prof. Beomkeun Kim, Prof. Xiaohan Fang,</i> <i>Prof. Hansol Kim, Prof. Xiaoming Jiang, Prof. Takashi</i> <i>Kuremoto</i> <b>Teams:</b> C-8、K-14、C-9、K-15、C-10、K-16、C-11、 K-17、C-12
15:00-15:40 (China) 16:00-16:40 (Japan)	Professor Group Meeting & Grading
15:40-16:40 (China) 16:40-17:40 (Japan)	Certificate Printing
16:50-17:30 (China) 17:50-18:30 (Japan)	<b>Award &amp; Closing Ceremony</b> Moderator: <i>Prof. MiHye Kim</i> (Multi-Function Hall of Qingjiao Apartment/青教多功能厅)
18:00-20:00	<b>Christmas Eve Dinner / Buffet</b> (Mingdu Hotel/明都大饭店)
<b>Monday, Dec. 25</b>	
<b>City Tour in Zhenjiang</b>	
7:00-8:00	Breakfast (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
09:00-09:30	<b>History Museum of Jiangsu University/江苏大学校史馆</b>
09:30-11:00	<b>Xijin Ferry/西津渡</b>
11:00-12:00	Lunch <b>(Zhenjiang Pot Cover Noodle/镇江锅盖面)</b>
12:30-15:00	<b>Jiaoshan Hill/焦山</b>
15:30-17:30	<b>Free Time</b>
18:00-20:00	Dinner (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
<b>Tuesday, Dec. 26</b>	
7:00-8:00	Breakfast (Sanshan Hall of Qingjiao Apartment/青教公寓三山厅)
8:00-12:00	Depart from Zhenjiang



## Technical Program of ICIARE2023

<b>Regular Session 1</b>	
<b>Time</b>	<b>13:00-14:15 (China) / 14:00-15:15 (Japan)</b> <b>December 23, 2023</b>
<b>Location</b>	<b>Lecture Hall No.3, Conference Center (China)</b> <b>KOKOROZASHI Innovation Dojo (Japan)</b>
<b>Chair</b>	<b>Prof. Hansol Kim</b> <b>Inje University, Korea</b>
<b>RS 1-1</b>	<b>(*from Japanese Room)</b> Estimation Method of Coagulation Area Focusing on Temperature Distribution for Performance Evaluation of Ultrasonic Scalpel Shunsuke Morikawa, Minoru Morita, Zhongwei Jiang <i>Yamaguchi University, Japan</i>
<b>RS 1-2</b>	Overcoming the therapeutic limitations of EZH2 inhibitors in Burkitt's lymphoma: a comprehensive study on the combined effects of MS1943 and Ibrutinib Yurim Jeong, Hui Won Seo, Su Hyun Kim, Minseo Yu <i>Inje University, Korea</i>
<b>RS 1-3</b>	<b>(*from Japanese Room)</b> Development of a manual muscle testing device for objective evaluation of peripheral neuropathy Ryutaro Kawamura, Zhongwei Jiang, Kenta Dezaki, Yamato Kawakami, Minoru Morita, Yukio Takeshita <i>Yamaguchi University, Japan</i>
<b>RS 1-4</b>	Design and Numerical Simulation of the Self-stirring Reactor Driven by Pressure Energy Zimu Zhang, Qiuyue Zhao, Ting-an Zhang <i>Shenyang University of Chemical Technology, China</i>
<b>RS 1-5</b>	<b>(*from Japanese Room)</b> Gait data analysis and estimation of lower limb weakness by the six-minute walk test (6MWT) Takeru Uyama, Zhongwei Jiang, Yunjin Zhang, Minoru Morita, Keiko Doi, Tsunahiko Hirano, Kazuto Matsunaga <i>Yamaguchi University, Japan</i>
<b>10 min</b>	<b>Tea Break</b>

<b>Regular Session 2</b>	
<b>Time</b>	<b>14:25-15:40 (China) / 15:25-16:40 (Japan)</b> <b>December 23, 2023</b>
<b>Location</b>	<b>Lecture Hall No.3, Conference Center (China)</b> <b>KOKOROZASHI Innovation Dojo (Japan)</b>
<b>Chair</b>	<b>Prof. Tetsuya Morisaki</b> <b>NIT &amp; Ube College, Japan</b>
<b>RS 2-1</b>	<p><b>(*from Japanese Room)</b> Exploring the relationship between diaphragm movement and respiratory diseases Chenyang Liang, Fei Jiang, Xian Chen, Tsunahiko Hirano, Keiko Doi <i>Yamaguchi University, Japan</i></p>
<b>RS 2-2</b>	<p>Assessment of Physical Activity Ability by 6-Minute Walk Test Yunjin Zhang, Zhongwei Jiang, Tsunahiko Hirano, Keiko Doi, Minoru Morita <i>Yamaguchi University, Japan</i></p>
<b>RS 2-3</b>	<p><b>(*from Japanese Room)</b> Study on sleep quality estimation method by analyzing sleep breath sounds Kazuto Kato, Takumi Nunokawa, Minoru Morita, Zhongwei Jiang <i>Yamaguchi University, Japan</i></p>
<b>RS 2-4</b>	<p>Voltage-Fault Diagnosis using Mutual Information Analysis for Battery Pack in Electric Vehicles Xinyang Yin, Tianhong Pan, Jiaqiang Tian <i>Anhui University, China</i></p>
<b>RS 2-5</b>	<p><b>(*from Japanese Room)</b> A method for identifying frailty by floor reaction force in SS-5 test Takumi Nunokawa, Zhongwei Jiang, Tsunahiko Hirano, Keiko Doi, Minoru Morita, Kazuto Matsunaga <i>Yamaguchi University, Japan</i></p>
<b>10 min</b>	<b>Tea Break</b>



<b>Regular Session 3</b>	
<b>Time</b>	<b>15:50-17:05 (China) / 16:50-18:05 (Japan)</b> <b>December 23, 2023</b>
<b>Location</b>	<b>Lecture Hall No.3, Conference Center (China)</b> <b>KOKOROZASHI Innovation Dojo (Japan)</b>
<b>Chair</b>	<b>Prof. Tianhong Pan</b> <b>Anhui University, China</b>
<b>RS 3-1</b>	<b>(*from Japanese Room)</b> Study on forceps equipped with FBG sensor for endoscope - Structural design aiming for miniaturization - Kazuki Kajihara, Minoru Morita, Zhongwei Jiang <i>Yamaguchi University, Japan</i>
<b>RS 3-2</b>	<b>(*from Japanese Room)</b> Study on risk assessment of posture during daily activities using OpenPose and REBA technologies Atsuya Hirakata, Han Xin, Minoru Morita, Zhongwei Jiang <i>Yamaguchi University, Japan</i>
<b>RS 3-3</b>	<b>(*from Japanese Room)</b> Proposal of an AI model for growth state estimation and its implementation in a hydroponic system Ryosuke Kamitani, Zhongwei Jiang, Kento Sasaki, Hitoshi Omura, Minoru Morita <i>Yamaguchi University, Japan</i>
<b>RS 3-4</b>	A Multi-task Learning Modeling Algorithm for Near-infrared Spectroscopy using Residual Networks Zhengtao Xi, Tianhong Pan <i>Anhui University, China</i>
<b>RS 3-5</b>	<b>(*from Online)</b> YOLOv5 works well for Facial Expression Recognition Takashi Kuremoto, Lei Chen, Ming Lei <i>Nippon Institute of Technology, Japan</i>



<b>Organized Session</b>	
<b>Time</b>	<b>15:00-15:45 (China) / 16:00-16:45 (Japan)</b> <b>December 23, 2023</b>
<b>Location</b>	<b>Yamaguchi University (Japan)</b>
<b>Chair</b>	<b>Hiroaki Yamada</b> <b>Yamaguchi University, Japan</b>
<b>OS 1-1</b>	Ripple Current Compensation of DAB Converter with Matching Transformer-Less DC Active Filter in DC Distribution Feeder Yuya Abe, and Hiroaki Yamada <i>Yamaguchi University, Japan</i>
<b>OS 1-2</b>	Comparative Study of DC/DC converters for Maximum Power Point Tracking in Reverse Electrodialysis Cell Yu Haixu, Hiroaki Yamada <i>Yamaguchi University, Japan</i>
<b>OS 1-3</b>	Single-Phase Grid-Tied MMC With Multiple Renewable Energy Sources Under Unbalanced Generated Power Ryo Yoshimura, Hiroaki Yamada <i>Yamaguchi University, Japan</i>



## Innovative Design Lists of CEDC2023

No.	Teams	Title
<b>A.M. (8:00-12:00, China / 9:00-13:00, Japan), Dec. 24, 2023</b>		
1	C-1	<b>Mechanical Folding Skateboard</b> Junhui Guo, Qitong Yao <i>Shenyang University of Chemical Technology, China</i>
2	K-1	<b>Analysis of Safety Issues and Policy Proposals about Electric Kickboards: Comparing Korea, China, and Japan Electric Kickboards Policies</b> Junghyun Choi, Minjoo Yeon, Eunji Son <i>Chungbuk National University, Korea</i>
3	K-2	<b>A Therapeutic Functional Mobile Game that Provides Children with Psychological Comfort through Interaction with A Doll</b> Heewon Jeong, Sanghyun Han <i>Chungbuk National University, Korea</i>
4	C-2	<b>A New Type of Self Suction Jet Spiral Stirrer</b> Jinning Liang, Shaozhe Wang, Guang Yang, Zhexuan Jiang, Simiao Cheng, Wenhao Hou, Yao Wang <i>Shenyang University of Chemical Technology, China</i>
5	K-3	<b>Sleep Care Bed for Snoring Relief</b> Jumyeong Lee, Minsu Kang, Geunyoung Lee, Gichan Lee, Jeonghwan Lee <i>Inje University, Korea</i>
6	K-4	<b>Autonomous fire detection and suppression vehicle using MCU</b> Junhwan Jung, Jaejun Lee <i>Chungbuk National University, Korea</i>
7	C-3	<b>An Integrated Intelligent Hanger for Both Clothes Drying and Ironing</b> Jinpeng Lv, Yuxiao Qiu, Changhen Tao <i>Jiangsu University, China</i>
8	K-5	<b>Fire Escape Number One</b> Junho Kim, Daejung Kim, Yongin Shin, Geonwoo Park <i>Chungbuk National University, Korea</i>
9	K-6	<b>VR Game for Fire Prevention Education</b>

		Doyoung Kim, Jina Choi, Mingyu Cho <i>Chungbuk National University, Korea</i>
10	C-4	<b>A Low Rolling Resistance Gradient Cellular Non-Pneumatic Tire</b> Yujie Wang, Haoran Liu <i>Jiangsu University, China</i>
11	K-7	<b>Smart Safety Helmet with Aruco Marker-Based Positioning System and Sensor Integration</b> Kim Gyeong Hyeon, Choi Tae Hun <i>Kunsan National University, Korea</i>
12	K-8	<b>Analysis of Microbial Diversity in Kimchi and Its Impact on Gut Microbiota</b> Huiwon Kim, Daeun Jung <i>Chungbuk National University, Korea</i>
13	C-5	<b>Design of Smart Waste Sorting Device</b> Tianxiang Xu, Yu Ding, Shuo Xu, Yuqing Hu, Chong Zhang, Jin Cao, Yulong Zhang, Jialin Yang, Keru Xia <i>Shenyang University of Chemical Technology, China</i>
14	K-9	<b>Pneumatic Kirigami Soft Gripper</b> Minsoo Kim, Seoungrok Baek, Seungjoo Lee <i>Chungbuk National University, Korea</i>
15	K-10	<b>Structure Behavior Evaluation Based on Floating Solar Photovoltaic Structure Design</b> Hyeonsik Kim, Taewoong Joo, Hyeongwon Seo, Iksoo Lee, Ingoo Lee <i>Kunsan National University, Korea</i>
16	C-6	<b>Intelligent Playground Lighting Management System</b> Rui Yang, Zhengtao Xi, Xinyang Yin, Tianhong Pan <i>Anhui University, China</i>
17	K-11	<b>Autonomous Vehicles</b> Seongjun Kim, Hojae Lee, Sunyong Jeong <i>Inje University, Korea</i>
18	K-12	<b>HAH: How About Here?</b> JinGyeong Lee, JunHo Lee, MinSeok Kang <i>Chungbuk National University, Korea</i>
19	C-7	<b>Nondestructive Testing of Carbon Fiber Based on Terahertz Technology</b> YaFei Zhou, PengCheng Wu, YuanXia Xu

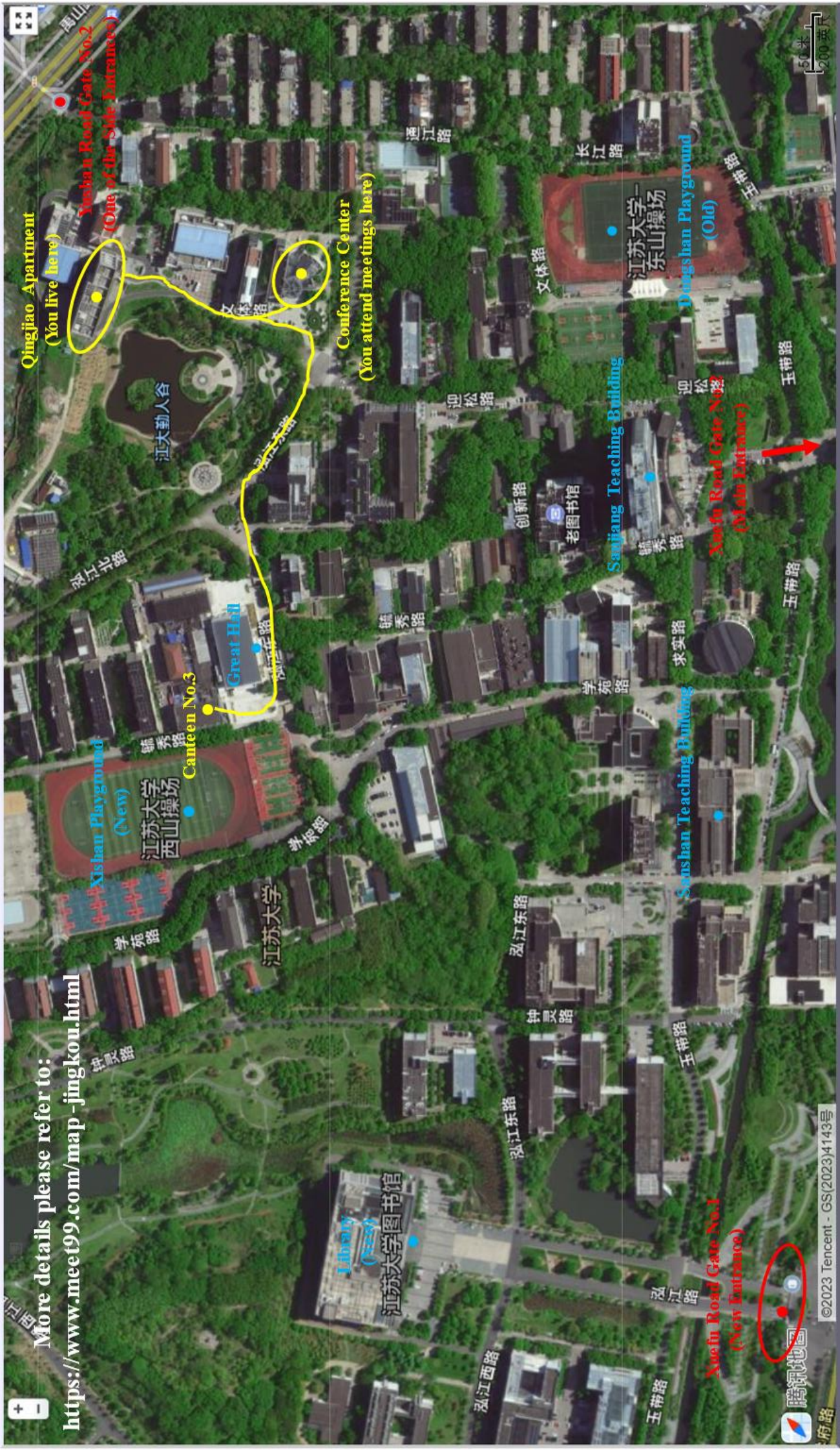


		<i>Jiangsu University, China</i>
20	K-13	<b>Medical Educational Game for Emergency Care</b> Taewan Kim, Kyungwon Kwon, Juho Park, Seokho Lee <i>Chungbuk National University, Korea</i>
21	C-8	<b>Design of Toothed Composite Spiral Static Mixer</b> Ming Sun, Qingguan Zhang, Shuo Zhao, Zhenhui Li, Yixin An, Haoxuan Lu, Zimu Zhang, Chunmei Zhang <i>Shenyang University of Chemical Technology, China</i>
22	K-14	<b>Eco Beat: Grand Festival of Recycling</b> Jiwon Oh, Gyeongmin Yun <i>Chungbuk National University, Korea</i>
23	C-9	<b>A Vacuum Cryogenic Drying System Based on Solar Frequency Division Type Electrothermal Co-generation Technology</b> Hao Yan, Qingchen Xia, Longhai Wang <i>Jiangsu University, China</i>
24	K-15	<b>A Study on the Improvement of the Installation Method of Fall Protection Net in the Scaffolding System</b> Junyoung Yang, Kyungtae Kim, Jiseong Eom <i>Kunsan National University, Korea</i>
25	C-10	<b>Design of An Autonomous Navigation System for High- Precision Agricultural Vehicles</b> Wenhao Yang, Cuiling Yu, Xinyue He <i>Jiangsu University, China</i>
26	K-16	<b>Correction of Bad Posture Habits in Modern Individuals</b> Taehyeon Han, Sangbeom Lee, Huibeom Mun, Hyeonho Jung <i>Chungbuk National University, Korea</i>
27	C-11	<b>A New Rainwater Recycling and Utilization System</b> Chengjie Zhang, Xin Wang, Xiwei Feng, Kaiwei Ma, Sanchuan Yu, Ruijie Xu, Wenbo Wang, Yaxia Li <i>Shenyang University of Chemical Technology, China</i>
28	K-17	<b>Exploration-type Spider Robot that can be Deployed in case of Disaster</b> Juyong Lee, Jinwoo Lee, Hyunmin Lee <i>Inje University, Korea</i>
29	C-12	<b>Thermalright Agricultural Drone</b> Boquan Yang, Xinqiang Ge, Hongnan Li <i>Shenyang University of Chemical Technology, China</i>

<b>P.M. (13:00-13:30, China / 14:00-14:30, Japan), Dec. 24, 2023</b>		
30	J-1	<b>T Shape Monster: Let's Search! Create! Battle!</b> Koki Kawata, Kento Sasaki, Masaya Kawaguchi, Saya Narita, Mikiya Morisaki <i>Yamaguchi University, Japan</i>
31	J-2	<b>Hydroponic Cultivation Device for HOME: A New Generation of Integration with AI</b> Ryosuke Kamitani, Kento Sasaki, Hitoshi Omura <i>Yamaguchi University, Japan</i>
32	J-3	<b>AI—kido: AI Helps You Teach AIKIDO</b> Takuya Hamada, Harada Shinji, Shunki Tanaka, Shunsuke Komoto <i>Yamaguchi University, Japan</i>
33	J-4	<b>Home Leg Training Partner: Evaluation and Advice for Your Ideal Body</b> Toyohara Taisei, Kakeru Matsui, Shunya Nakata, Shogo Ikeda, Koichi Sone, kenta Dezaki <i>Yamaguchi University, Japan</i>



# The Map of Jiangsu University (Part)



More details please refer to:  
<https://www.meet99.com/map-jingkou.html>





## Organized By:

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