2024 CDIO Asian Regional Meeting - Hokkaido Information University (HIU)
"Digital Innovation in Higher Education - Steering Students toward Success"

Day 1 05 September 2024 (Thursday)

Time	Program and Schedule	Location
8:00 ~ 8:50	Buses depart Sapporo TV Tower (north side) for HIU **Assemble at benches in front of TV Tower*	North TV Tower
9:00 ~ 9:30	Arrival・Registration・Networking・Coffee	Information Plaza (Near MMH)
9:30 ~ 9:45	*Program and Explanation* (Academy/Facilities)	Matsuo Memorial Hall (MMH)
9:45 ~ 9:55	*Welcome Address*: Dr Jun Nishihira − HIU President	MMH
10:00 ~ 10:30	***Keynote Speech One*** **"Rethinking Teaching and Learning: A Case Study of Flipped Learning and the Use of Learning Analytics"** Helene Leong − Singapore Polytechnic	MMH
10:40 ~ 11:10	*Quick Institution Introduction* (quickly introduce your school and get a CDIO hat!)	MMH
11:10 ~ 11:30	**Tea break and Networking**	Information Plaza
11:30 ~ 12:30	***Special Interest Session One*** **"High Altitude Balloon"** Masaki Miki − IWAYA Giken INC. - Japan	MMH
12:30 ~ 14:00	**Lunch (in School Cafeteria)**	Cafeteria
13:30 ~ 14:00	***EVENT*** - *Ainu Cultural Dance*	MMH
14:00 ~ 14:30	***1 Minute Poster Presentation Introduction*** (Poster Presentation is on Friday, 11:15~ 13:45)	MMH
15:00 ~ 16:00	①**"CDIO 101 - CDIO for Newbies"** (Eng) Uravis Tangkijviwat & Natha Kuptasthien RMUTT – Thailand　②**"Applied CDIO - Sustainability in Education via CDIO Intregrated Curric."** Sin Moh Cheah − Singapore Polytechnic　③**"CDIO 101 - CDIO for Newbies"** (日本語) Kuniaki Yajima − Sendai Kosen NIT Japan	① 8F ② 10F ③ MMH
16:00 ~ 16:30	**Tea break and Networking**	Info Plaza & 10F
16:30 ~ 17:30	④**"Realising the Value of CDIO"** Helene Leong − Singapore Polytechnic　⑤**"ICT Tools for Engineering Education"** Rajeev Sukumaran & Christu Raj − SRM Institute of Science & Technology - India　⑥**"Enhancing Industry Competence through Capstone Design Projects"** Session Chair/ Speaker: Prof. Dong Jin Kang *Intro of Yeungnam Uni Consortium for Future Mobility* (10min) Speaker: Prof. Clare Chisu Byeon *Capstone Design Projects in Kyungpook National Uni* (10min) Speaker: Prof. Minseok Kim *Capstone Design Projects in KumohGongdae (KIT)* (10min) *Round table discussion* (30min) Speakers: Prof. Cheol Young Park, Prof. Kyung Bong Park	④ 8F ⑤ 10F ⑥ MMH
17:30 ~ 17:45	**Day 1 Reflections - Return to Matsuo Memorial Hall (MMH)**	MMH
17:50 ~	Buses depart HIU for Sapporo TV Tower	Car Park

Day 2 06 September 2024 (Friday)

Time	Program and Schedule	Location
8:00 ~ 8:50	Buses depart Sapporo TV Tower (north side) for HIU **Assemble at benches in front of TV Tower*	North TV Tower
9:00 ~ 9:15	Arrival・Registration・Networking・Coffee	Info plaza/Hall
9:15 ~ 10:00	***Keynote Speech Two*** ***"The Paradox of AI in the Future of Engineering"*** Robert Songer – Net Smile Inc. - Japan	MMH
10:00 ~ 10:30	**Tea break and Networking**	Info plaza/Hall
10:30 ~ 11:15	***Special Interest Session Two*** ***"Crossing Boundaries: The Growth and Empowerment of Students Through Global Engagement"*** Aki Nishihara – Hokusei Gakuen University - Japan	MMH
11:15 ~ 13:30	***Poster Presentations & Lunch*** (Early lunch & combined **Poster Presentation Session) **Go to Skyway*	Skyway
13:30 ~ 14:00	**Lunch** (in School Cafeteria) ***EVENT*** - *Hirayama Productions - Digital Art Music Experience in MMH*	MMH
14:00 ~ 15:30	⑦ ***Panel Discussion & Roundtable: "Motivating Students With or Without ICT"*** Tsubasa Yumura – HIU Mitsutaka Yasuda – HIU Junichi Kurihara – HIU Anand Nayyar – Duy Tan University, Vietnam Rajeev Sukumaran – SRM Institute of Science & Technology, India Natha Kuptasthien – Rajamangala University of Technology-Thanyaburi, Thailand Jarmo Mikkola – Oulu University of Applied Sciences, Finland	MMH
15:30 ~ 15:35	***Announcement*** concerning CDIO International Working Meeting (Sin Moh Cheah – Singapore Polytechnic	MMH
15:35 ~ 15:40	***Poster Presentation Awards*** (Dr Jun Nishihira)	MMH
15:40 ~ 16:00	Tea break and Networking	Info plaza/Hall
16:00 ~ 17:30	⑧ ***"Exploring the HIU Metaverse"*** Mitsutaka Yasuda & Masaru Kawahara – HIU ⑨ ***"CDIO for Non-Engineers*** (Architecture)**"** Yenn Giin Ho – Singapore Polytechnic ***"Curriculum Design to Develop Students' Thinking"*** Yunyi Wong – Singapore Polytechnic ⑩ ***"HIU Campus Tour"*** Takashi Anbai & Keita Odajima – HIU	⑧ 10F ⑨ MMH ⑩ 8F
17:30 ~ 17:45	**Day 2 Reflections - Return to Matsuo Memorial Hall (MMH)**	MMH
17:50 ~	Buses depart HIU for Networking Dinner (Downtown Sapporo)	Car Park
19:00 ~ 20:30	Networking Dinner (Sapporo) **No bus* *after dinner - walk back to hotel*	**Park Hotel**

Day 3 07 September 2024 (Saturday)

Time	Program and Schedule	Location
8:05 ~	Buses depart Sapporo TV Tower (north side) for HIU **Assemble at benches in front of TV Tower*	North TV Tower
9:00 ~ 9:05	***Message of Appreciation*** Dr Jun Nishihira – President of HIU	MMH
9:05 ~ 9:25	***Election of CDIO Asia Co-leader***	MMH
9:25 ~ 9:50	***Presentation by Institution(s)*** ***Wishing to Host 2025 CDIO Asian Regional Meeting***	MMH
9:50 ~ 10:15	Tea break and Networking	Info plaza/Hall
10:15 ~ 11:15	***CDIO Meeting*** ***Presentation by Institution(s) Wishing to Join CDIO Initiative*** University A – 10:15 ~ 10:45 University B – 10:45 ~ 11:15	MMH (Waiting Rm 106)
11:15 ~ 11:45	***CDIO Leaders' Roundtable Session*** *Helene Leong – "How do we make regional meetings sustainable? - Pros & Cons"*	MMH
11:45 ~ 12:00	***Wind up/Closing comments/Presentation Results/Announcements***	MMH
12:00 ~ 12:05	**Day 3 Reflections**	MMH
12:15	Buses depart HIU for Sapporo TV Tower	Car Park

2024 CDIO Asian Regional Meeting - *Welcome Message from Our Chairman*

Dr. Jun Nishihira, HIU President

To all attendees of the CDIO Asia Regional Meeting 2024 in Hokkaido, Japan, I would like to extend a personal and heartfelt welcome.

At Hokkaido Information University (HIU)—established in Ebetsu City, Hokkaido, in 1989—we promote human resource development through information education. We focus on three fields: education, research, and regional contribution. Our distinctive Faculty Development/Student Development (FD/SD) Program nurtures experts in the information field. Its tenets include: (1) commitment to various specialized fields based on IT; (2) collaboration between industry, academia, and laboratories, enabling cutting-edge research and education; and (3) implementation of state-of-the-art distance learning systems, including e-learning and learning management systems. In our graduate school education, we focus on digital businesses, space technology, IT, healthcare, and media design in the information field.

In recent years, the globalization of education and research has greatly expanded the range of opportunities for the information-related workforce, both domestically and abroad. There is an increasing need for human resources with the knowledge and skills to play an active role overseas. This need has fostered a trend among universities to develop learning environments that are rich in international exchange, and whose students can respond to the demands of a society that has been greatly transformed by internationalization and advanced information technology. In other words, human resource development through internationalized education is becoming increasingly important in higher education institutions. It is our foremost goal to provide such an environment.

Toward this goal, HIU has introduced international information programs, including ICT education, SDGs, multilingual education, and study abroad programs, in order to implement selection systems tailored to the characteristics of each field and to foster diverse education that emphasizes the characteristics of individual students. It is, therefore, a great opportunity to further strengthen the foundation and globalization of IT education, as well as an honor, for us to host this year's annual CDIO Asian Regional Meeting.

Universities face a major turning point with the introduction of generative AI into higher education. Expectations, as well as uncertainties, for generative AI are both high. At this year's CDIO Asian Region Meeting, we imagine a future ICT education system based on the concept of CDIO through active discussion and collaboration.
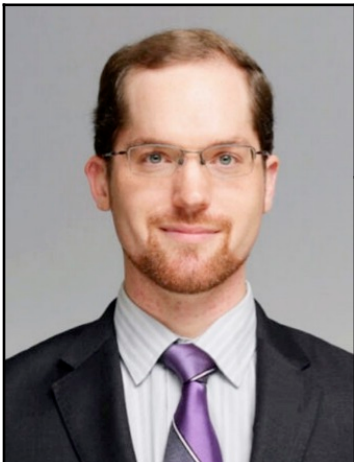
Helene Leong, Singapore Polytechnic

"Rethinking Teaching and Learning: A Case Study of Flipped Learning and the Use of Learning Analytics" (Thurs, AM)

"Realising the Value of CDIO" (Thurs, AM)

Helene Leong is Singapore Polytechnic's Education Consultant and the former Director of the Department of Educational Development. She is also currently the co-chair of the CDIO council and was the former co-leader of the Asian CDIO region from 2011-2022. As Director, she led educational initiatives and professional development programmes which focused on CDIO, Flipped Learning, Self-Directed Learning, and Analytics in Education at Singapore Polytechnic. She is currently leading 2 projects: a poly-wide multi-year project on Self-Directed Learning and how it can be assessed and developed, and a project involving 5 institutions which explores the outcomes of Flipped Learning.

Robert Songer, Net Smile Inc., Japan

"The Paradox of AI in the Future of Engineering" (Fri, AM)

Robert Songer is an AI systems engineer at Net Smile Inc. and a Ph.D. candidate in the Department of Information and Computer Science at Kanazawa Institute of Technology in Kanazawa, Japan. Songer actively participated in the CDIO community for 14 years while teaching Information and Computer Science topics at International College of Technology, Kanazawa (ICT). He changed to a career in industry in 2023 but continues to teach Software Engineering as adjunct faculty at ICT while working on his Ph.D. Songer holds a Master's in Knowledge Science for which he researched learner motivation and gamification technologies. His Ph.D. focuses on applications of recommender systems in educational contexts.

Masaki Miki, Iwaya Giken Inc., Japan

"High Altitude Balloon" (Thurs, AM)

Masaki Miki is Deputy Director of Research & Development at Iwaya Inc., a passenger technology development company that designs, develops, and manufactures high-altitude balloons and airtight cabins for stratospheric balloon travel. A graduate of the National Defense Academy of Japan, he served for 25 years as an army officer in the Japan Ground Self-Defense Force, specializing as a parachute rigger and an airdrop and balloon pilot. His hobbies include traveling and skiing.

Aki Nishihara, Hokusei Gakuen University, Japan

"Crossing Boundaries: The Growth and Empowerment of Students Through Global Engagement" (Fri, AM)

Aki Nishihara is the Director of the International Education and Language Center and a Professor in the Faculty of Social Welfare at Hokusei Gakuen University, Sapporo, Japan. She received an MA with distinction in Comparative Education from the Institute of Education, University College London, UK. Her research focuses on intercultural communication, study abroad, and international co-learning. In 2023, her seminar students presented their project titled "Global Fireside Chat: A Collaborative Event with a Malaysian Company for Intercultural Team Building" at the Professional Skills Grand Prix National Opening, organized by the Japan Society for Core Competencies for Working Professionals, where they were awarded the Grand Prize Runner-Up. She has secured Grants-in-Aid (Kaken-hi) to advance study abroad and international co-learning programs with an emphasis on diversity and inclusion.

2024 CDIO Asian Regional Meeting - *Invited Speakers*

Natha Kuptasthien – Rajamangala University of Technology-Thanyaburi (RMUTT), Thailand

"CDIO for Newbies" (English), AND Panel Discussion & Roundtable: "Motivating Students With or Without ICT—Empowering Future Graduates through Engaging Learning Experiences"

Natha Kuptasthien is an Associate Professor at the Department of Industrial Engineering, Faculty of Engineering, Rajamangala University of Technology Thanyaburi (RMUTT). Her current focus is on developing a community of pedagogical competence and strengthening the CDIO Thailand network.

Uravis Tangkijviwat – Rajamangala University of Technology-Thanyaburi (RMUTT), Thailand

"CDIO for Newbies" (English)

Uravis Tangkijviwat is a psychophysicist at the Color Research Center, Faculty of Mass Communication Technology, Rajamangala University of Technology Thanyaburi (RMUTT). Drawing on many years experience in teaching, he now focuses on encouraging educators to adopt CDIO into non-engineering programs.

Kuniaki Yajima – Sendai Kosen NIT, Japan

"CDIO 101 – CDIO for Newbies" (日本語, in Japanese)

Kuniaki Yajima is a Professor in the Department of General Engineering at NIT, Sendai College, Japan**.**
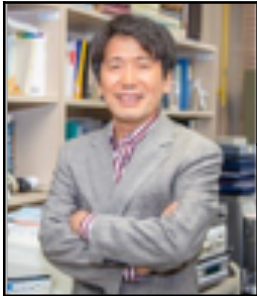
Sin Moh Cheah – Singapore Polytechnic

"Applied CDIO – Sustainability in Education via CDIO Integrated Curriculum"

Sin Moh Cheah is a chemical engineer turned academic. He is currently the Lead Teaching & Learning Specialist with Singapore Polytechnic, and a key practitioner of CDIO since 2007. He is also a legend. (added by editor)

2024 CDIO Asian Regional Meeting - *Invited Speakers*

Dong Jin Kang – Yeungnam University, Korea

Roundtable: "Enhancing Industry Competence through Capstone Design Projects —Introduction of Yeungnam University Consortium for Future Mobility"

Prof. Dong Jin Kang is a professor of Yeungnam university in Korea, and serve as a director of future mobility consortium for innovative engineering education. He has extensive experience in developing and operating innovative engineering programs.
Professor, Yeungnam University, 1992~ ,   Senior Engineer, Samsung Electronics Co., 1991~1992,   Ph.D. mechanical engineering, KAIST, 1991

Clare Chisu Byeon – Kyungpook National University, Korea

Roundtable: "Enhancing Industry Competence through Capstone Design Projects—Creative Design through Project-based Learning at Kyungpook National University"

Clare Chisu Byeon is currently a professor in the Advanced Institute of Science and Technology at Kyungpook National University, S. Korea. He has 15 years of experience in science and engineering education. His research specializes in photonic and industrial applications.

Minseok Kim – Kumoh National Institute of Technology, Korea

Roundtable: "Enhancing Industry Competence through Capstone Design Projects—Capstone Design Projects in Kumoh National Institute of Technology"

Minseok Kim received his Ph.D. from Ulsan National Institute of Science and Technology (UNIST) and has held positions at MIT and the Korea Institute of Machinery and Materials (KIMM). Currently, he leads the Microfluidics Laboratory at Kumoh National Institute of Technology (KIT) and serves as the Director of the Center for Innovation in Engineering Education.

Cheol Young Park – Daegu University, Korea

Roundtable: "Enhancing Industry Competence through Capstone Design Projects"

Cheol Young Park received B.S. and M.S. degrees from Kyungpook National University, Korea, in 1984 and 1986, respectively and Ph. D degree from Tohoku University, Japan, in 1997. From 1985 to 1997, he worked as a senior research engineer at Multimedia Research lab., LG Electronics, Seoul, Korea. He is currently a professor in School of Electronic and Electrical Engineering, Daegu University. His main research interests are design of advanced devices for information processing and VLSI implementation of learning algorithms for artificial neural networks and dynamic information processing.

2024 CDIO Asian Regional Meeting - *Invited Speakers*

Kyung Bong Park – Andong National University, Korea

Roundtable: "Enhancing Industry Competence through Capstone Design Projects"

Professor Kyung Bong Park received his bachelor's, master's, and doctoral degrees from the Department of Ceramic Engineering at Yonsei University, South Korea. He is currently a professor in the Department of Electrical and New Materials Engineering at Andong National University. He worked as a post-doc at the University of Illinois at UC and as a visiting professor at the University of Central Florida. His research interests include solar cells and dielectric materials.

Rajeev Sukumaran – SRM Institute of Science & Technology, India

"ICT Tools for Engineering Education" AND Panel Discussion & Roundtable: "Motivating Students With or Without ICT"

Rajeev Sukumaran is a Director at the Directorate of Learning and Development (DLD) at SRM Institute of Science and Technology, Chennai, India. His expertise includes engineering epistemology, education, educational psychology, and philosophy. He has been instrumental in setting up teaching learning centres across various higher technical institutions in India. He is also a Senior IEEE member and a Fellow of Institution of Engineers.

Christhu Raj – SRM Institute of Science & Technology, India

"ICT Tools for Engineering Education"

Christhu Raj is the Head of Academic Initiatives and Principal Curriculum Architect (CDIO & TPACK) at SRM Institute of Science and Technology, Chennai, India.

Tsubasa Yumura – HIU

Panel Discussion & Roundtable: "Motivating Students With or Without ICT"

Tsubasa Yumura is an Associate Professor in the Faculty of Information Media at Hokkaido Information University. His research interests include human-computer interfacing, and the collection and utilization of data through physical-spatial sensing.

2024 CDIO Asian Regional Meeting - *Invited Speakers*

Mitsutaka Yasuda – HIU

Panel Discussion & Roundtable: "Motivating Students With or Without ICT" AND "Exploring the HIU Metaverse"

Mitsutaka "Mitch" Yasuda is a Professor in the Faculty of Information Media at Hokkaido Information University. His research interests include UX/UI design, entrepreneurship, and educational technology.

Junichi Kurihara – HIU

Panel Discussion & Roundtable: "Motivating Students With or Without ICT"

Junichi Kurihara is a Professor in the Faculty of Information Media at Hokkaido Information University. His research interests include remote sensing using satellites and drones, especially hyperspectral imaging technology, for earth observation and smart agriculture.

Anand Nayyar – Duy Tan University, Vietnam

"CDIO and Artificial Intelligence: Enhancing Learning and Motivation"

Dr. Anand Nayyar received Ph.D (Computer Science) from Desh Bhagat University in 2017 in the area of Wireless Sensor Networks, Swarm Intelligence and Network Simulation. He is currently working in School of Computer Science-Duy Tan University, Da Nang, Vietnam as Professor, Scientist, Vice-Chairman (Research) and Director- IoT and Intelligent Systems Lab.

Jarmo Mikkola – Oulu University of Applied Sciences, Finland

Panel Discussion & Roundtable: "Motivating Students With or Without ICT"

Jarmo Mikkola is the Director of the School of ICT and Business at Oulu University of Applied Sciences. With a master's degree in Information Systems Science from Aalto University (Helsinki), Jarmo brings over 20 years of experience in the ICT sector. His career includes significant roles at leading companies such as Fujitsu, KPMG, and Elisa, Finland's largest telecom operator. Jarmo has a deep expertise in information systems and business technology, and is passionate about driving innovation in education and industry collaboration.

2024 CDIO Asian Regional Meeting - *Invited Speakers*

Masaru Kawahara – HIU

"Exploring the HIU Metaverse"

Masaru Kawahara is an Associate Professor in the Faculty of Information Media at Hokkaido Information University. His research interests include eSports, metaverses, and local-community-based digital content production.

Yenn Giin Ho – Singapore Polytechnic

"CDIO for Non-Engineering (Architecture)"

Yenn Giin Ho is a senior lecturer and program lead of the Diploma in Architecture program in the School of Architecture and the Built Environment at Singapore Polytechnic. He has keen interest in environmental sustainability and has been exploring various opportunities to develop awareness in environmental sustainability within the program.

Yunyi Wong – Singapore Polytechnic

"Curriculum Design to Develop Students' Thinking"

Yunyi Wong is a Teaching and Learning Mentor in the School of Chemical and Life Sciences at Singapore Polytechnic. Her current academic interests include integrated learning and learning analytics.

Takashi Anbai and Keita Odajima – HIU

"HIU Campus Tour"

Takashi Anbai is an Executive Director at HIU.
Keita Odajima is the International Liaison / Student Support Division at HIU.

2024 CDIO Asian Regional Meeting - *Poster Presentations* (Primary authors)

P01 — Ng Kean Eng – *ICA 40 Sdn Bhd, MalaysiaICA 40 Sdn Bhd, Malaysia*

"Data Science Education at Smart Factory in Malaysia for Fostering Young Data Technology Engineers"

P02 — Narongsak Thammachot – *RMUTI, Thailand*

"Developing a CDIO-Based Program for Learning Management System to Enhance Student Competency at Rajamangala University of Technology Isan"

P03 — Rajeev Sukumaran – *SRM Institute of Science & Technology, India*

"Exploring the HIU Metaverse"

P04 — Hajime Saito – *HIU*

"Approaches to Learning Support for Students Studying Web Production"

P05 — Mitsuyoshi Nagao – *HIU*

"PBL through A Regional Tourism Promotion based on Social Media"

P06 — Manami Sugisawa – *HIU*

"Illustration Education Program Proposal for Building Related Populations"

P07 — Mitsutaka Yasuda – *HIU*

"Engaging Students with Real-World Issues : A Case Study of "Web Design Project"

P08 — Mitsutaka Yasuda – *HIU*

"Design Management Education at Banei Horse Racing : Designing a 6-Month Program to Learn from On-Site Insights to Implementation and Operational Testing"

2024 CDIO Asian Regional Meeting - *Poster Presentations* (Primary authors)

P09 — Terukazu Iwasaki – *HIU*

"UX Design Meets Local Needs: Successful Garbage Separation Education Project for Foreign Residents in Ebetsu City"

P10 — Eiji Shimada – *HIU*

"From Concept Making to Final Exhibit:16 Years of "Project Trial" for Project Beginner Students"

P11 — Jun Chikazawa – *HIU*

"Interdisciplinary Innovation through Design, Technology, and Business: A Case Study from the Entrepreneurship Center"

P12 — Eiji Shimada – *HIU*

"Fostering Global Human Resources through the 'International Collaboration': Promoting Practical Learning with a Japan-Thailand Joint Workshop Utilizing an ICT Contest"

P13 — Namie Toda – *HIU*

"'Ebetsu Active Future Study' as a Learning Experience: Remarkable Changes in Student Awareness through Health Survey Activities with Ebetsu citizens"

P14 — Naoyuki Honma – *HIU*

"ChatGPT as a Food and Health Advisor: The Potential of AI in Healthcare Education and Practical Applications of Prompt Engineering"

P15 — Yuji Sase – *HIU*

"Implementation of a Performance Prediction Tool for Personalized Education"

P16 — Takanao Tsuyuki – *HIU*

"Basic Physics Education for Clinical Engineering Students"

2024 CDIO Asian Regional Meeting - **Poster Presentations** *(Primary authors)*

P17

Ryota Ono – *HIU*

"Issues in the field of data scientist education in Japan"

P18

Fumio Chiba – *HIU*

"The Use of VR in On-Campus Education for Clinical Engineering"

P19

Fumihiro Higashino – *HIU*

"Educational Program for Scientific Research: Science Simulation"

P20

Eunju Kim – *HIU*

"The Implementation and Effectiveness of Blended Online Classes Using Drama Materials: Applications in Korean Language Education"

P21

Kenji Saito – HIU

"*A SOLID Platform for Sharing and Utilizing Educational Resources"*

P22

Tsubasa Yumura – *HIU*

"Practices of Research and Education using Digital Fabrication Technologies"

P23

Satoru Morikawa – *HIU*

"Educational Participation in Tokyo Game Show"

P24

Naoki Fujimoto – *HIU*

"Agile Development of Health Observation System in Corona Disaster through Government-Academia Collaboration"