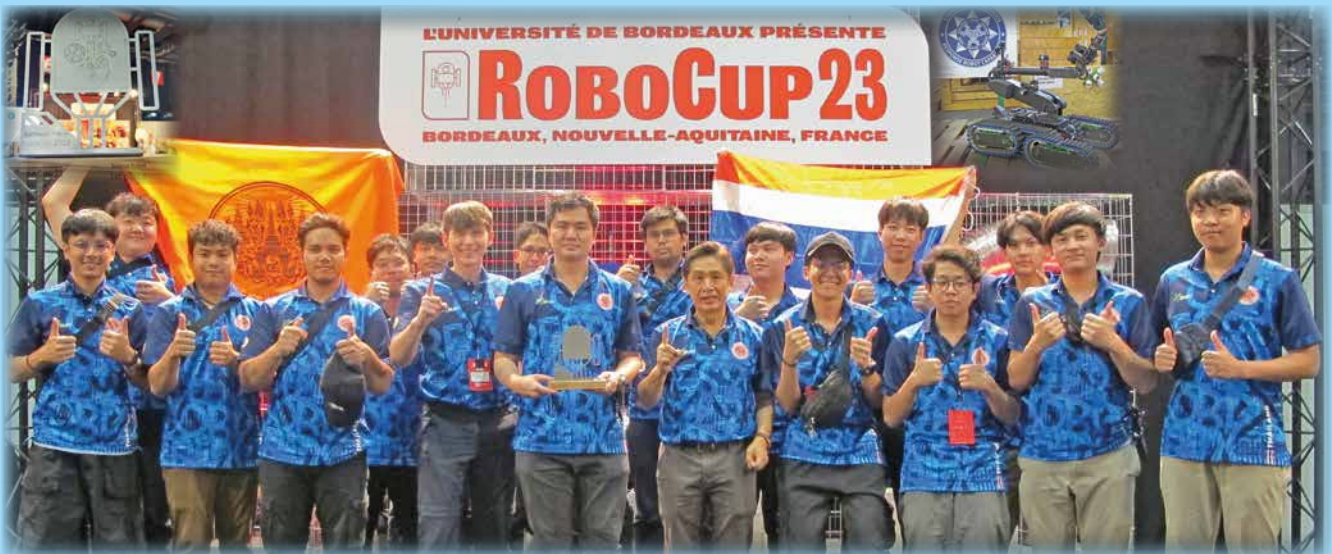


## KMUTNB'S iRap Robot Team Wins the Championship from World Robocup Rescue 2023

### “Becoming the 9-time World Champions”



The iRAP ROBOT team from KMUTNB became the championship in the “World Robo Cup Rescue 2023” which was organized during 4 – 10 July 2023 at Bordeaux, France. This is the ninth time the team from KMUTNB has brought home the World Robo Cup Rescue 2023’s top prize, and they also have won other two special prizes, namely the Best in Class Mobility Award and Best in Class Mapping Award.

The Robo Cup Rescue was joined by 17 qualified teams representing 11 countries across the world, including United States, Germany, France, Japan, China, Australia, Turkey, Mexico, Bangladesh, South Korea and Thailand. The Hector Darmstadt team from Germany won the first runner-up while the Quix team from Japan won second runner-up. This is an annual international robotics competition with an aim to advance the robotics and AI research by tackling challenges.

### Speech on “Sustainability: Climate Change and our Responsibility”

On September 20, 2023, at Benjarat Hall, KMUTNB, Mr. Jean Pascal Tricoire, Chairman of Schneider Electric and President of the Schneider Electric Foundation, delivered an inspirational speech titled “Sustainability: Climate Change and Our Responsibility” to an audience of over 300 KMUTNB students. These students specialize in fields such as energy, electrical engineering, automation, and more. His impactful speech served as a wake-up call and a source of inspiration for the young minds in attendance, urging them to take

action and shoulder the responsibility of addressing climate change. His words motivated them to aspire to become the energy leaders of tomorrow, driving positive change for our planet.

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## Academic Cooperation

### Establishing the TFII-Schneider Center of Excellence



Picture from l-r: Asst. Prof. Dr. Pornsak Srisungsitthisunti (1<sup>st</sup>), TFII Director, Mr. Stephane Nuss (2<sup>nd</sup>), Schneider's Cluster President Thailand, Myanmar and Laos, Mr. Jean Pascal Tricoire (3<sup>rd</sup>), Chairman of Schneider Electric, Prof. Dr. Teravuti Boonyasopon (4<sup>th</sup>), Chairman of KMUTNB Council, Mr. Arumugaraj Davitdurai Pandian (5<sup>th</sup>), ASSIST Project Director and Mr. Sanga Taechersai (6<sup>th</sup>), Assistant Secretary -General of Vocational Education Commission.

was signed between the Thai-French Innovation Institute (TFII) and the Asia Society for Social Improvement and Sustainable Transformation (ASSIST) for the procurement of equipment for the center. Representing their organizations, Asst. Prof. Dr. Pornsak Srisungsitthisunti, TFII Director, and Mr. Arumugaraj Davitdurai Pandian, ASSIST Project Director, signed the agreement. Additionally, an MoU was signed with the Office of the Vocational Education Commission, represented by Mr. Sanga Taechersai, Assistant Secretary-General of the Vocational Education Commission. This MoU outlines the involvement of technical college lecturers in the 'training of the trainer program.'

The TFII-Schneider Center of Excellence is located at the Thai-French Innovation Institute, aimed at developing students, faculty members in higher education institutions, Vocational Technical Colleges in both public and private, and industry professionals in the field of electrical and electronic control systems, automation, and new-age alternative energy." according to the needs of the industry sector with the goal of producing highly qualified instructors and engineers in the future. This center is as a unique and pioneering initiative in Thailand.

### Tsinghua University, China

From August 7<sup>th</sup> to 9<sup>th</sup>, 2023, at Tsinghua University in China, Prof. Dr. Somrerck Chandra-Ambhorn (7<sup>th</sup> from l-r of the front row), Vice President for Research and Information Technology Development, led three lecturers and researchers from KMUTNB specializing in Materials to participate in the 1<sup>st</sup> THU-NUS-QUT-KMUTNB Joint Workshop on Advanced Materials. This workshop was a collaborative initiative between Tsinghua University in China, the National University of Singapore in Singapore, Queensland



University of Technology in Australia, and King Mongkut's University of Technology North Bangkok in Thailand.

The workshop revolved around the theme of "Advanced Materials" and provided a platform for scholars from various disciplines to engage in discussions and exchange ideas regarding breakthroughs in advanced materials research. The participating universities explored opportunities for shared development and aimed to foster collaborative achievements in the near future.

KMUTNB is expanding its collaboration with Schneider Electric (Thailand) Limited to establish the TFII-Schneider Center of Excellence in the field of electrical and electronic control systems, automation, and new-age alternative energy at the Thai-French Innovation Institute (TFII). This partnership involves joint cost-sharing efforts.

On September 20, 2023, a significant MoA and MoU signing ceremony took place at the Ratchaprak Meeting Room, KMUTNB. The ceremony was attended by Prof. Dr. Teravuti Boonyasopon, Chairman of KMUTNB Council, and Mr. Jean Pascal Tricoire, Chairman of Schneider Electric and President of the Schneider Electric Foundation, as honorary witnesses. The MoA



## Academic Cooperation

### Ministry of Higher Education, Malaysia



On July 6, 2023, a delegation of 23 representatives from 14 Malaysian universities paid a visit to KMUTNB. The delegation was led by ACP Dr. Parusuraman Subramanian. The warm welcome was extended by Prof. Dr. Somrerck Chandra-Ambhon, Vice Pres-

ident for Research and Information Technology Development, and KMUTNB's management at the Ratchapruck Meeting Room, KMUTNB. During the visit, an overview of KMUTNB was presented, with a special emphasis on two outstanding organizations: the Sirindhorn International Thai-German Graduate School of Engineering (TGGS) and Techno Park. The visitors had the opportunity to visit some of the TGGS labs and the Central Library where had received the Green Library Award in 2022.

This visit served as a platform for creating academic and research networks, fostering collaboration between the visiting Malaysian universities and KMUTNB.

### Railway Experts from UK and Netherlands Visit KMUTNB



On September 8, 2023, Prof. Dr. Clive Roberts from the University of Birmingham, UK, and Prof. Dr. Rob Goverde from Delft University of Technology, the Netherlands, paid a visit to the Railway Technology and Innovation Operation Center, Techno Park. During their visit, these distinguished professors engaged in discussions regarding potential future collaborations with the faculty members and researchers at

KMUTNB, led by Prof. Dr. Somrerck Chandra-ambhom and Asst. Prof. Dr. Nattapong Makaratat.

### Hallym University, South Korea



On August 17, 2023, the Wichitwathi Auditorium in Building 81 at the Faculty of Engineering hosted a technical seminar on "AI and Cognitive Intelligence: Surgical Video and Early Detection with Research and Study Opportunities in Korea." The esteemed keynote speaker for this event was Prof. Dr. Taikyeong Ted. Jeong, School of Artificial Intelligence Convergence, Hallym University, who was warmly welcomed by

Assoc. Prof. Dr. Kittichai Thanasupsin, the Dean of the Faculty of Engineering. The primary objective of this seminar was to enhance students' knowledge and understanding of AI technology.

### The 6<sup>th</sup> Asian Science Deans Summit 2023, Malaysia



During July 25 to 27, 2023, Assoc. Prof. Dr. Pianpool Kamoljitprapa (on the right), Dean of the Faculty of Applied Science, KMUTNB, attended the Asian Science Deans Summit 2023, organized by the Faculty of Science and Technology at Universiti Kebangsaan Malaysia and took place at the Everly Putrajaya Hotel, Malaysia. The summit aimed to foster academic networking and research collaboration under the theme 'Frontiering Science Through Impactful Collaboration.'

The Summit brought together deans and representatives from science faculties of universities across Asia, with more than 60 participants from 30 universities in 20 countries attending the conference.



## Academic Cooperation

### Universitas Brawijaya, Indonesia



On August 7, 2023, Assoc. Prof. Dr. Kittichai Thanasupsin (8<sup>th</sup> from l-r), the Dean of the Faculty of Engineering, along with the executive team, extended a warm welcome to a delegation of nine representatives from Universitas Brawijaya, Indonesia. The delegation was led by Professor Hadi Suyono (9<sup>th</sup> from l-r), the Dean of the Faculty of Engineering at Universitas Brawijaya. During the meeting, they engaged in discussions to identify potential collaborative opportunities and to explore the possibility of cooperation between the two universities' Faculty of Engineering.

### Delegates from German Universities Visit KMUTNB



Picture from l-r: Dr. Peter Mieth (1<sup>st</sup>), Prof. Dr. rer. nat. habil. Steffen Fischer (2<sup>nd</sup>), Prof. Dr. Thomas Heinze (3<sup>rd</sup>), Prof. Dr.-Ing. habil. Suchart Siengchhin (4<sup>th</sup>), KMUTNB President and Assoc. Prof. Dr. Pianpool Kamoljitprapa (5<sup>th</sup>), Dean of Faculty of Applied Science.

from Posanova GmbH, presented on "Polysaccharide building blocks for immunochemistry." This event aimed to facilitate knowledge exchange and collaborative research among students, faculty members, and researchers.

On August 31, 2023, at Faculty of Applied Science, KMUTNB, Prof. Dr.-Ing. habil. Suchart Siengchhin gave a welcome and opening a special lecture series by guest lecturers from Germany. The honored guest lecturers included Prof. Thomas Heinze from Friedrich Schiller University Jena, who presented on the topic "Cellulose-structure and properties." In addition, Prof. Steffen Fischer from the Institute of Plant and Wood Chemistry, Dresden University of Technology delivered a lecture on "Production of cellulose by pulping," and Dr. Peter Mieth, a representative

### Nihon University, Japan



Picture from l-r, in a meeting with the KMUTNB team at Techno Park, Asst. Prof. Dr. Nattapong Makaratat (4<sup>th</sup>), Professor Dr. Norio Tomii (5<sup>th</sup>) and Prof. Dr. Somrerk Chandra-ambhom (6<sup>th</sup>) during meeting with KMUTNB team.

On August 22, he delivered a special lecture on the "Recent Research Topics in Railway Operations" at the Faculty of Industrial Technology and Management (FITM), Prachinburi Campus. The event commenced with a warm welcome and introductory remarks by Asst. Prof. Dr. Khridsadakhon Booddachan, FITM Dean.

On August 21, 2023, Prof. Dr. Norio Tomii, from the Department of Mechanical Engineering at Nihon University and also serving as the Japan's Vice Dean of the Center for Railway Research, visited the Railway Technology and Innovation Operation Center, Techno Park, KMUTNB. The purpose of his visit was to discuss potential research collaborations with KMUTNB executives, including Prof. Dr. Somrerk Chandra-ambhom, Vice President for Research and Information Technology Development, Asst. Prof. Dr. Nattapong Makaratat, Assistant to the President for University's Environment and Physical Development, and the KMUTNB team.

## Academic Cooperation

### Establishing the IGIP National Section in Thailand



*Picture: Prof. Tiia Rüttermann (left), IGIP President and Asst. Prof. Dr. Panarit Sethakul (right) at the event.*

From September 26 to 29, 2023, Asst. Prof. Dr. Panarit Sethakul, Chairperson of the IGIP National Section Committee of Thailand and a representative of KMUTNB, attended the 26<sup>th</sup> International Conference on Interactive Collaborative Learning and the 52<sup>nd</sup> IGIP International Conference on Engineering Pedagogy in Madrid, Spain.

During this event, he presented his paper and held a meeting with the IGIP International Monitoring Committee to report updates and engage in discussions regarding the progress of establishing the IGIP National Section in Thailand. Since 2019, KMUTNB has been planning to establish the IGIP National Section in Thailand. KMUTNB has formed a dedicated team, led by Asst. Prof. Dr. Panarit Sethakul, in collaboration with the IGIP International Monitoring Committee, to diligently follow the necessary procedures and guidelines. During his visit, he had a meeting with Prof. Tiia Rüttermann, IGIP President, Dr. Eleonore Lickl, IGIP President of the International Monitoring Committee, and Prof. Dr. Michael Auer, IGIP General Secretary. The discussions on the submission

of the IGIP national section curriculum to the IGIP International Monitoring Committee for assessment and accreditation. Additionally, plans for organizing an online workshop in the near future were also addressed.

The establishment of the IGIP National Section at KMUTNB in Thailand will play a crucial role to enhance a quality of lecturer/teacher and management staff at Higher Education Institutions and Vocational Institutions which will mark a significant milestone as it will be the first of its kind in Southeast Asia.

### National Formosa University (NFU), Taiwan



On August 30, 2023, the MoU signing ceremony between KMUTNB and NFU took place at the KMUTNB Council Meeting Room, 9<sup>th</sup> floor, Navamin Building. Asst. Prof. Dr. Aiya Chantarasiri, Dean of the Faculty of Science, Energy and Environment (SciEE), represented KMUTNB, while Prof. Dr. Li-Wei Chen, Vice President for International Affairs, represented NFU during the signing of the MoU.

In attendance as witnesses to the ceremony were Prof. Dr. Somrerk Chandra-Ambhon, Vice President for Research and

Information Technology Development, Ms. Sikan Kulchonchan, Vice President for International Affairs and members of the SciEE Management. The event provided an opportunity for the representatives to engage in discussions regarding the development of future academic activities between the two institutions.

### Vietnam-Korea University of Information and Communications Technology, Vietnam



On July 28, 2023, two representatives from KMUTNB's Faculty of Information Technology and Digital Innovation, Asst. Prof. Dr.-Ing. Sunantha Sodsee, the Dean, and Asst. Prof. Dr. Siranee Nuchitprasitchai, Chair of the Bachelor of Science Program in Informatics for Digital Economy, participated in the ASEAN Consortium for Innovation and Research held at VKU, Vietnam.

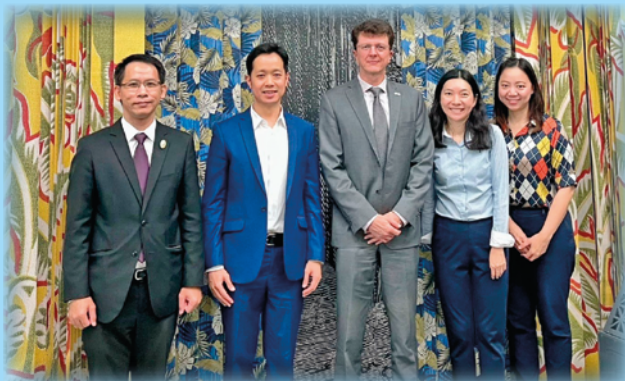
Furthermore, Asst. Prof. Dr.-Ing. Sunantha Sodsee (6<sup>th</sup> from l-r) had the honor of representing

KMUTNB and Assoc. Prof. Dr. Huynh Cong Phap (7<sup>th</sup> from l-r), VKU Rector, in signing the Memorandum of Understanding (MoU) between KMUTNB and VKU.



## Campus News

### TFII Director Makes the Courtesy Visit to the French Embassy in Bangkok



*Picture from l-r: Asst. Prof. Dr. Wattana Kaewmanee (1<sup>st</sup>) a former TFII Director, Asst. Prof. Dr. Pornsak Srisungsitthisunti (2<sup>nd</sup>), a newly TFII Director, Mr. Xavier GROSMAITRE (3<sup>rd</sup>), Attaché for Scientific and Higher Education Cooperation, Ms. Wanpen Sirapat(4<sup>th</sup>), Budget and Scholarship Coordinator and Ms. Jutaporn Kanjanakuha (5<sup>th</sup>), Assistant to Attaché for Scientific and Higher Education Cooperation.*

On September 21, 2023, Asst. Prof. Dr. Pornsak Srisungsitthisunti, the newly appointed TFII Director, and Asst. Prof. Dr. Wattana Kaewmanee, a former TFII Director, held a meeting with Mr. Xavier Grosmaître, Attaché for Scientific and Higher Education Cooperation and his team at the French Embassy in Bangkok. They received a warm welcome from Mr. Grosmaître and engaged in discussions regarding their collaborative work plan, aimed at strengthening the partnership between TFII and French universities and the private sector in the future.

During this gathering, a significant proposal was extended to Mr. Grosmaître, inviting him to join the TFII Executive Board Committee. His role within this committee would involve providing valuable insights and strategies for enhancing cooperation with French universities and companies.

TFII was originally established in 1990 through a collaborative effort between the French Government and Thai Government. This partnership stands as a testament to the deep-seated friendship and academic cooperation between the two nations.

Additionally, it is noteworthy that Asst. Prof. Dr. Pornsak Srisungsitthisunti was appointed as TFII Director on August 26, 2023.

### Université de Lorraine, France



From July 10 to August 14, 2023, Asst. Prof. Dr. Ehsan Jamshidpour, a researcher from GREEN, Université de Lorraine, France, visited KMUTNB as part of the Electrical Engineering – Thai French Research Center (EE-TFRC) project. The primary aim of his research visit was to engage in collaborative work within the international research laboratory “Electrical Engineering Thai French Research Center” (EE-TFRC), alongside the TFII research team at the Renewable Energy Research Centre (RERC), TFII.

Additionally, he gave a lecture to Ph.D. students in the Dual Degree Program in Electrical and Energy Engineering. And from August 9 to 11, 2023, Asst. Prof. Dr. Jamshidpour and Prof. Dr. Matheepot Phattannasak, a lecturer/researcher at KMUTNB, jointly organized an international workshop on “Fault Diagnosis in DC-DC Converters” at RERC. The workshop attracted nearly 100 participants, including lecturers, researchers, as well as undergraduate, master’s, and Ph.D. students from various universities in Thailand and abroad.

### CESI Engineering School, France

In June to September 2023, 18 students from CESI Engineering School, France, embarked on their internships, split between the College of Industrial Technology (CIT) and various companies.

On 11 July, the welcoming and orientation session for the first interns group took place at the Palmthong Meeting Room, Assoc. Prof. Dr. Smith Songpiriyakij(6<sup>th</sup> from l-r), Dean of the College of Industrial Technology



(CIT), and Assoc. Prof. Dr. Rattanakorn Phadungthin (7<sup>th</sup> from l-r), Associate Dean for International Affairs, extended a warm welcome to the CESI Engineering School students. Since 2022, KMUTNB and CESI Engineering School have established a Memorandum of Understanding to foster collaboration in promoting activities such as the Exchange Student program and Internships between the two universities.



## Campus News

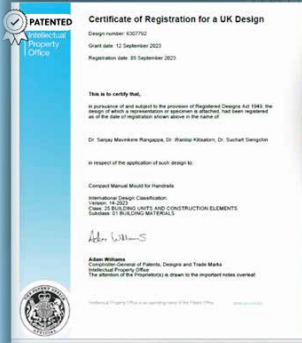
### KMUTNB Research Team Successfully Registers Intellectual Property Rights in the Type of a United Kingdom Design Patent

KMUTNB RESEARCH TEAM

United Kingdom Design Patent

DESIGN NUMBER 6307792

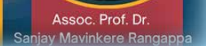
Compact Manual Mould for Handrails



Prof. Dr.-Ing. habil.  
Suchart Siengchin



Asst. Prof. Dr.  
Wanlop Kitisatorn



Assoc. Prof. Dr.  
Sanjay Mavinkere Rangappa

The KMUTNB research team has successfully registered an intellectual property of the United Kingdom Design Patent with the number 6307792. The design work is titled ‘Compact Manual Mould for Handrails.’ The designers are as follows:

1. Prof. Dr.-Ing. habil Suchart Siengchin, KMUTNB President and a Professor at the Sirindhorn International Thai-German Graduate School.
2. Asst. Prof. Dr. Wanlop Kitisatorn, Deputy Director for Research Promotion and Strategy Development, Science and Technology Research Institute, King Mongkut’s University of Technology North Bangkok and lecturer/researcher of Faculty of Engineering.
3. Assoc. Prof. Dr. Sanjay Mavinkere Rangappa, a researcher at the Sirindhorn International Thai-German Graduate School, KMUTNB.

### KMUTNB Researcher Received the SIAL Innovation Selection Award 2023 in Shenzhen, China



On August 28-30, 2023, Assoc. Prof. Dr. Benjawan Thumthanaruk, from the Department of Agro-Industrial, Food, and Environmental Technology, Faculty of Applied Science, KMUTNB, received the SIAL Innovation Selection Award 2023 at the SIAL Shenzhen 2023 event. The award was granted for the work on “Freeze Drying Jelly Fish Products.”

Currently, this achievement is under intellectual property rights by Unique Gold Interfood Co., Ltd., and the products, known under the two brands Kurage and Suppersea.

### KMUTNB Lecturers Received Awards at Indonesia Inventors Day (IID 2023) in Bali, Indonesia



On September 16-19, 2023, Faculty members and master students from the Master’s Program in Innovation Management for Business and Industry (IMBI), the College of Industrial Technology, KMUTNB have received awards for presenting their research work at the Indonesia Inventors Day 2023 (IID 2023) in Bali, Indonesia. The distinguished achievements are as follows:

1. Silver medal and special prizes from Innovation Organizations in Taiwan for their work titled ‘Innovative sheet-forming Thai-style sweet fish sauce.’
2. Bronze medal and special prizes from Innovation

Organizations in South Korea for their work titled ‘The deployment of a pulse high voltage generator for stimulating mushroom.’

3. Bronze medal for their work on ‘Innovative jelly diet to boost energy for seniors.’

4. Bronze medal for their work on the ‘Development of an antimicrobial patch for food shelf-life extension.’

## Indian Institute of Technology Madras, India



Picture from l-r: Prof. Dr.-Ing. Nisai Fuengwarodsakul (4<sup>th</sup>), TGGS Dean, Mr. Nitirooge Phoneprasert (5<sup>th</sup>) the Royal Thai Consulate-General in Chennai and Prof. Dr. Raghunathan Rengaswamy (6<sup>th</sup>), Dean of Global Engagements, IIT-M.

On September 11, 2023, Mr. Nitirooge Phoneprasert, the Royal Thai Consulate-General in Chennai, participated as a witness in the signing ceremony of a Memorandum of Understanding (MoU) between the Sirindhorn International Thai-German Graduate School of Engineering (TGGS), KMUTNB and the Indian Institute of Technology Madras (IIT-M) in Tamil Nadu, India. The MoU was signed by Prof. Dr. Nisai Fuengwarodsakul, the Dean of TGGS, and Prof. Dr. Raghunathan Rengaswamy, the Dean of Global Engagements, IIT-M.

The signing of this MoU marks the beginning of a significant partnership

between the Consulate General in Chennai and educational institutions in Tamil Nadu, one of the five southern states of India, known for its prestigious institutions in science, technology, and engineering.

This MoU is aimed at fostering diplomatic initiatives to enhance educational collaboration between Thai and Indian educational institutions in Tamil Nadu. It paves the way for various collaborative activities between TGGS and IIT-M, including student and faculty exchange programs, the sharing of academic and research information, as well as organizing seminars, conferences, and academic meetings.

## Chiba University, Japan

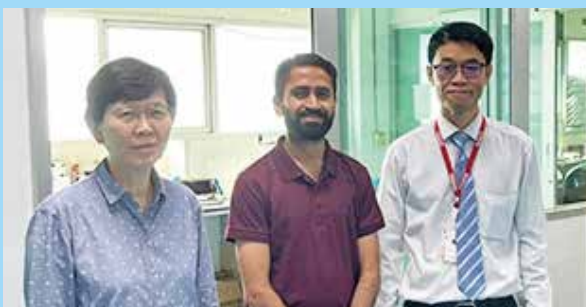


From August 22 to September 22, 2023, two exchange students, Mr. Shuntaro Fukuoka and Mr. Daiki Fujikawa (2<sup>nd</sup> and 3<sup>rd</sup> from the left), from the Graduate School of Science and Engineering, Chiba University, Japan, engaged in research at the Computer Engineering Laboratory (ComEng) within the Thai-German Graduate School of Engineering (TGGS). Their work were conducted under the co-supervision of Assoc. Prof. Dr. Shoko Imaizumi (4<sup>th</sup> from the left)

from Chiba University and Asst. Prof. Dr. Wannida Sae-Tang (5<sup>th</sup> from the left) from TGGS.

## Ph.D student to join the NSIRC Ph.D Programme

Mr. Muhammad Tahir Farooq (Center), has been granted acceptance into the NSIRC Ph.D Programme at TGGS. He is set to embark on an industry-focused research endeavor in collaboration with TWI and the Lloyd's Register Foundation (LRF), with the supervision of Asst. Prof. Dr. Peerawatt Nunthavarawong (the right), Materials and Production Engineering (MPE) department, TGGS. This collaborative initiative, uniting TWI, LRF, and KMUTNB, marks a significant milestone in enhancing the safety and efficiency of Thailand's oil and gas industry.



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