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# Activity Report for TAIST-Tokyo Tech 支援者の皆様への活動報告

Steering Committee for TAIST-Tokyo Tech TAIST 運営委員会



**TAIST-Tokyo Tech Hybrid Graduation Ceremony 2022** 

2022 年度修了式(2022 年 8 月ハイブリッド開催)の様子

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### ACTIVITIES REPORT/活動報告

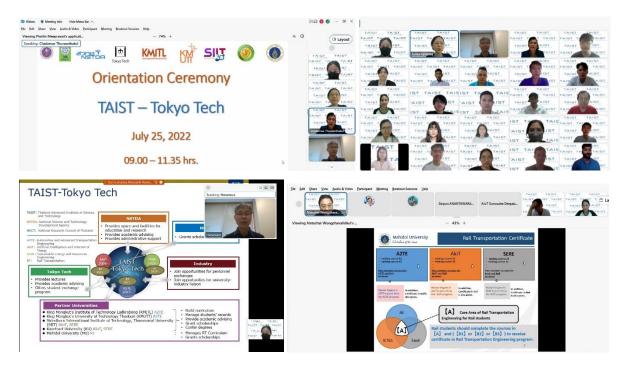
TAIST-Tokyo Tech students were able to access a range of experiences through their extracurricular activities.

TAIST-Tokyo Tech の学生は,授業や課外活動等を通じて様々な経験を積んでいます。 本ニュースレターでは 2022 年~2023 年の活動をご紹介します。

1. Opening Day and Orientation Ceremony 2022/開講式・オリエン テーション

To welcome the new students of the academic year 2022, TAIST-Tokyo Tech has organized an orientation ceremony via WebEx Meeting on July 25, 2022 at 9:00 am - 12:00 pm (Thai time). Dr. Chadamas Thuwasettakul, Executive Vice President of NSTDA, welcomed the students on behalf of the Thai side and Prof. Dr. Katsunori Hanamura, Chairman of the Steering Committee of TAIST-Tokyo Tech, welcomed the students and audience on behalf of the Japanese side. Brief introduction of NSTDA, Tokyo Tech. In addition, PD and co- PD advice on study and research for 3 programs and one certificate program (rail transportation) were given. In addition, students were briefed on research areas by representatives from NSTDA's 4 national research centers (BIOTEC, NANOTEC, NECTEC, and MTEC) in Thailand.

2022年7月25日,開講式および新入生オリエンテーションがオンラインで開催されました。新入生への歓迎の言葉が贈られ,各プログラム等の説明が行われました。



### 2. Virtual Graduation Ceremony 2022 (Academic Year 2021) /修了式

The virtual graduation ceremony was held on August 18, 2022 hybrid events. In the academic year 2021, there were a total of 47 graduates from 3 programs, namely 12 AE graduates, 18 ICTES graduates, 1 AIoT graduate 17 EnvE/ SERE graduates. In addition, 23 graduates received Rail Transportation Certificates. The opening speech was delivered by Executive Vice President of NSTDA, Dr. Chadamas Thuvasetthakul, the welcoming speech was delivered by Executive Vice President, Prof. Jun-ichi Imura, Tokyo Institute of Technology, Japan, and the welcoming speech was delivered by First Secretary of the Embassy of Japan Mr. Takeshi Uchida. To celebrate the achievements of the new graduates, TAIST professors and supporting staff of TAIST participated in the virtual ceremony.

2022 年 8 月 18 日, TAIST-Tokyo Tech の 2021 年度修了式がハイブリッド形式で行わ れ,47名の学生が修了しました。うち 23名は、副専攻コースである鉄道カリキュラ ムもあわせて修了しました。式典では NSTDA・チャダマス・ツバセタクル副長官、 東工大・井村順一理事・副学長(教育担当),在タイ日本国大使館・打田一等書記 官から祝辞が贈られ,TAIST-Tokyo Tech 教員やスタッフも出席し、修了生の門出を 祝福しました。







# 3. NSTDA Laboratory Visit Program 2022/NSTDA の研究所訪問

National Science and Technology Development Agency: (NSTDA.) organized activities NSTDA Lab Tour 2022 for TAIST-Tokyo Tech students on August 10 and August 18, 2022. who visited NSTDA centers to learn how to use the tools. Sharing knowledge with researchers leads to joint research efforts.

2022 年 8 月 10 日と 8 月 18 日に TAIST-Tokyo Tech の学生が NSTDA の研究所を訪問 しました。



#### On August 10, 2022

AIoT Program visited National Electronics and Computer Technology Center (NECTEC)

**2022**年8月10日, AIoT の学生が NSTDA の研究所・タイ国立電子コンピューター 技術研究センター(NECTEC)を訪問しました。



SERE Program visited National Metal and Materials Technology Center (MTEC), National Center for Genetic Engineering and Biotechnology (BIOTEC) and National Nanotechnology Center (NANOTEC)

2022年8月10日,SEREの学生がNSTDAの研究所・タイ国立金属材料技術研究センター(MTEC),タイ国立遺伝子生命工学研究センター(BIOTEC),タイ国立ナノテクノロジー研究センター(NANOTEC)を訪問しました。





#### August 18, 2022

A2TE Program\_visited National Electronics and Computer Technology Center (NECTEC) and National Metal and Materials Technology Center (MTEC)

2022 年 8 月 18 日, A2TE の学生が NSTDA の研究所・タイ国立電子コンピューター 技術研究センター(NECTEC), タイ国立金属材料技術研究センター(MTEC)を訪問し ました。





### 4. NSTDA site visit 2022/企業訪問

National Science and Technology Development Agency: (NSTDA.) organized enrichment activities NSTDA site visit 2022 to Delta Electronics Thailand for TAIST-Tokyo Tech students on December 22, 2022. The purpose of the event is to provide students with the opportunity to learn about the design industry. Production and service business solutions for power management and manufacturing of various electronic components. It is also useful for students to discuss and exchange knowledge with practitioners.

2022年12月22日, TAIST-Tokyo Tech の学生が Delta Electronics Thailand を訪問しました。





# 5. Students Exchange Program 2022/学生交流プログラム

### Research-oriented Program in Japan/日本における研究活動プログラム

Tokyo Tech offered the TAIST-Tokyo Tech Student Exchange Program in Japan 2022- a research-oriented Program. The program took place from September 12, 2022 - November 29, 2022. Six students from three TAIST-Tokyo Tech programs participated. The program enabled participants to spend time conducting research under guidance of Tokyo Tech Faculty members. In addition to experiencing research in Japan, the TAIST-Tokyo Tech student also experienced Japanese culture and daily life and learned from their Japanese peers.

Participating student

- Automotive and Advanced Transportation Engineering Program : Mr. Plan Teekatasn Cosh, Mr. Kittipit Hwaiwai
- Artificial Intelligence and Internet of Things Program : Ms. Mya Ei San, Mr. Patipon Petchtone
- Sustainable Energy and Resources Engineering Program : Ms. Kannika Pleejaroen, Mr. Ittichai Kanchanakul

東工大は、TAIST-Tokyo Tech の学生を日本に受け入れ、研究活動に取り組んでもら うプログラムを毎年実施しています。2022 年度は 9 月 12 日~11 月 29 日に TAIST-Tokyo Tech の 3 プログラムから計 6 名の学生を受け入れました。学生たちは、修士 論文研究における副指導教員の研究室において研究活動に取り組み、東工大の研究 室見学や日本企業の見学に参加することで、東工大での研究生活を実体験し、また、 日本の文化や日常生活についても理解を深めました。



### Study in Thailand/東工大生のタイ派遣プログラム

Tokyo Tech implemented the Exchange Program for Tokyo Tech students in Thailand. In the 2022 academic year, 2 Tokyo Tech students joined the program from October 11, 2022 – February 23, 2023. They attended intensive lectures of TAIST-Tokyo Tech program at NSTDA given by Tokyo Tech professors and participated in internships at the National Research Center of NSTDA.

東工大は、TAIST-Tokyo Tech の枠組みを活用して、東工大生をタイへ派遣するプロ グラムを毎年実施しています。2022 年度は 2 名の東工大生が本プログラムに参加し ました。派遣学生は、現地の学生とともに TAIST-Tokyo Tech の講義を受講したほか、 NSTDA の各研究室において研究インターンシップに取り組みました。

Participating student : Sustainable Energy and Resources Engineering Program : 1. Mr. Subaru Ono, October 11, 2022 – November 17, 2022.

A welcome lunch and site visit Thammasat University, Rangsit Campus.



Participating student: Automotive and Advanced Transportation Engineering Program : 2. Mr. Hiroshi Noma, January 14, 2023 – February 23, 2023







6. Message from Graduates 2022/修了生からのメッセージ

# Testimonials from Graduates of the Automotive Engineering Program (AE) /AE プログラム修了生

I can't thank you all enough. Thank you, everyone, for all the help, and for supporting me. This accomplishment would not have been completed without the support and inspiration from many people.

Kulranut Junya : KMITL : AE13



I would like to express my sincere appreciation to Thailand Advanced Institute of Science and Technology and Tokyo Institute of Technology (TAIST-Tokyo Tech), a joint graduate education program organized in cooperation with National Science and Technology Development Agency (NSTDA, Thailand) and Tokyo Institute of Technology (Tokyo Tech, Japan), who provided a financial support for my master's degree.

I have been deeply fascinated by automotive since I was young age so I decided to enroll in automotive engineering program. During my studied, I interested about diesel emission mitigation strategies so I decided to conduct my research project related to diesel particulate filter. I experienced many challenges and difficulties when doing research. However, my master could not have been achieved without support and help of a good number of people. I would like to thank all members in TAIST-Tokyo Tech, NSTDA as well as KMITL laboratory who advised me research and all useful support of all documents, paper works and assistance for laboratory equipment. In addition, I would like to express my deep and sincere gratitude to my supervisor, Assoc. Prof. Dr. Preechar Karin, Co-Advisor Dr. Nuwong Chollacoop, and Prof. Dr. Katsunori Hanamura, who gave me a great opportunity to study in this excellence institute and wonderful laboratory. Their fruitful suggestion, dynamism, vision and motivation have deeply inspired me to achieve such great research. It was a great privilege and honor to work and study under there guidance. I could have broadened my knowledge and gain deeper insight into automotive industry.

TAIST-Tokyo Tech's scholarship has opened a door and the prospect of a brighter future and will play a key role in shaping me into a successful person in future.

Sattatad Rodvanna AE 11 : KMITL

The opportunities do not always come to us, so when we get an opportunity, grab it. And show our full potential. I would like to take this opportunity, to thank you TAIST-Tokyo Tech scholarship that offers the opportunity to study for a master's degree until graduation. I feel extremely fortunate to be given the chance to develop my potential. and would like to request this scholarship for the next generation.



Tiwat Kaewkam : AE13: KMITL

Finally, I have reached my goal of a "master's degree" which is possible thanks to the tremendous support from Thailand Advanced Institute of Science and Technology-Tokyo



Institute of Technology (TAIST-Tokyo Tech), National Science and Technology Development Agency (NSTDA). If I looked back to three years ago when I have just finished my undergraduate degree and make the comparison with me now, I see myself learning many good things and getting to know lots of people from different backgrounds. The learning environment that was created under this program is just perfect for students not only to learn about the theory but also contain an opportunity to work with the outstanding researcher with adequate facilities support. What is more, everyone here is supportive and tries to help as much as they can to see me accomplish my work with flying

colors. I, one more time, would like to express my gratitude toward TAIST-Tokyo Tech for establishing this excellent program which provides me the great opportunity to come and study in Thailand. It also hands me the rare chance to start my career as an assistant researcher. I always feel grateful and blessed for everything I went through during my study period. I hope that everyone also has a similar marvelous journey.

Your sincerely,

Khemrath Vithean : AE 13 : KMITL

As for my impression of studying at TAIST-Tokyo Tech, my first impression is that I'm

learning in a truly international teaching environment. Because most of the instructors are from Japan. The communication in the classroom must be in English only. This is different from other international courses because when the instructors are Thai people. Therefore, the communication is not fully English. For anyone who does not have a very high language background before actually starting to study engineering. The foundation of English was also laid at SIIT and the foundation of automotive engineering knowledge from Thai professors was also laid before. So that we can study with Japanese teachers better and when entering teaching during the first year as for



the place to study, it's okay. Module style that studied at the beginning of the week, the exam at the end of that week quite difficult to adjust because it's like studying for a while and then

taking the exam but the teacher was very attentive and took the test that wasn't too difficult make it possible for everyone to come through. Overall, my first year of study at TAIST-Tokyo Tech was quite impressive. Even if the grade is low. Then the next part is choosing to do research with university professors. This one is quite stressful. Most of my friends spent a lot of time doing research, including me, which made me discouraged many times. But in the end, when it passed, we felt that we are very talented people and ready to go out to work, especially in the academic field or research, TAIST-Tokyo Tech graduates can say that there is nothing to be afraid of.

Chaichayo Suetrong : AE11 : KMUTT



It should be a great opportunity I ever met, TAIST-Tokyo Tech program. I'm AE student batch number 11. After I graduated from the university, I known the AE program of TAIST-Tokyo Tech from Website. Then I tried to apply and I was selected to attend in this program. I'm very excited to attend this program. When the class began, I was impressed my friends and teachers. I'm grateful to Japanese teachers who fly to Thailand to teach me even though they are busy. This is my first time to study with Japanese teacher. I was quite nervous. I was always no questions to the Japanese teacher, but my friends don't. This made me learning how to make a

good question at that time. Sometimes our class can't answer critical questions about what they wanted us to do, which made us disappointed because the Japanese teachers were so kind and had very clear explanations of each subject. By the way, my classmates were very kind, responsible, and very helpful. It was the best relationship that I found. I was impressed all staffs of TAIST-Tokyo Tech who were kind and helpful. I would like to thank you all teachers who saw my potential and selected me to study in this program. I would like to thank you all of my friends and thanks for the good friendship.

Kampanat Sookchanchai : AE11: KMUTT

TAIST-Tokyo Tech program has offered an opportunity for me to learn more about automotive

engineering. Automotive engineering program is quite challenging to me because my bachelor degree background and I have worked in different field of work. These encourage me to learn new things and increase my potential. Almost every subject I have to start from zero but with the patiently teaching from Japanese professors, challenging assignments and with the help of my friends in the batch. I manage to pass through the subjects. Moreover, the research is the hardest part for studying this program. I have struggled a lot to find the right topic and advisor who match me. But with the help from many lecturers from



KMITL and KMUTT, they guide me until I found my advisor and the research topic. This research taught me a lot more than engineering knowledge. It taught me about how to solve the

problem with procedure in scientific method and transformed into someone who works hard to overcome obstacles. Finally, TAIST-Tokyo Tech program have shaped the students into a better version of yourself and push our potential beyond the limit.

Pera Tanateerapong : AE 11: KMUTT

# Testimonials from Graduates of the International and Communication Technology for Embedded Systems Program (ICTES) and Artificial Intelligence and Internet of Things (AIoT) /ICTES・AIoT プログラム修了生

I am grateful to participate in the AI/IoT engineering program. This program provided rich course works, allowing me to learn a great deal from professors at SIIT, KU and Tokyo Tech. Moreover, I could work in a NECTEC laboratory where it is not only the place that I have known a lot of brilliant engineers and researchers, but they also helped me improve my work toward my goals. This program let me participate in the NECTEC's laboratory, where I had to work among those wonderful people, and I learned a lot from them. In addition, I appreciate that I can know many good friends from Thailand, Myanmar, Vietnam, and Indonesian through this program. Although



we did not have as many opportunities to meet each other in the on-site classes due to the pandemic in 2020, we sometime exchange some knowledge regarding course works by online meetings, and spend few times on trips to further develop our relationship. The pandemic could not break us apart! I felt lucky that I could know them. Lastly, this curriculum also offers the opportunity to develop advanced research skills in AI/IoT domain. During the first year, we have firmly developed much knowledge in this domain. We could then further apply all our knowledge to solve the problems in our research in the second year. This program also provides another scholarship to students who wish to pursue a Ph.D. at Tokyo Institute of Technology. I heard this scholarship from Prof. Thanaruk in the Line group (AI/IoT batch group). It is very interesting opportunity, but however, at that time, I just started my M2 student life. So, I pondered about this for several days, since I have no experience and I still could not publish any conference paper. However, I applied for this scholarship, and I also managed to pass the entrance exam of Tokyo Institute of Technology. At that time, I had to work hard, to publish papers and graduate by March 2022, and I made it! Finally, I would like to say thank you to everyone that come into my life during I was in TAIST-Tokyo Tech program. I gained a lot of good opportunity, and I genuinely appreciate all that TAIST's professors and staffs have done for me and others. Thank you so much for everything.

Phurich Saengthong : AI/IoT 1 : SIIT/TU



I am writing to convey my impressions to TAIST-Tokyo Tech. Before I start my impression, I would like to introduce myself that my name is Menghorng BUN, who is from Cambodia. Currently, I am a Ph.D. student at the Institute National Polytechnic of Toulouse, French. Since I had passed a scholarship and studied at the TAIST-Tokyo Tech program for 2 years, I learned many new things, got more experiences, and especially had many good memories that I cannot forget. All professors are kind and full explanation, and the lesson slides and references are fully detailed. Even though this program looks more challenging than the others that I had learned, I still finish successfully.

Meanwhile, I would like to thank my advisors (Assoc. Prof. Dr. Waree Kongprawechnon, Dr. Cherdsak Kingkhan, and Assoc. Prof. Dr. Hiroki Nakahara) who always guide me in the right way to get the best methodologies, correct my mistakes, recommend me, encourage me to finish my degree, and kindly support me when I need help. Moreover, I would like to thank all project members of Smart Machine and Mixed Reality Laboratory, NECTEC, NSTDA, who always help me to solve my technical problems.

Finally, I would like to thank the Thailand Advanced Institute of Science and Technology (TAIST), National Science and Technology Development Agency (NSTDA), Tokyo Institute of Technology, Sirindhorn International Institute of Technology (SIIT), Thammasat University (TU) under the TAIST-Tokyo Tech Program that financially supports to my research. In my opinion, the TAIST-Tokyo Tech program is the best program to develop and improve the capacity of high education and engineering in ASEAN.

Menghorng Bun : ICTES 12 : SIIT/TU

I would like to thank the TAIST-Tokyo Tech program for the supporting grants. And I appreciate this program bringing me to meet the numerous people who contribute to this research from many departments including Tokyo Institute of Technology (Tokyo Tech), National Electronics and Computer Technology Center (NECTEC), Sirindhorn International

Institute of Technology (SIIT), and Department of Mineral Resources (DMR). This program provides the opportunity to gain a work experience as a co-researcher of the famous government agency (NECTEC) and also earn a living allowance from this work. Due to my assigned project, I have a chance to cooperate with DMR to achieve this project. In terms of education, I was advised by talented people from excellent universities (Tokyo Tech and SIIT). During the course of this program, I was supported by the kindly staff of this program such as the facilitation of learning, consulting, and



activities. Finally, my heartfelt gratitude is delivered to the assistants who have supported me, not only my parents, both directly and indirectly, for the whole years of my education life. Last but not least, I hope a good program like this program is extended to the future to give the opportunity for the people who need to improve and challenge the ability of themself.

Pitisit.Dillon : ICTES 12 :SIIT/TU

I would like to express my sincere gratitude to TAIST-Tokyo Tech for accepting me to join a master's program in ICTES with scholarships. This program provided me with great opportunities and support to improve my skills and knowledge.

Sawittree Jumpathong : ICTES 12 : SIIT/TU





I would like to take this opportunity in this graduation ceremony to give my most sincere gratitude for everything to the TAIST-Tokyo Tech program all these years. I have been very fortunate to join this program and have been taught by many best teachers from both KU, SIIT in Thailand and from Tokyo Institute of Technology in Japan. They have taught me so much about many interesting lessons. I've gained so much knowledge in what I was interested about and showed me of what I am capable to do from being in classes. Moreover, I would like to thank to Dr. Seksan, my advisors from SIIT, who helped guiding me in right way to the achievement and for supporting me through my years during this master degree. I couldn't have had such a great education without

your guidance and support. Also Dr. Krit, my researcher from NSTDA, thank you for your guidance that has led me to my success today. Lastly, Dr. Yuko, my advisors from Tokyo Institute of Technology, for your kind and very well recommendation to make my every single examination in every semester are much easier. Throughout my academic journey, I was really appreciating to be the ICTES student surrounded with many friends I also would like to thank to everyone in ICTES 12 who always being there when I needed your help and support. This friendship has meant a lot to me, and without your help, I would not be where I am today. Thank you for being my friend and You are amazing guys. As I look back at it now, this journey was not really easy for any one of us but having teachers and friends like this makes our academic's life fun and much easier to get it through.

Warnnaphorn Suksuganjana : ICTES 12 : SIIT/TU

I think I am very fortunate to be selected for a Master's degree scholarship from Thailand Advanced Institute of Science and Technology and Tokyo Institute of Technology (TAIST-Tokyo Tech) and the opportunity to study with some of the world's leading teachers. All teachers care about students. keep giving advice and answer problems very well.

I would like to appreciative to all of my thesis advisors. First, Assistant Professor Denchai Worasawate from Kasetsart University Thailand for his guidance, kindly suggestions, and following up on my thesis progress. Second, Professor Kazuhiko Fukawa from



Tokyo Institute of Technology Japan, for his valuable suggestion on this thesis. Last, Dr. Kamol Kaemarungsi from National Electronics and Computer Technology Center, for providing knowledge, tools, and a place for experiments. Without these people, the thesis would have never been done successfully. My thanks also go to Dr. Tiwat Pongthavornkamol from National Electronics and Computer Technology Center for his kindly assistance, guidance, and providing specialized knowledge. Without him, it will be difficult for me to produce this thesis. I really appreciate his thoughtfulness. Lastly, I would like to thank National Electronics and Computer (NECTEC) for the funding of this project. This thesis was supported in part by a Thailand Advanced Institute of Science and Technology and Tokyo Institute of Technology (TAIST-Tokyo Tech) scholarship.

Finally, I would like to thank all of the Thailand Advanced Institute of Science and Technology and Tokyo Institute of Technology (TAIST-Tokyo Tech) staff for their help, convenience and gave me the necessary advice. If it is possible, I want this scholarship to continue for good opportunities for next generations.

Aman Worasutr : ICTES 11 : KU



I am writing to express my sincere gratitude to you for making the TAIST-Tokyo Tech Scholarship possible. I was thrilled to learn of my selection for this honor, and I am deeply appreciative of your support. I am immensely grateful to you for having faith in me. I want to say that by choosing me for scholarships, not only you are helping us financially but also mentally as you have faith in us to be worth helping. I am immensely thankful to you for giving us the opportunity for a glorious future manageable for me.

Previously, I was a final-year college student unsure about what to do after graduation. This scholarship helps me to study new technologies. and discovered a method to make my career I got the opportunity to study with academics from Tokyo Institute of Technology. Gain personal knowledge from instructors who go to Thailand to teach in classrooms. There are also advisers from all three universities, notably Kasetsart University, NSTDA, and Tokyo Institute of Technology. All professors are extremely helpful in creating projects and providing advice when there are difficulties and providing solid ideas on how to address them. And this scholarship has cost for conference as well. It made my master's studies easier and less stressful. I was able to focus on my project as a result.

Thank you again for your generosity and support. By awarding me the TAIST-Tokyo Tech Scholarship, you have lightened my financial burden, which allows me to focus more on the most important aspect of school: learning. Your generosity has inspired me to help others and give back to the community. I hope one day I will be able to help students achieve their goals just as you have helped me.

Kanittha Rungyaem : ICTES 12 : KU

Firstly, I am grateful to be a part of TAIST-Tokyo Tech program. This program not only provide me a coursework but also a great environment of study. The students were enrolled from many various backgrounds which will broaden the experience of each other. The collaboration of lecturers from different partner universities sharing their expertise and give us a lot of academic instruction. The program also provides the opportunities to work with NSTDA where student can experience the real researcher who work for the government agency. Furthermore, thanks to the staff of this program who always support throughout the study including document works, instructions and fun activities.

Besides, I would like to express my special thanks of gratitude and appreciation to my advisor, Asst. Prof. Teerasit Kasetkasem who gave me a great support, opportunity, and suggestion. He guided me along until the completion of this thesis by providing many necessary suggestions on the research. My NSTDA co-adviser, Dr. Teera Phatrapornnant for the comment on my work and gave me the opportunity to be in a part of government agency research work. My thanks also go to my Japanese co-advisor, Prof. Itsuo Kumazawa who provide me a support for writing a conference paper during the study program. Lastly, I would like to thank Ms. Wanlaya Laungnarutai for



an advice and suggestion on this work since the starting of this program.

Finally, I really appreciate for the financial supported by Thailand Advanced Institute of Science and Technology (TAIST), National Science and Technology Development Agency (NSTDA), Tokyo Institute of Technology, Kasetsart University (KU) under the TAIST-Tokyo Tech Program.

Teepakorn Tosawadi : ICTES 12 : KU

# Testimonials from Graduates of the International Sustainable Energy and Resources Engineering Program (SERE) /SERE プ ログラム修了生

The word "opportunity" doesn't come up often. Opportunities are not available to everyone. It was a word that made the decision to come and take the scholarship exam with this project. Before deciding to continue studying in the project, I am a fresh graduate who is deciding on two paths between work and study. Try to think with your family about which option would be better, as opportunities don't come around often. Therefore, it was decided to receive the scholarship.

The TAIST-Tokyo Tech program has given me and many others an educational opportunity to pursue a master's degree. There are a wide variety of subject areas to choose from. I chose to study SERE. This field of study is about sustainable energy and resource optimization. It will be the main use of renewable resources. Whether it is energy from bio-inexhaustible natural energy, this is considered a replacement to maintain the world's resources to last as long as possible.

The first impression that needs to be made is the opportunity to win a full 2-year scholarship from the program. And also take into account the living allowance from the researchers of the NSTDA. The second is the impression while studying. Both Thai teachers and Japanese teachers come to teach directly during the course. And when it is an international program, there must be teaching and learning. All communication is in English. The third impression is having friends who help with the use of English. My English is not very good, but I have friends who help explain and help me communicate with Japanese teachers more easily. This gives us the courage to speak English more and more confidently than before.

Finally, the decision to choose to study at that time is considered the most correct decision in choosing to continue studying and working. This project gives an impression and gives a good experience in life.

Nhalinrat Nuengphirom : SERE 3 : KU

First, I would like to thank NSTDA for allowing me to accept into this course and provide facilitation in areas such as classrooms, courses, many excellent professors, and publishing, including in particular the free tuition subsidy/for the duration of my two-year master's degree including various publications and laboratories. I love this course. It is a course I saw once and was interested in and decided to apply. There are both interesting subjects about various aspects of energy, environmental management, life cycle assessment, material environmental chemical engineering, biorefinery process, and rail transport system, and studied with teachers from different universities



(KU, TU, SIIT, KMUTT, and MU) and researchers, Especially the Japanese Sensei from Tokyo Tech directly. Had the opportunity to learn to work with Japan and include international

cultural exchange when working in groups Worked with students from many nations. The coursework is 1 credit per course, each subject has a project semester to do. The course is active learning. Most of the work is group work. foreign students who have fully practiced English language skills and soft skills, working with others as a group, presenting work, and being punctual under pressure. This is a very important skill for working outside in the future. It's a pity that after 2020, the covid-19 crisis has made learning to be an online format so may not have received anything as fully as they should Including the Japanese exchange capital is therefore canceled. But studying in this course is considered the most worthwhile.

Kittitat Sirivechphongkul : SERE 3 : KU

I am writing to convey my heartfelt appreciation for making the TAIST-Tokyo Tech Scholarship Program. I was so delighted to learn of my chosen for this distinction, and I am grateful for your support.

My profession is that of a chemical engineer who aspires to be an excellent researcher regarding with environmental fields after completing the Master of Sustainable Energy and Resources Engineering program. I'm one step closer to my ambition thanks to TAIST-Tokyo Tech. The financial support you offered will be extremely beneficial to me in meeting my educational and research expenditures, allowing me to devote more time to studying.



Thank you once more for your kindness and generosity. I pledge to work hard and ultimately give back to others, both as a teacher and may be through a scholarship to future students like myself. My ambitions are now achievable thanks to the TAIST-Tokyo Tech Scholarship Program.

Mya Thandar Khin : SERE 8 : KU

I thought this TAIST-Tokyo Tech scholarship would be a good opportunity for a master's degree. I'd like to thank you for your help during this difficult time. While I was entered in the Sustainable Energy and Resource Engineering (SERE) programme, NSTDA, TAIST, and a KU officer assisted me so much. Furthermore, I have had a lot of fun with my new friend both in and out of class, and we also hang out whenever we have a chance. Although there is a good time, the Covid-19 situation occurs, which takes us to an online class that is difficult as we discovered, and we also graduated. Finally, I hope that this scholarship will be extended to the next generation of students interested in sustainable fields.



Parinya Inthasuwan : SERE 3 : KU

I would like to thank my family, my wife and my kid for believing and supporting me these past few years. I would also like to thank all the TAIST-Tokyo Tech staff at NSTDA and

Kasetsart University for your hard work, dedication, and commitment in making my learning experience an inspiring and memorable journey. To all professors, especially my advisors, my sincere gratitude for all of your collaborative effort in finishing my projects and papers. I couldn't have accomplished any of this without all of your help and



support. Apart from my academic life at the university, I would like to thank all of my SERE03 classmate for spending time together and sharing the importance of mentorship, diversity of thought, and inclusivity. With my newfound knowledge and experience I feel confident that I can share this experience with others to make a positive impact on anything in the future. Thank you for letting me be part of the TAIST-Tokyo Tech community!

Phoowadon Prapruetdee : SERE 3 : KU

I studied Sustainable Energy and Resources Engineering program under Kasetsart University's host. I am very glad that I graduated from here. I got a lot of experience while I studied for this program. This program supports students who have various backgrounds, especially me, who graduated as a mathematics major. I had a great experience while I studied at TAIST-Tokyo Tech. I learnt advanced knowledge in an international classroom with a Tokyo Tech professor.

The course work was also taught from Kasetsart professor and NSTDA staff. I had new friends from different country and different background. There are various topics for students from various backgrounds. My research topic was very challenging and meaningful to this world. I had an opportunity to conduct my research with researchers at MTEC, NSTDA. I am very happy in my laboratory. The laboratory's staff were very nice to me. Lab visits and field trips were also provided by this program. During my studies at TAIST-Tokyo Tech, I got a scholarship to register for a certificate in a rail transportation program that is a collaboration between NSTDA, Mahidol University, and Tokyo Tech.



Furthermore, the program supports my attendance at an exchange student program at Kanazawa University for six months. The time during which I studied at TAIST-Tokyo Tech is really precious to me. Finally, I would like to express my sincere gratitude to my advisor, co-advisor, researcher, professor, Kasetsart staff, and TAIST-Tokyo Tech staff who gave me valuable guidance, motivation, feedback, and support to complete the degree.

Phimthong Khamjapo : SERE 3 : KU

This is Pudtraporn Napang, TAIST-Tokyo Tech Sustainable Energy and Resource Engineering Batch 02 from Kasetsart University who got a chance being a student in this scholarship. I have got wonderful memory in my life both knowledge, connection, profile, and good opportunity to work.

When I was a student, as my background is art and science, it's quite challenging to learn and adapt myself in engineering fields. Even the subject is complicated, but I still live it up every day as this opened up myself in the world science and technology.



The most impressive that I obtain is becoming a confidence person, also direct myself being as I have to learn, research, and present self-assignment. Despite the fact that I have got nervous, but finally I know by heart that with my passion, there is not thing I cannot do.

The most fabulous in my live that being a student exchange at Kumamoto university. It's been 6 months living aboard, speaking different language, different cultures, and different environment but I still appreciate and keep this memory in my

mind. I have experience study with Japanese friends in Japanese class with Japanese sensei. Also, I went fields survey in Azo mountains, visited geothermal power plant and did activity with Japanese friend. It's such a beautiful time and I still remember.

At this time, I am an officer at start-up company and start new journey in computer science and environment. Every experience that I got from TAIST-Tokyo Tech direct me becoming an effective girl with good skill survive in reality.

Pudtraporn Napang : SERE 2 : KU

It was a great honor to be a selected candidate and join academic with TAIST-Tokyo Tech in 2019. I am thankful to all professors from TAIST-Tokyo Tech and relevant universities in Thailand who spent their precious time contributing useful courses to Sustainable Energy and Resource Engineering (SERE).

In addition, the valuable guidance, support, and encouragement from professors pushed me to complete my degree successfully. I would also like to thank the coordinator at NANOTEC that provide an opportunity for me to do some experiments at National



Nanotechnology Center (NANOTEC) in National Science Technology Development Agency (NSTDA).

And I would like to show my gratitude to the "TAIST-Tokyo Tech Scholarship" for providing me with the financial support to study for my master's degree at Sirindhorn International Institute of Technology, Thammasat University two years which is very most valuable for my academic life.

Finally, I would like to acknowledge the TAIST staffs who put all their efforts to make each of the courses run smoothly from the first stage to the complete course.

I wish all the professors here and the TAIST staff have a great day. May this wish work as a lucky charm that helps you achieve joy, success, peace, and prosperity in life.

Ms. Bunthoeurn Khann : SERE 8 : SIIT

Since the day I received the scholarship from TAIST-Tokyo Tech, I am delighted to receive this scholarship to pursue my master's degree. Admission to this institution I chose to study SERE program with my interest in renewable energy. When I come to study, I met friends from different places and ages and learned new subjects that I had never studied before. Professors who teach in this program are Thai and Japanese professors who are talented and ready to give us knowledge and advice. In addition to studying in the classroom, there is also a matter of research involved, which must be coordinated with a researcher from NSTDA and an advisor from Sirindhorn International Institute of Technology (SIIT). In this two-year study, I learned something new that I had never learned and encountered before. This institution made it possible to do research with a researcher from NSTDA and an advisor from SIIT. Finally, I would like to thank the TAIST-Tokyo Tech scholarship for giving me the opportunity to study and conduct research at this master's degree level and I would like to thank the professors from Tokyo Tech and researchers of NSTDA for their advice and assistance, and thanks to the advisor from SIIT who supported me throughout my master's degree study. Studying here makes me develop myself and determine to overcome the obstacles that come through, learn to solve immediate problems, work in groups, and meet new friends who come together in sorrow and happiness. Friends are another driving force that has helped each other all the way through graduating with this master's degree.

Muthita Kachapoch : SERE 8 : SIIT/TU



Not everyone can take advantage of opportunities. The choice to attend and take the scholarship exam for this project was motivated by a word. I am a recent graduate choosing to study in the master degree. We have been granted the chance to pursue a master's degree through the TAIST-Tokyo Tech program. There are many different subject and I decided to pursue SERE program. The study of sustainable energy and resource engineering is covered in a big of scope area. The main application of renewable resources will be this. To ensure that the world's resources last as long as possible, this is

thought of as a replacement, whether it comes from bio-inexhaustible natural energy or another source.

I studied chemical engineering for my undergraduate degree and became interested in biodegradable polymers. I would like to study more in this part, but pursuing a master's degree costs is using a lot of money. So, I need to find a scholarship to study. And this scholarship has helped me to make my dreams come true. The scholarship include all of the tuition fee support and other parts from NSTDA and SIIT host for educational expenses such as equipment, characterization fee and living allowances. My understanding is now more open as a result of my master's degree studies here. There are both new experience and knowledge that I never knew before until I came to know from this program. And I will never stop learning I will be a part of developing all the time. Thank you again for your generosity and support.

Pattara Somnuake : SERE 8 : SIIT/TU

Graduation day is one of the wonderful days that we are all impatiently waiting for, and we are trying to prepare for it. The morning of 18th August 2022, is my graduation day. Graduation means more than a ceremony to me. It leads to a new path in life and opens doors to opportunities and the moment for me to chase my dreams. It is time for me to take up the responsibilities and duties of an adult. However, today is the day to celebrate. I have fought the fight, persevered, and conquered this obstacle to be where I am right now.

I would like to impress my sincere gratitude to my advisors from SIIT-TU and my co-advisors from NSTDA, MTEC and Tokyo

Institute of Technology for their valuable help and constant encouragement throughout this thesis. Without their guidance and persistent support, this thesis would not have been possible. I am extremely thankful to Thailand Advanced Institute of Science and Technology-Tokyo Institute of Technology (TAIST-Tokyo Tech), National Science and Technology Development Agency (NSTDA), Thailand and Sirindhorn International Institute of Technology (SIIT), Thammasat University for giving me an opportunity to join the Sustainable Environmental and Engineering Resources of TAIST-Tokyo Tech program (SERE, TAIST-Tokyo Tech) which is such a great program providing me several precious experiences during my master's degree life such as work like professional with research (Ph.D.) and customer or work on the advanced equipment laboratory, etc. during my master's degree life.

Therefore, I am very grateful and appreciate the role of those in charge of my opportunities from TAIST. I hope to be as good as they think and achieve the best for myself and them.

Preenaphan Tanteerapolchai : SERE 7 : SIIT/TU

Foremost, I would like to express my heartfelt appreciation to TAIST-Tokyo Tech for providing me with scholarships to study for a master's degree in the SERE program. TAIST-Tokyo Tech provides an incredible experience and also the opportunity to study with expert professors from Tokyo Tech and the nation's top universities. Furthermore, TAIST-Tokyo Tech has given me the opportunity to cooperate with the Catalysis research team (CAT), the National Nanotechnology Center (NANOTEC), and to conduct my research on a modern instrument at National Science and Technology Development Agency (NSTDA). Besides, I would



like to thank Sirindhorn International Institute of Technology (SIIT), Thammasat University for the financial support.

Moreover, I would like to express my heartfelt gratitude to my NSTDA advisor, Dr. Pongtanawat Khemthong, his supervision, guidance, and encouragement me to develop an understanding of carbon materials, as well as, recognizing the research process and writing research findings which are credible and attractive. In addition, I would like to express my gratitude to my SIIT advisor, Assoc. Prof. Dr. Paiboon Sreearunothai for providing invaluable guidance and encouragement throughout this research. I am grateful to my thesis committee,



Prof. Dr. Toshiyuki Ikoma and Assoc. Prof. Dr. Pakorn Opaprakasi, for their insightful comments and suggestions in resolving this research problem.

Finally, I would like to thank my TAIST friends for being so friendly and helpful. Every time I come to class, they make me very happy. And, I would like to thank TASIT staff for their kindness and support.

TAIST-Tokyo Tech has furnished me with knowledge, development, and opportunities to pursue a variety of careers.

Unchidtha Wongthong : SERE 7 : SIIT/TU

# 7. TAIST-Tokyo Tech Supporting Members (from April 2022 to March 2023) / 2022 年 4 月~2023 年 3 月にご支援いただいた皆様

#### Thai Side/タイ側 (in alphabetical order/アルファベット順)

Bridgestone Asia Pacific Technical Center Co., Ltd. http://bridgestone-asiapacific.com

Tokyo Tech Side/東工大側 (in alphabetical order/アルファベット順)

#### Supporting Companies

Mitsubishi Electric Corporation

https://www.mitsubishielectric.com/en/worldwide/index.html

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