



SUT⁷
SURANAREE
UNIVERSITY OF
TECHNOLOGY

27 August - 7 September

CommTECH Camp Highlight 2026

Stream 2: Engineering Innovations

Institut Teknologi Sepuluh Nopember at Surabaya, Indonesia

A wide-angle photograph of Mount Bromo in Indonesia, showing its iconic conical shape and surrounding ridges under a hazy, golden sky. The foreground features the dark, sandy slopes of the volcano, with some wisps of smoke or steam rising from the valleys between the ridges.

Siravit Suhatthaphorn

Suranaree University of Technology
School of Electronic Engineering

GET TO KNOW ME



Hello everyone. Before we go on my short journey at CommTech Camp Highlight 2026, my name is Siravit Suhatthaphorn; you can call me Japan. I'm from Suranaree University of Technology (SUT). I'm currently a fourth-year student at the School of Electronic Engineering. My background was enriched by experiences with international peers, having participated in outbound camps, Global Project-Based Learning Camp as staff and a participant, and a student trainee position at Center for International Affairs.

This is my second time joining an outbound exchange camp, and this report holds all my best memories from CommTECH Camp. It brings back the fun moments I had during the activities, classes, and trips around Surabaya. I hope everyone enjoys reading this report and gets something good from it.

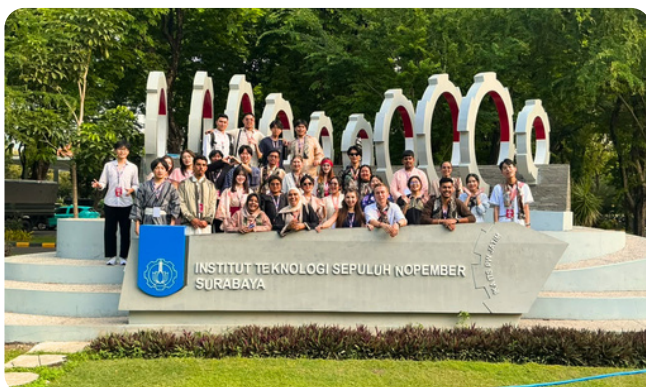


WHAT IS COMMTECH?



SOLVING LOCAL PROBLEMS WITH GLOBAL KNOWLEDGE

CommTECH Camp is an opportunity for university students, academics, and professionals from all over the world to learn about community and global issues through a variety of insightful but fun activities. The program includes courses, visitation and discussion with government and non-government agencies, societal engagement, Indonesian language courses, learning traditional music and dances, visit to main tourist destinations, and for sure tasting delicious Indonesian food. The aim of this program is to facilitate an opportunity to better understand ITS's expertise in technology implementation within the society while visiting, discovering, and experiencing Indonesia's diverse heritage and culture. It will also open up an opportunity to exchange ideas and develop a mutual goal for the future of our community.



Ref. CommTECH Camp Highlight 2026 - ITS Global Engagement

Photos: ITS CommTECH Committee

Stream 2 Engineering Innovations 27 August - 7 September 2026

Overview

CommTECH Camp: Engineering Innovations offers a captivating exploration into ITS's vast innovations in the engineering field, aims to educate and empower young individuals interested in our latest engineering research and products. Through a series of workshops, seminars, and hands-on activities, participants learn about the latest technologies, sustainable practices, and emerging trends in the engineering sector. The program also focuses on fostering leadership skills, encouraging innovation, and promoting a deeper understanding of engineering fields.

ITS will provide the certificate upon the completion of the Final Project and Final Presentation.

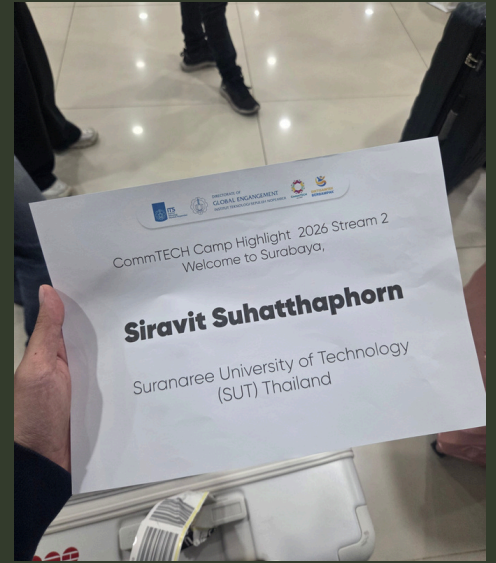
Schedule

Day 1 - Opening Ceremony - Campus Tour & Visit to ITS Research & Innovation Gallery	Day 5 - Course 1: Innovations in Computer Science - Visit to ITS Science Techno Park	Day 8 - Cultural Session with High School Students - Shopping at Surabaya SMEs Center - Preparation for Bromo Trip
Day 2 - General Course : Mechanical Engineering Innovations - Lab Tour - Traditional Games - Fun Dinner	Day 6 - Course 2: Innovations in Applied Physics - ITS Students Talent Presentations Part 1	Day 9 Bromo Trip
Day 3 - Fun Bahasa Indonesia - Cultural Session with ITS Student	Day 7 - Course 3: Innovations in Manufacturing Engineering - ITS Students Talent Presentations Part 2	Day 10 Project
Day 4 City Tour		Day 11 - Free Time - Preparation for Final Presentations
		Day 12 - Preparation for Final Project - Final Project Presentations - Closing Ceremony

@itsglobalengagement ITS International Office ITS Global Engagement ITS Students Talent Presentations ITS Global Engagement ITS Global Engagement

CommTECH Camp: Innovations in Engineering offers a captivating exploration into ITS's vast innovation in the engineering field, aims to educate and empower young individuals interested in our latest engineering research and products. Through a series of workshops, seminars, and hands-on activities, participants learn about the latest technologies, sustainable practices, and emerging trends in the engineering sector. The program also focuses on fostering leadership skills, encouraging innovation, and promoting a deeper understanding of engineering fields.

FIRST DAY ARRIVED AT SURABAYA



August 26, 2026, at 18:15 — Upon arriving at Juanda International Airport, Surabaya, Indonesia, we were welcomed by the CommTECH committee, who had spent the entire day waiting to receive us. They demonstrated exceptional hospitality by providing transportation, assisting with our luggage, and attentively accommodating all our needs.



Following our arrival, the committee escorted us to our accommodation, **KANNA STAY**, located roughly 15 minutes away from ITS. After room assignments, we received our camp welcome kit containing essentials such as a T-shirt, tumbler, name tag, guidebook, pen, and notebook, as shown in the picture.



OPENING CEREMONY

The official opening ceremony of CommTECH Camp Highlight 2026 Stream 2: Engineering Innovations was hosted by Mr. Wahyu, alongside ITS Global Engagement representatives. Participants were presented with traditional Batik cloth, symbolizing cultural respect and appreciation. Following the ceremony, I exchanged souvenirs with the ITS staff and organizing committee, after which we gathered for lunch.

ICE BREAKING SESSION



Getting to know each other even better!

We kicked things off with an ice-breaking session where we were split into six groups. It was a great opportunity to connect, share fun facts about ourselves, and satisfy our curiosity by asking the committee all sorts of questions about the camp and campus life.

UNIVERSITY TOUR

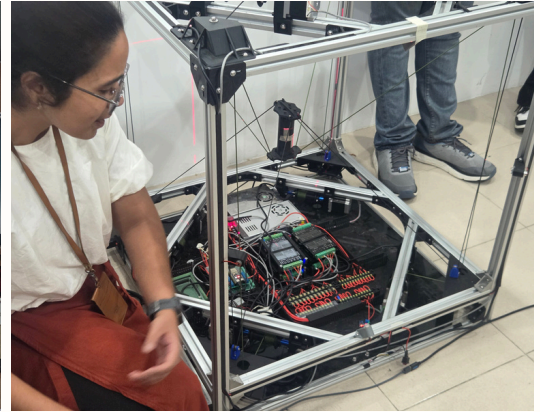


Following the opening ceremony, we headed over to the library for a floor-by-floor tour. Along the way, we explored the facilities, viewed the current exhibitions, checked out the learning areas, and finished with a quick coffee stop at the library cafe.

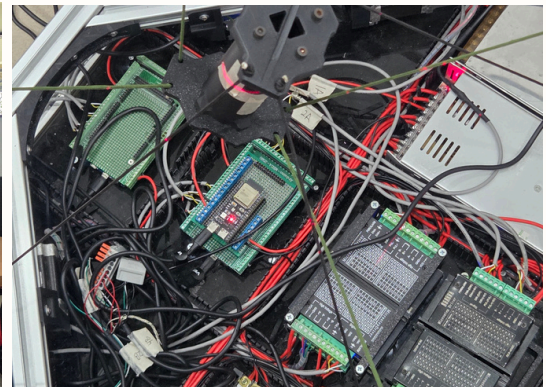


This was followed by a visit to the Innovation Tower, which showcased outstanding senior capstone projects from ITS students. We concluded the tour by taking commemorative photos at the university's signature landmark.

COURSE 1: MECHANICAL ENGINEERING INNOVATIONS

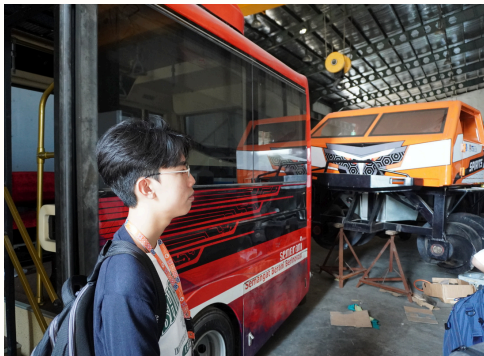


We kicked off the day with a mechanical engineering module on systematic problem-solving frameworks, including the Fishbone Diagram and the 5 Whys Analysis. Following the lecture, participants were divided into collaborative groups to brainstorm and develop innovative engineering solutions using these analytical tools.



Afterward, we visited their research laboratories to observe active development projects and cutting-edge innovations. The tour highlighted ongoing work integrating Arduino, ESP32 platforms, and collaborative robots (cobots) designed for automated applications.

VISIT TO SCIENCE TECHNO PARK: AUTOMOTIVE CLUSTER



In the afternoon, we visited the Automotive Cluster. The department showcased an electric motorbike completely developed in-house, alongside a prototype powered by hydrogen energy. All the participants had a blast test-riding the bikes!

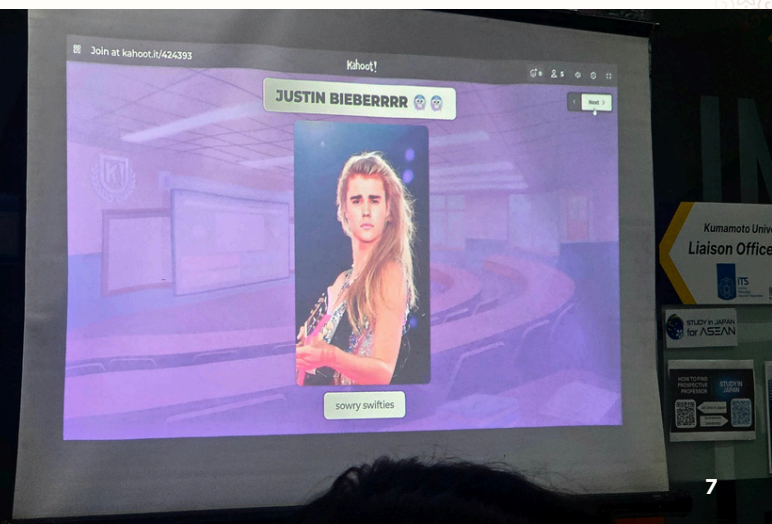


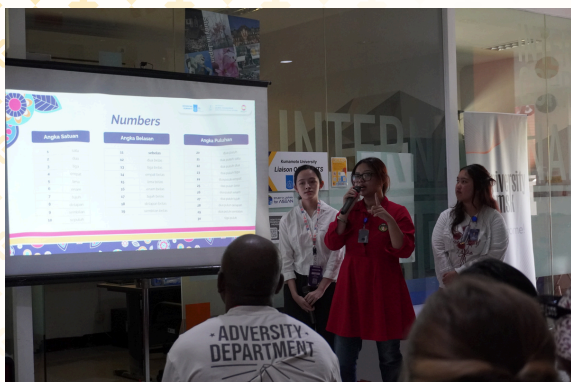
TRADITIONAL GAMES

In the evening, the fun continued with Indonesian traditional games! We played the classic marble-and-spoon race using only our mouths, followed by Color Simon Says and a number counting game. We wrapped up the day with a lively dinner and interactive mini-games at Global Kampong, as you can see the picture below here:



FUN DINNER AT ITS GLOBAL KAMPONG



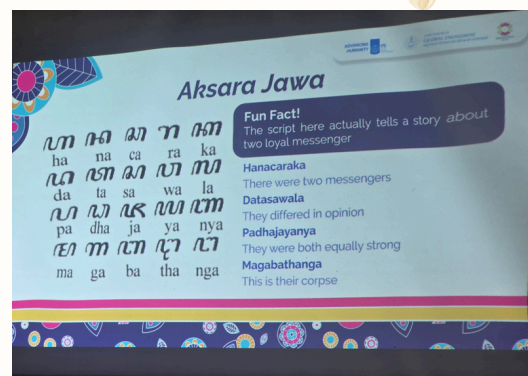


FUN BAHASA INDONESIA

Saturday morning began with an interactive Bahasa Indonesia crash course covering foundational vocabulary: daily greetings (such as 'Terima kasih' and 'Selamat pagi'), numerical counting, local food items, pronouns, and practical phrases for commercial transactions. The session concluded with an immersive role-playing exercise where participants acted as customers negotiating purchases using Bahasa Indonesia.



CULTURAL SESSION WITH ITS STUDENT



In the afternoon, we joined a cultural exchange session led by ITS students, who introduced us to their diverse regional heritage. We learned basic Javanese phrases and had hands-on experience making traditional Balinese floral offerings.

SURABAYA CITY TOUR

DAY 4



Sunday's itinerary commenced with a site visit to **Kampung Genteng Candirejo**, an eco-heritage village recognized for its community-driven environmental practices, including decentralized water management and sustainable waste recycling. Participants observed community engagement models and experienced traditional Javanese hospitality, highlighted by a tasting of local ginger herbal drinks.



Following a lunch break at a municipal park, the cultural excursion continued to the **De Javasche Bank Museum**. The tour covered colonial banking history, monetary policy milestones, and the progression of Indonesian currency, featuring antique banknote machinery preserved in the vault exhibition.



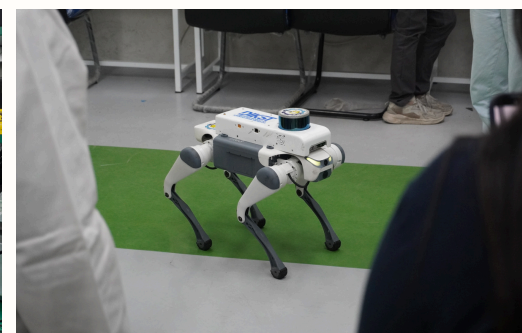
The day concluded with a cultural shopping excursion at **Mirota Batik**, allowing participants to acquire local craftsmanship such as batik textiles, artisanal accessories, and regional delicacies before returning to the accommodation.

COURSE 2: INNOVATIONS IN COMPUTER SCIENCE

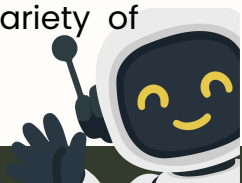


Today, we focused on the computer science track, diving deep into the fundamentals of machine learning and data science. We walked through the complete AI development pipeline—from systematic data collection and preprocessing to training models tailored for real-world applications and academic research.

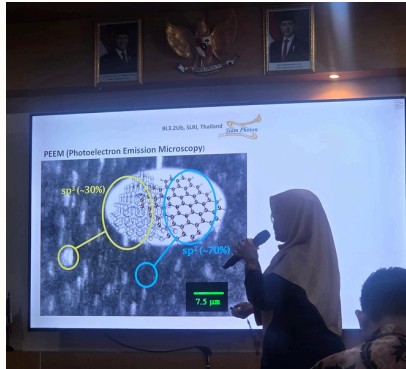
VISIT TO SCIENCE TECHNO PARK - ROBOTIC CLUSTER



In the afternoon, we headed over to the Robotics Cluster for an exciting lab tour. The team showcased their award-winning competition robots, including the famous IRIS autonomous football robot, and gave us a live demonstration of how it tracks the ball and coordinates movement in real time. We also explored a wide variety of specialized robots across.



COURSE 3: INNOVATIONS IN MATERIALS & NANOTECHNOLOGY



This session delved deeply into materials science, focusing on the structures of carbon allotropes, advances in nanotechnology, photonics, and semiconductor components used in supercapacitors.

Afterward, we went on a hands-on tour across the department's specialized laboratories. We saw rapid prototyping with 3D printing and CNC machining, got an up-close look at hybrid motorcycle powertrains, and autonomous vehicle driving simulators, while observing the state-of-the-art testing equipment throughout the facilities.

As an electronics engineering student, this experience was genuinely captivating. It provided a clear, practical perspective on how cutting-edge materials and embedded systems converge in modern technology.

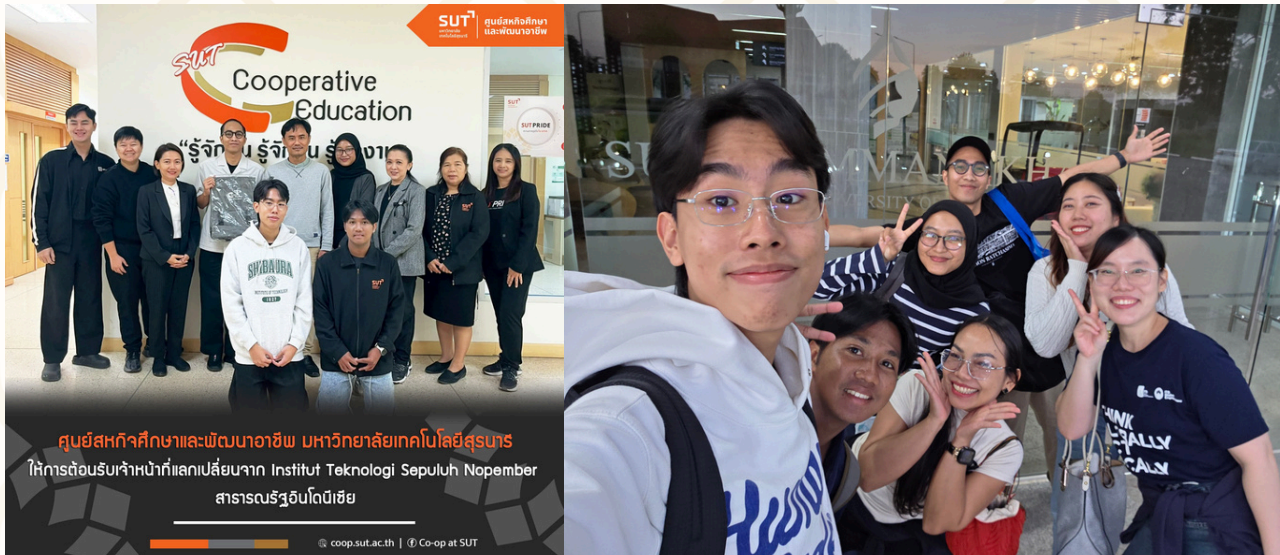
ITS STUDENTS TALENT PRESENTATIONS



The final session of the day was the vibrant ITS Student Talent Showcase. Representatives from various student organizations and clubs took the stage to present their creative projects, sharing how their initiatives create meaningful impacts across campus.

Afterward, we joined interactive mini-volunteer stations set up around the room. We got to test our drama skills in a mini-acting booth, conduct hands-on experiments in a basic electrical circuit lab, and tackle fun, fast-paced trivia questions.

WONDERFUL DAY WITH ITS STAFF



at SUT November 2025

Two administrative staff members from ITS, Miss Fildzah Amalia Putri Herdina, ITS SDGs & Smart Eco Campus Unit, and Mr. Dio Putra Pratama, Institutional Reputation Unit, participated in the one-week exchange program at Suranaree University of Technology (SUT), Thailand, 16–23 November 2025.

Never expected this before, but it's happened now! I met P'Dio and P'Fildzah again. You might be confused, but we met here before at SUT; both of them came to SUT through the Staff Mobility program as I mentioned.



at ITS September 2026

We had dinner together, talked, and recapped about studying, and also shared our thoughts about the camp and my experience here in Surabaya, Indonesia.

CULTURAL SESSION WITH ELEMENTARY STUDENTS

DAY 7



Today we had a wonderful cultural session with the elementary school. This was a Muslim bilingual school with around 1,000 elementary students. They showed us an excellent performance in the opening ceremony and warmly welcomed all of us from different countries, cultures, and religions.



We were separated into 18 rooms with two participants each. My buddy participant was named Fatna from Morocco. We were assigned to prepare a presentation about our countries and present them from our perspectives.



For me, I presented Thai food, places, and basic Thai phrases. The energy of their students was incredible and unlimited. They cooperated really well with my presentation. After that, we played traditional games altogether.

Lastly, we had lunch together before we went back and said goodbye.

SITE VISIT TO PLN NUSANTARA POWER KETINTANG



Following the elementary school visit, our afternoon program featured an industrial tour of **PLN Nusantara Power (Ketintang)**, a premier power generation company in Southeast Asia. While photography within the facility was restricted due to safety protocols, participants gained valuable insights into large-scale electrical infrastructure, examining technological innovations, operational management procedures, and real-time mechanical operations.

DAY 8

COURSE 4: QUANTITATIVE MODELLING ANALYSIS FOR ENGINEERING



On Day 8, we visited the Department of Industrial Engineering, where we explored quantitative modeling and analysis and the basics of data science. Afterwards, we headed over to the Computer Science Department to learn about the R programming language and worked through hands-on coding tutorials for data analysis.

MOUNTAIN BROMO



No need to explain, you must come here once in a lifetime



FINAL PROJECT

MECHANICAL ENGINEERING INNOVATIONS

DAY 10



On Day 10, come up with the project announcement, which our group got the topic of mechanical engineering/automotive innovations. We're the same group as in Course 1, so it's easy to discuss together;

We have plenty of ideas, and we decided to choose the **Smart Modular Anti-clog Drain Cover**. The main problem is flooding in Vietnam, where trash frequently clogs stormwater pipes and restricts water flow.

My groupmates are the best. We're all doing the project by thinking about the process inside the machine, improving the presentation slides, and preparing for the Q&A session.



LAST DAY



FINAL PROJECT PRESENTATION



SOUVENIRS FROM CENTER FOR INTERNATIONAL AFFAIRS



SPECIAL THANKS

Special thanks to the **CIA SUT (Center for International Affairs)** for always prioritizing and valuing our outbound opportunities. Thank you for providing this incredible opportunity and financial support that made this journey possible.

This experience allowed me to broaden my horizons, explore new perspectives, and encounter things I never would have experienced otherwise. I am deeply grateful for the chance to step out into the world, challenge myself, and grow both personally and professionally. I will take all the knowledge and experiences I've gained and apply them to further develop myself in my academic journey.

I would like to thank **ITS (Institut Teknologi Sepuluh Nopember)** and **ITS Global Engagement** for providing a full scholarship and welcoming us so warmly, with excellent hospitality and the good photos from the committee.

Lastly, thank you to my parents and my family for their financial support and help in preparing all the necessary documents. And thank you to my friends for always supporting me academically and encouraging me throughout this journey.

THANK YOU
ขอบคุณครับ
TERIMA KASIH
ありがとう
谢谢
CÁM ƠN.
СПАСИБО
SALAMAT
धन्यवाद
SHUKRAN
