

東工大 クロニクル



Tokyo Tech Chronicle

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東京工業大学
Tokyo Institute of Technology

“Roots of Robocon” monument unveiled

Roots of Robocon, a monument commemorating the birth of Tokyo Tech's original robot contest and the upcoming 30th anniversary of the Robocon International Design Contest (IDC) co-launched by Tokyo Tech and Massachusetts Institute of Technology, was unveiled on Ookayama Campus on May 25, 2019.



Ceremony participants with Prof. Mori in green shirt and tie

In 1982, now-Professor Emeritus Masahiro Mori from the Department of Control Engineering proposed a competition as part of the Control Engineering and Design Course. The task was to devise a mechanism, powered only by two D-size batteries, which would carry a human across a specified distance in the least amount of time.

The contest quickly spread to technical schools and colleges throughout the country, and, after the shift from batteries to robots, developed into many variations including the NHK Student Robot Contest, the ABU Asia-Pacific Robot Contest, and IDC. Mori became known as the founder of Robocon.

The monument's unveiling ceremony, held in conjunction with the Institute's Homecoming Day, also celebrated Professor Emeritus Masashi Shimizu, who received the Broadcasting Culture Award from the Japan Broadcasting Corporation in 2018 for his efforts in developing the televised version of the contest.

On Homecoming Day, the ceremony participants watched a video of the very first on-campus competition, which was supplemented with live commentary by Mori himself. Tokyo Tech President Kazuya Masu, Executive Vice President for Education Tetsuya Mizumoto, Yokyu-kai¹ alumni association president Akira Nagashima, and Department of Systems and Control Engineering Professor Mitsuji Sampei joined Mori in unveiling the monument.



Participants watching footage of first Robocon



Mori and others unveiling monument

Roots of Robocon depicts two dry cells and is stamped with the phrase "Monotsukuri wa hitotsukuri,"² an ode to Mori's hands-on style as a professor. The monument stands outside the west end of South Building 5 on Ookayama Campus, the location of the goal line during the original competition in 1982.



Monument outside South Building 5

- 1 Control and systems engineering alumni association, established in 1964.
- 2 Roughly translates to "Those who make, learn."

(Tokyo Tech news published : Publish Relation Section • June 13, 2019)

New student-led co-working space Attic Lab born on Ookayama Campus

Attic Lab, a new student-led co-working space, has opened on the second floor of the First Cafeteria on Ookayama Campus. The facility provides Tokyo Tech students with a place where they can focus on developing startups, realizing their own ideas, or simply starting a new activity in a free space. Attic Lab will also be a venue for various events to help broaden networks among students.

Two students recently spoke about the purpose and process leading up to the formation of Attic Lab, which officially opened its doors on April 19.



The roomy Attic Lab

Comments from student design team member

Chisato Sasada, 2nd-year master's student, Architecture and Building Engineering

Once we had established the core concept as being a "secret hideout for Tokyo Tech students," we gradually came up with four other ideas that we incorporated into the design. The space was to be one of "collective intelligence" where everyone shared their expertise. It also had to include a hint of "otaku," where buffs of different fields secretly but steadily planned their next move. It was also to be a "lab" of constant trial and error. And as its users, over time, would break through the ceiling and out into the world, we integrated the concept of an "attic". We brought all these ideas together, and as a result pictured a rough, tough, reliable, yet slightly clumsy space that was rich in color and texture, and assimilated wood, concrete, and other materials. Each component was also designed with the "collective intelligence" concept in mind.



Students painting the facility walls...



Renovating the ceiling...



Installing new flooring...

The ceiling design represents this concept very well. The aluminum foil and the shape of the original ceiling help reflect light, drawing everyone's attention to the center of the room.

The tools in the room also encourage sharing the wisdom of crowds. White canvas-like walls have been supplemented with post-its and memo pads to help visualize students' output. The mobile wooden shelves can be used to share and display student creations, and the stationery wall also aims to encourage spontaneous conversations among users.



And building new furniture

The space also functions as a base for collective art. As the aim is for users to renovate and update the space according to their needs, we hope that students continue to design the Attic Lab together.

We could not have completed this project without the valuable support of the Office of Research and Innovation, the many Tokyo Tech alumni, local interior designers, and builders who helped us, and of course the students! So many joined in the fun, not just from the Architecture and Building Engineering field, but also from other departments and majors. For many, it was their first experience in interior construction, and it was a joy to witness the speed and technical ingenuity of Tokyo Tech students as they worked together. I hoped that, by having many participants join in to support student entrepreneurship, we could all benefit from the diversity Tokyo Tech has to offer. Let's keep going! Come and re-create the space in a way that best suits you!

Comments from student management team member

Ayano Nomura, 2nd year, Mechanical Engineering

The Attic Lab student management team conducted plenty of discussion regarding what kind of co-working space Tokyo Tech needs. Many students helped us with the process of remodeling the room on the second floor of the building. Attic Lab is now open, but it is never complete. That is an important part of the concept. As the name suggests, it is a hideaway where we students can freely renovate and update the facilities.

We obviously want students who are involved in startups and entrepreneurship, or who plan to join business contests, to utilize Attic Lab. However, we also feel that awareness regarding these kinds of activities on campus is still fairly low. Therefore, we want Attic Lab to host lectures regarding startup activity and ideathons that cover everything from brainstorming to prototype creation. Students themselves are involved in the planning, design, and execution of events and the upkeep of the venue itself, and Attic Lab aims to continue promoting student-centered planning and operations in the future.

Check out our Facebook pages for more information.

Be more creative! This is the slogan of the Attic Lab family!

How was Attic Lab established?

With the support of the Office of Research and Innovation, the Attic Lab project was conceived in an attempt to boost student start-up support. It aims to foster more entrepreneurial minds through networking involving current students, graduates, and business people.

During the implementation phase, Tokyo Tech graduates employed by Innovations and Future Creation Inc. provided mentoring to the students in charge of planning and managing Attic Lab, while alumni at tsukuruba Inc. guided students heading the design and construction of the space.



Students and staff at opening ceremony

From Attic Lab's conception to its initial completion, heavy emphasis was placed on the independence of students and their interaction and networking with alumni. The new facility is an outstanding new place for Tokyo Tech students to innovate.



Attic Lab logo

BE MORE CREATIVE!
東工大生による東工大生のためのワーキングスペース

Attic Lab

興味のある方、まずはフォローorご連絡ください！
活動の様子・イベント・コンペ情報など発信中！
atticlab.committee@gmail.com

第一食堂2階 ■ OPEN 平日9:00-20:00 ■ 無料・会員制

Twitter Facebook

Attic Labが目指すこと

東工大からスタートアップや起業家を増やす
なんでもやりたいことを実現できる場づくり

Attic Labが支える4つの機能

マインドの育成	スキルの向上
ネットワーク構築	アイディアを生む環境

こんな東工大生が集まる場です

ビジネスアイデア・研究成果を基に起業したい
イベントを通じてネットワークや知識を広げたい
既存の枠にとらわれずこれから何か新しいことを始めたい
自分のアイデアを実現したい
etc

やりたいことを自由に実現しましょう！

Attic Lab poster

(Tokyo Tech news published: Venture Development and Relations Section, Office of Research and Innovation • May 23, 2019)

traP students win Best Technical Award at Crisis Management Contest

Four members of Tokyo Tech's Digital Creators Club, traP, won the Best Technical Award at the 14th Crisis Management Contest held in Tanabe City, Wakayama Prefecture from May 23 to 25. Two individual students — 4th-year Information and Communications Engineering student Koya Ohashi and 3rd-year Mathematical and Computing Science student Shu Takayama – were also awarded the Japan Computer Emergency Response Team Coordination Center (JPCERT/CC) Award.



traP members (from left) Kishimoto, Ota, Takayama, Ohashi



Takayama (left) and Ohashi receiving JPCERT/CC prize

During the Crisis Management Contest, contestants assume the role of client company server administrators who need to find rapid, appropriate solutions to various incidents that occur during the contest. These include webpage, network, and other service anomalies, and complaint calls from outside the company, which the participants have to respond to by using their technical skills. These responses are evaluated comprehensively before a winner is chosen.

A total of 33 teams participated in the preliminary round of the contest in April. A second qualification round was held in May, with five universities progressing to the finals. Representing Tokyo Tech at the finals was the traP team, mentored by Associate Professor Takashi Ishida from the School of Computer Science.



Focused during the finals

traP team members

- Koya Ohashi, 4th year, Information and Communications Engineering
- Takashi Kishimoto, 4th year, Computer Science
- Mikito Ota, 4th year, Computer Science
- Shu Takayama, 3rd year, Mathematical and Computing Science

Comments from team leader

Koya Ohashi, 4th year, Information and Communications Engineering

We won this contest last year, and we were aiming for no less this year. We were prepared and assigned roles appropriately, but came across difficult problems during the contest, and were not able

to produce the desired result. We tried to investigate and change router and server settings, and strived to provide appropriate solutions, but to no avail. That said, I am delighted that my teammate Shu Takayama and I were awarded the JPCERT/CC Award.

While there may be some changes to the team, we look forward to getting our revenge next year. Meanwhile, traP will continue to create ideas through its club activities.



Contest participants and judges

What is traP?

traP, an official Tokyo Tech Student Club, began its activities in April 2015. The club focuses on various activities including game programming, digital and audio content creation, 2D illustrations and 3D modeling, pixel graphics, and cybersecurity capture the flag competitions. traP shares its knowledge through various public engagement activities, including programming classes for middle and high school students.

(Tokyo Tech news published : Digital Creators Club traP • June 21, 2019)

Archers victorious at Tokyo regional competition

Members of the Tokyo Tech Kyudo Club put in outstanding performances at the 67th Tokyo Regional Kyudo Competition for national and public universities in May. The men claimed first place for the second consecutive year, while the women finished second in the team category. Tokyo Tech also won the women's individual competition.

The men's competition

The men's competition was held on May 11 and 12 at the archery grounds of the University of Tokyo and Tokyo Tech. The preliminary round was divided into Blocks A and B, with the two top teams from each block advancing to the finals. In each match, the ten participating universities nominated five archers who shot eight arrows each.

Tokyo Tech strung together a series of victories to book a place in the final with Tokyo Medical and Dental University. The Institute won its final match 31-23. During the preliminary round, 3rd-year

Mechanical Engineering student Daisuke Dobashi and 3rd-year Information and Communications Engineering student Ryu Azumi also produced the 5th and 6th-best individual performances respectively.



Men' s team mean business

Comments from Captain Kosuke Kashimura, 3rd year, Mathematics

The men's team won this competition last year, and our goal was a consecutive victory this year. That said, we really struggled throughout this tournament. We were not hitting our targets, either individually or as a team, but somehow we were able to win our matches. At the end of the first day, we were very uncertain about whether we would achieve our goal. However, during the final when it counted the most, the team came together to produce the best result of the weekend, earning us victory.

I think the Kyodo Club has become a lot stronger as a result of this contest. Everyone is working hard to balance their time between studies and club activities. After a good result at the rookie contest and now this win, we hope to continue this momentum as a team so we can win future regional, national, and league competitions.

The women's competition

The women's competition was held on May 18 and 19 at the archery grounds of the University of Tokyo, Tokyo Gakugei University, and Tokyo Tech. The preliminary round was divided into Blocks A and B, with the two best teams from each block advancing to the finals. Each of the eleven participating universities nominated four archers who shot eight arrows each.

Once again, Tokyo Tech performed well, reaching the final with Hitotsubashi University. It was a thriller, but in the end, Tokyo Tech succumbed to a 19-20 loss, finishing in second place. Some of the women's individual performances, however, offered some consolation. 3rd-year Electrical and Electronic Engineering Mizuki Takeuchi was first, while 3rd-year Civil and Environmental Engineering student Megumi Ito finished fifth in the individual category.



All smiles on women' s team

Comments from Mizuki Takeuchi, 3rd year, Electrical and Electronic Engineering

At this competition, we continued winning until the semifinal, but unfortunately, we lost our final game. Still, we were able to produce consistent results throughout the contest, which is not always the case during practice sessions. I think each of the team members experienced personal growth as a result of this competition.

With the start of the new academic year, everyone is very busy with their studies. Most team members seem to have found a good balance between learning and practice. I hope we can maintain this balance while working hard to achieve our goals. As a 3rd-year student, I have six more months to prove myself at competitions before I leave the club. I look forward to spending the rest of this time fighting for victories with my teammates.

Tokyo Tech Kyudo Club

The Tokyo Tech Kyudo Club studies and practices the Heki-ryu Insai branch of Japanese archery under the guidance of Master Takashi Isobe. The club currently consists of 30 male and 11 female members. Three practice sessions a week are held at the Ookayama Campus field, but members are also free to practice independently at a time that suits them best. Over two-thirds of current members began kyudo after entering university, and everyone is encouraged to participate in competitions.

(Tokyo Tech news published : Tokyo Tech Kyudo Club • June 12, 2019)

Rowers dominate Five Universities' Regatta

Tokyo Tech's Rowing Club dominated the 62nd Five Universities' Regatta, held on April 27 at the Toda Boat Course in Saitama Prefecture. The Institute's rowers won the men's eight, men's coxed four, and single scull categories. This was the third consecutive victory for Tokyo Tech in the men's eight, and the second straight win in the men's coxed four and single scull.



The Five Universities' Regatta, which has its roots in a 1919 feud between the rowers of Tokyo Higher Technical School and Tokyo School of Foreign Languages, has been held every year since 1958. Today, participants include Tokyo University of Foreign Studies, Tokyo University of Marine Science and Technology, University of Tsukuba, the National Defense Academy, and Tokyo Tech.

Men's eight

In this category, eight rowers propel the boat with sweep oars while one cox steers. Each rower holds one oar with both hands. This year's winning team is:

- Kentaro Shimizu, 2nd year, Materials Science and Engineering
- Koudai Inoue, 4th year, Industrial Engineering and Economics
- Hiroki Hattori, 4th year, Mechanical Engineering
- Tetsuro Hara, 3rd year, Civil and Environmental Engineering
- Shotaro Murata, 4th year, Computer Science
- Kazumasa Shirakata, 2nd year, Mechanical Engineering
- Riku Uchida, 3rd year, Chemical Science and Engineering
- Koyu Nakamori, 4th year, Mechanical Engineering
- Yu Okui, 4th year, Earth and Planetary Sciences



From left: Hattori, Okui, Nakamori, Inoue, Shimizu, Shirakata, Hara, Uchida, Murata

Comments from crew leader Koyu Nakamori

Life in the laboratory is getting busy, but I am starting to enjoy the trial and error of experiments. I had one month to practice for this competition, and I am delighted that I was able to achieve victory. That said, there were many issues I identified during the contest.

The summer competition is next. I will try to stay focused while continuing with my research.

Men's coxed four

In this category, four rowers propel the boat with sweep oars, one oar per rower, while one cox steers the boat. This year's winning team consisted of:

- Taiki Iijima, 2nd year, Chemical Science and Engineering
- Takaaki Ogiso, 3rd year, Transdisciplinary Science and Engineering

- Shogo Masuda, 2nd year, Earth and Planetary Sciences
- Hiroki Tanabe, 2nd year, Civil and Environmental Engineering
- Yasunori Nose, 2nd year, Industrial Engineering and Economics

Comments from crew leader Takaaki Ogiso

The Tokyo Tech Rowing Club were victorious in men's coxed four category in this year's Five Universities' Regatta. After all our daily practices, I am extremely happy with this win. I feel that, like with my studies, this is the result of patience and time dedicated to improving ourselves.

The next goal of the Rowing Club is a strong result at the Intercollegiate Rowing Championships. We will focus on both our studies and rowing one day at a time, so look out for our next performance.



Clockwise from top left: Ogiso, Tanabe, Masuda, Nose, Iijima

Men's single scull

In this category, a single rower propels the boat alone with two oars. This year's winner is:

- Hiroki Masuda, 4th year, Systems and Control Engineering



Men's single scull winner Masuda

Comments from Hiroki Masuda

I am happy that things went as I planned last year, and that I was again able to win this year. My research is actually related to how fast a boat can be propelled, so perhaps this win was related to my findings.

This is my last year of racing, and I will continue to try my best with both my rowing and studies. I will try hard to finish the last race without any regrets.



Celebrating victory: (from left) Club Prof. Hidenori Kosaka, club captain Hiroki Hattori, Tokyo Tech President Kazuya Masu, club rep Tsukasa Kubo

(Tokyo Tech news published : Rowing Club • May 17, 2019)

Judo captain second at Tokyo regional contest

Tokyo Tech Judo Club captain Atsuki Ono finished second at Tokyo's 67th regional judo tournament for national and public universities on June 9. Ono competed in the 66-kg individual category.



Ono (front, center) with other judokas

The Tokyo Tech Judo Club also participated in the team category of the tournament. This year, 79 judokas joined the tournament from the University of Tokyo, Hitotsubashi University, Tokyo Gakugei University, Tokyo University of Marine Science and Technology, Tokyo Metropolitan University, Tokyo University of Agriculture and Technology, the University of Electro-Communications, and Tokyo Tech.

Tokyo Tech participants

- Atsuki Ono, 4th year, Chemical Science and Engineering
- Kota Matsushima, 2nd year, Systems and Control Engineering
- Hiroki Matsui, 2nd year, Chemical Science and Engineering
- Shota Yamada, 2nd year, Life Science and Technology
- Tatsuhiro Arai, 2nd year, Life Science and Technology
- Kosuke Kozuka, 2nd year, Electrical and Electronic Engineering
- Hiju Yun, 2nd year, Chemical Science and Engineering
- Keigo Nonaka, 1st year, School of Materials and Chemical Technology
- Takeru Asada, 1st year, School of Environment and Society
- Rui Ota, 1st year, School of Science

Comments from captain Atsuki Ono

Honestly, I am slightly surprised that I achieved second place at this tournament. I have been practicing judo for almost 10 years now, and this is my first time on the podium. This was not just an individual achievement, but the result of tough practices with and encouragement from team members, support for our club from generous alumni, wise guidance of our grand master, and invaluable help from my parents. I will continue to practice with my teammates and aim for better results, and will direct this energy to my research, which begins this year.

Tokyo Tech Judo Club

The Tokyo Tech Judo Club trains under Tokyo Tech grand master Hiroshi Hasegawa, usually holding practice sessions at the dojo on Ookayama Campus. The club is active in promoting international exchange, and regularly invites international students to join their practice sessions. The doors are open to both beginner and more advanced judokas. Currently, the 10 regular members of the club are focused on achieving results at the technical universities' national judo tournament.

(Tokyo Tech news published : Tokyo Tech Judo Club • June 27, 2019)

German Federal Minister of Education and Research Karliczek briefed on Tokyo Tech's quantum sensing research

On April 16, President Kazuya Masu and School of Engineering Professor Mutsuko Hatano welcomed to Tokyo Tech Ms. Anja Karliczek, Minister of Education and Research of the Federal Republic of Germany, and a delegation that included four German parliamentarians and the heads of Germany's leading research institutes.



Professor Hatano (far right) briefs her research in solid-state quantum sensors

After opening remarks, Masu shared an overview of the Institute, including education and research collaborations with German partners, and introduced Tokyo Tech ANNEX Aachen, the Institute's new European hub. Hatano then gave a briefing on her research in solid-state quantum sensors and later led the visitors on a tour of her laboratory.

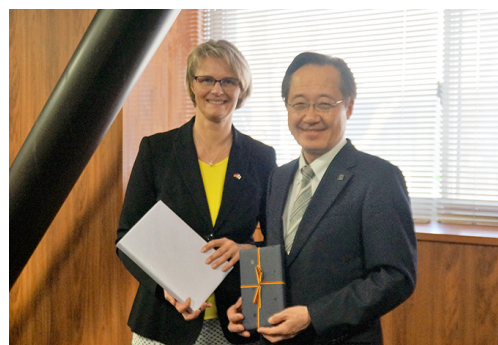
Hatano and colleagues are working on the development of innovative solid-state sensor systems based on diamonds by bringing together the basic technology of sensors with sensor systems and prototype applications in the fields of healthcare and energy electronics.

Hatano is also involved in a number of collaborations with overseas research groups, including those in Germany's University of Stuttgart, Ulm University, and Fraunhofer Institute for Applied Solid State Physics (IAF).

The Minister thanked Masu for hosting the visit and briefing, commenting that it "is excellent to see how we can cooperate."



Hatano (far right) briefs Minister Karliczek (second from right) on solid-state quantum sensors

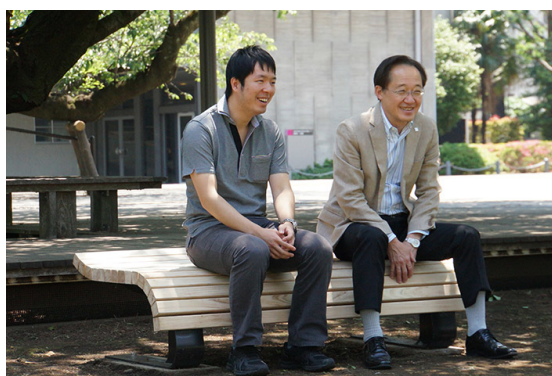


President Masu (right) exchanging gifts with Karliczek

(Tokyo Tech news published : International Cooperation Division, International Affairs Department • June 3, 2019)

Ookayama gets first Campus Environment Fund bench

The first bench commemorating a donor to Tokyo Tech's Campus Environment Fund was installed on Ookayama Campus in April 2019. The uniquely-shaped bench, shaded by the cherry blossom trees along the wood deck in front of the Main Building, is engraved with a special message from donor Dr. Hayato Obo, a Tokyo Tech alumni.



Alumni and donor Obo (left) with President Kazuya Masu during Homecoming Day



Bench with commemorative plaque

Comments from Dr. Hayato Obo

Ookayama Campus was my home for five years during my master's and doctoral studies. Before that, I studied electrical engineering at Tokyo Metropolitan College of Technology. When I was going through the admissions process here, I remember being part of a diverse environment where many outstanding domestic and international students were thirsty for specialized knowledge. Nestled in a residential area and emitting beauty throughout the four seasons, Ookayama Campus became for me a place of learning that greatly boosted my expertise. It is also special as I met my wife here.

The plaque on this bench reads "When The Roots Are Deep There Is No Reason To Fear The Wind." I hope that my small gift contributes to this beautiful, green campus, that the tradition of diverse, highly specialized education and research activity at Tokyo Tech continues to thrive, and that future students feel as comfortable here as I did.

Tokyo Tech's Campus Environment Fund

With support from the Campus Environment Fund, established under the Tokyo Institute of Technology Fund, the Institute aims to provide and maintain a rich, green, attractive campus environment. Contributions, accepted from both individual and corporate donors, go towards maintaining the flora, plazas, and other features that make Tokyo Tech's campuses unique. Donors who contribute a certain amount can have a commemorative plaque bearing their name added to a campus feature such as a bench or building. They are also offered a certificate of gratitude and a personal invitation to a special event hosted by the president.

(Tokyo Tech news published : Fund Office · June 14, 2019)

Food trucks to serve lunch on Ookayama Campus from June 18

Students, staff, and other campusgoers will be able to enjoy more lunch options from June 18 onwards, when a food truck will begin offering meals on Ookayama Campus.

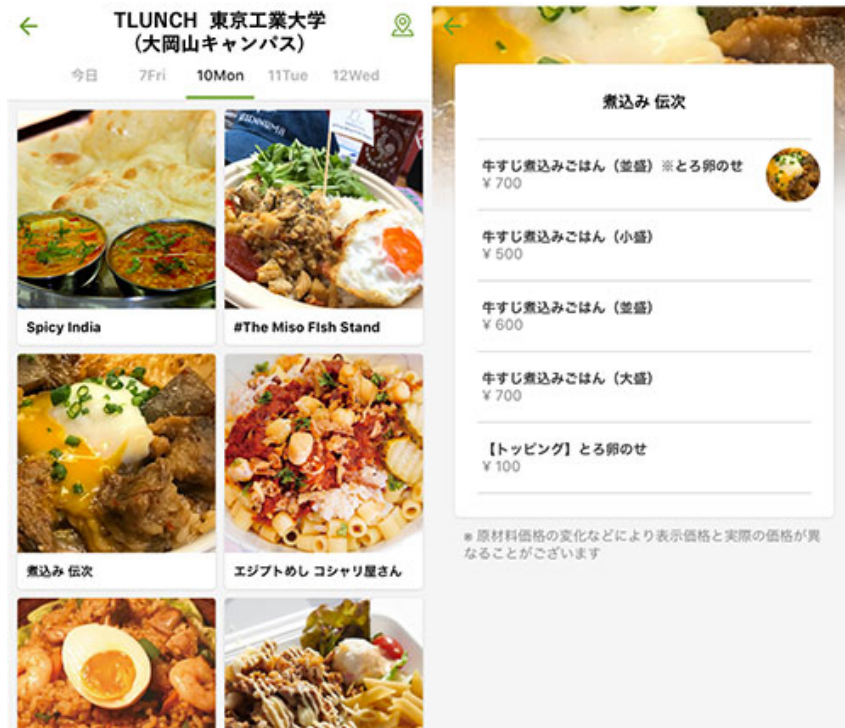


The truck will initially operate every Tuesday on the northwest side of the Main Building, where professional chefs will serve a variety of dishes. Provided that the trial period goes smoothly, visits from the mini-kitchens will increase in frequency after the summer break, as will the number of chefs serving the food.



Example weekly menu from TLUNCH

Tokyo Tech initiated this change in response to one of the items in the last Student Survey — a request for more lunch options to alleviate queues in campus cafeterias. The meals on wheels will be provided by TLUNCH, a company specializing in food truck services around the Tokyo area. Customers can check the weekly menu using the company app, which will also enable cashless payments in the near future.



Menus for each day shown on TLUNCH App

Depending on the number of meals sold, TLUNCH will consider whether it will expand its operations to other areas on Tokyo Tech's campuses.

(Tokyo Tech news published : Student Support Division, Student Services Department ・ June 12, 2019)

Experiences from AOTULE Conference 2018 in Chennai, India

International Cooperation Office

The Asia-Oceania Top University League on Engineering (AOTULE) is a league of thirteen outstanding engineering universities in the Asia-Oceania region. Its main mission is to promote inter-university cooperation and to create a platform for improved engineering education and research at participant universities.

While bringing together faculty and staff, AOTULE also hosts an annual student conference where member university students gather to present their research findings. One Tokyo Tech student recently shared his experiences from the 2018 conference, hosted by Indian Institute of Technology Madras (IITM) from November 21 to 23.

Muhammad Huda

**2nd-year master's student, Department of Transdisciplinary Science and Engineering,
School of Environment and Society**

I would like to share my experiences from the 13th AOTULE Conference held in Chennai, India. AOTULE was established by Tokyo Tech in 2007 with the mission to increase student educational programs and to promote graduate engineering students' mobility in Asia and Oceania, similar to the ERASMUS program by the European Union. AOTULE consists of 13 notable universities and institutes.

The AOTULE Conference, hosted by Indian Institute of Technology Madras (IITM), was held on 21–23 November, 2018. The participating Tokyo Tech group consisted of 23 students from Japan, Indonesia, Malaysia, Thailand, Nepal, Bangladesh, and China, and 14 faculty and staff members. We departed from Haneda Airport and arrived at Chennai by way of Singapore, traveling around 14 hours. As a prerequisite to join this event, students were selected based on their research presentation in the Multidisciplinary International Student Workshop (MISW) held in early August 2018. After being selected, we had to attend an orientation and visa application session, which required extra care and attention.

One of the top-tier universities in India, IITM is located in Chennai, the capital city of Tamil Nadu Province. Chennai has a population of approximately 7 million, an area of 1,189 km², and a tropical climate (28 degrees Celsius) all year round. On the first day, we were taken to the research park in IITM, where university researchers collaborate with industry to establish start-up companies. Various innovations developed by the companies are promoted by the university, as represented by the successful cooperation with many big industries in India and the world. Since the start-up companies collaborate with IITM students by solving many issues, they have offices in the research park. I was excited about the presentation of the products from several start-up companies, which included solutions in the rapidly developing 4.0 industrial era. The first day ended with a hearty dinner and opening ceremony together with several traditional Indian dances.

On the second day, there was a workshop and symposium where each student presented their research outcomes. Topics were divided into three categories, which were translating ideas for social impact, urban mobility, and smart cities. I had the chance to present my research topic, entitled

"Potential Ancillary Services of Electric Vehicles (Vehicles-to-Grid) in Indonesia," which fell into the smart cities category. The participants were enthusiastic about my presentation because electric vehicles are unique devices which have recently shifted focus to alternative energy storage. Needless to say, participants also had a passion for their own research fields, and all the presentations and discussions were very active. After that, the faculty and staff members held a meeting to evaluate the achievements and future plans for AOTULE. The traditional Indian dinner prepared by the local organizing committee was delicious. Various Muslim-friendly bread and curry dishes were served by the skillful chefs.

We joined a campus and city tour on the third day. During the campus tour, we visited several innovative laboratories and facilities, including the ocean engineering research center, the national center for combustion research and development, and some campus facilities with green environments inhabited by wild animals such as deer and monkeys. I was excited about the visit to the national center for combustion research and development because it is one of the most well equipped laboratories in the world. There were several laboratory apparatuses that I had never seen, the functions of which were thoroughly explained.



City tour in Chennai

Last but not least, the event committee took us to visit some sightseeing spots in Chennai. I am from Jakarta, Indonesia, and the street view was similar to that of my hometown. However, Chennai has Marina Beach, one of the longest beaches in the world. Furthermore, we visited a Hindu temple called Kapaleeswarar Temple. Visitors needed to take off their shoes just like Hindus who came in to pray. It was very interesting to enter the Hindu praying area, which I had only seen in Bollywood films. Though our visit was short, we were impressed by the hospitality of the temple hosts. They were friendly and communicated well in English. I was very happy to be able to join the AOTULE Conference. Having made acquaintances with students from many countries, I also gained new experiences in a country I had not visited before.

(Tokyo Tech news published : May 24, 2019)

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Public Relations Section, Office of Public Engagement, Tokyo Institute of Technology
2-12-1-E3-13 Ookayama, Meguro-ku, Tokyo 152-8550 Japan
Tel +81-3-5734-2976 Fax +81-3-5734-3661 Email publication@jim.titech.ac.jp

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Osamu Jinnouchi, Associate Professor, School of Science

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