

### Tokyo Tech Chronicle

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No. 529 May 2019



## Fumio Koyama to receive 2019 Nick Holonyak, Jr. Award

Tokyo Tech's Dr. Fumio Koyama, director-general of the Institute of Innovative Research and professor at the Laboratory for Future Interdisciplinary Research of Science and Technology, has been selected by The Optical Society (OSA) to receive the 2019 Nick Holonyak, Jr. Award for seminal contributions to VCSEL photonics and integration.

The Nick Holonyak, Jr. Award is presented annually to an individual who has made significant contributions to optics based on semiconductor-based optical devices and materials, including basic science and technological applications. The award was established in 1997 to honor Nick Holonyak Jr., who has made distinguished contributions to the field of optics through the development of light emitting diodes and semiconductor lasers. Holonyak, Jr. has been called "the father of LED."

This year's award will be presented during the Conference on Lasers and Electro-Optics (CLEO) in May 2019.

#### **Comments from Professor Fumio Koyama**

I'm honored to have been selected by OSA as a recipient of this very prestigious award. It has been over 40 years since Professor Emeritus Kenichi Iga invented VCSEL as a new type of semiconductor laser. These days, VCSELs are widely used for various applications such as datacenter networks, 3D optical sensing in smartphones, and automotive LiDAR, and have been making great impact on the progress of the Internet of Things. This recognition will further stimulate my research efforts in the field.



(Tokyo Tech news published: Public Relations Section • March 4, 2019)

## Toshinori Fujie selected as "Emerging Investigators 2019" by Biomaterials Science

Associate Professor (Lecturer), Toshinori Fujie of the School of Life Science and Technology has been named to Emerging Investigators 2019 by the Biomaterials Science published by the Royal Society of Chemistry.

This award was established in 2014, and is an influential international award. About 20 young researchers from around the world in the field of biomaterials have been selected as Emerging Investigators. This is the third selection following those made in 2014 and 2017, and is the first time that a researcher from Tokyo Tech has been selected. To select recipients, members of the Editorial and Advisory Boards of the Biomaterials Science, which is prestigious academic journal in the field of

biomaterials, as well as previous Emerging Investigators conducted an examination to consider the potential and influence on the future of the biomaterials field.

The journal published a special issue about Emerging Investigators, and this issue includes a minireview of "Printed Nanofilms Mechanically Conforming to Living Bodies" by Fujie and others.

#### Comment by Associate Professor (Lecturer) Toshinori Fujie

I am honored to have this wonderful opportunity. I am overjoyed that research I worked on has been highly evaluated. I would like to take this opportunity to express my deep appreciation to my fellow researchers, members of the academic society, as well as students who have been studying day and night. The Fujie Laboratory was just established in the School of Life Science and Technology in November 2018. I am motivated by this to work even harder on the development of biomaterials. Our laboratory will continue to pursue research activities so that Tokyo Tech medical technologies can be delivered to patients and their families as well as to medical professionals as quickly as possible.



Associate Professor (Lecturer) Toshinori Fujie (fourth from right) and laboratory members

(Tokyo Tech news published: Public Relations Section • March 8, 2019)

# Shinsuke Inagi and Masaaki Kitano are FY2018 STAR grant recipients

Associate Professors Shinsuke Inagi and Masaaki Kitano have been named as the recipients of the Support for Tokyo Tech Advanced Researchers (STAR) grant for FY2018.



(counterclockwise from front left) Kitano, Inagi, EVP for Research Osamu Watanabe, President Kazuya Masu

The STAR grant is awarded each year to promising young researchers who grapple with research topics that have the potential to become national projects in the future. Other recipients may include those who have achieved distinguished results in the fundamental sciences. Through the STAR grant, Tokyo Tech seeks to support up-and-coming 'shining stars' in the next generation of researchers.

FY2018 was the sixth year of the grant. This year's "STARs" were selected by President Kazuya Masu and Executive Vice President for Research Osamu Watanabe, who is also the head of the Office of Research and Innovation.

#### Shinsuke Inagi

#### Associate Professor, School of Materials and Chemical Technology

## •Research overview: Development of functional polymer materials based on bipolar electrochemistry

Although the principles of bipolar electrochemistry, where wireless electrodes (bipolar electrodes) that simultaneously manifest positive and negative poles are utilized, have been known for a long time, only recently has it been applied to chemical synthesis methods that use electric energy (electrons) as a reagent. It is once again attracting attention as a field for creating next-generation lightweight and flexible organic and polymeric materials. This classic yet new



bipolar electrochemistry is making it possible to realize things such as technologies for patterning conductive polymers without wires, forming conductive polymer networks, and the development of gradient polymer materials that skillfully utilize electric potential distribution generated on the surface of bipolar electrodes, resulting in the proposal of never-before-seen technologies and materials.

Furthermore, by fusing it with redox (oxidation/reduction) chemistry in a broad sense, we are aiming to create new value in areas such as smart molecular conversion technology, energy conversion, and the construction of smart systems that precisely combine redox systems.

I am honored to be selected as a STAR recipient. Since I came to know about this interesting phenomenon called bipolar electrochemistry, I have been deeply immersed in and enjoying my research, and would like to show my appreciation to the students and joint researchers with whom I am engaging in this work. This support motivates me to work even harder on my research. I would like to thank all those who have provided support by contributing to the Tokyo Institute of Technology Fund.

#### Masaaki Kitano

#### Associate Professor, Materials Research Center for Element Strategy

## •Research overview: Development of new solid catalysts containing electride or hydride compounds

Ammonia (NH3) is commonly used as a raw material in nitrogen fertilizers, foods, and medicines. In recent years, it has attracted attention as a material for storing hydrogen energy, and demand is expected to increase. Currently, it is synthesized via the Haber–Bosch process, which uses a large amount of energy to cause nitrogen and hydrogen to react in a high-temperature and highpressure environment. We developed new electrides and hydrides containing a



high density of electrons and hydride ions in a crystalline framework, and using these, our aim is to create catalysts that activate nitrogen molecules at low temperature in order to achieve an ammonia yield that is superior to current industrial processes.

I am thankful at this time to be granted this Support for Tokyo Tech Advanced Researchers. I am more determined to develop my own research with this support, and I want to use it to achieve creative, world-class research achievements. In addition to achieving excellent results in fundamental research, I will strive to achieve practical applications through my research.

#### About the STAR grant

#### Purpose

Funded by the Tokyo Tech Fund, this program aims to provide large-scale support to bright young researchers who create new value based on various unique research achievements in the fundamental sciences. This objective is in line with the Institute's mid-term goals and contributes to enhancing research capacity.

#### Selection process

Based on their career and research achievements, recipients are selected by the president and the head of the Office of Research and Innovation. Individuals cannot apply for this grant.

#### Selection criteria

- Young researchers engaged in a project which contributes to strategic policies on the national level
- Young researchers who demonstrated outstanding achievement in basic research

#### Eligibility

Early-career researchers with a title of associate professor or below (in principle under the age of 40)



Friendly discussion with executives



Inagi (left) and Kitano

(Tokyo Tech news published: Research Planning Division, Research Promotion Department • March 26, 2019)

## Tokyo Tech team 2nd at SECCON CTF 2018 International

NaruseJun, Tokyo Tech's four-member team, place second at the Security Contest Capture the Flag (SECCON CTF) 2018 International, held in Tokyo on December 22 and 23.



Announcement of results



Certificate presented to members of NaruseJun

SECCON is a cybersecurity contest that aims to uncover and nurture the best information security talents around the world. The CTF portion is a hacking contest that seeks to test out the comprehensive security skills of teams through both attack and defense perspectives. The international version of the CTF contest has been held since 2014.

The qualifications for SECCON CTF 2018 International were held online in October. Approximately 1, 400 teams from over 80 countries and regions participated. NaruseJun qualified in 4th place, earning them a place in the international finals



Points board with NaruseJun in 2nd at 7,196 points

against 14 other teams. Last year, NaruseJun also finished second in the SECCON CTF – Domestic contest, where captain Kazuki Sawada was recognized with an individual award from the Ministry

of Education, Culture, Sports, Science and Technology. All NaruseJun members are members of the Digital Creator Club traP, an official Tokyo Tech student club.

#### Team NaruseJun members

- Kazuki Sawada, 4th year, Computer Science
- Shugo Miyamoto, 4th year, Information Science
- Yuki Ataka, 4th year, Computer Science
- Shohei Kuroiwa, 4th year, Computer Science



After award ceremony: (from left) Sawada, Miyamoto, Ataka, Kuroiwa

#### Comments from team captain Kazuki Sawada

I am very pleased that we were able to achieve such a strong result at SECCON CTF 2018 International, one of the toughest cybersecurity competitions out there. It was the first international CTF contest for traP members, and comparing our skills with the strongest international teams was a challenging and stimulating experience.

At Tokyo Tech, my research focuses on information and communication networks, while my teammates specialize in various fields within the realm of computing. We were able to combine knowledge and skills from a variety of fields, and the results speak for themselves.

(Tokyo Tech news published : Public Relations Section • March 1, 2019)

## Tokyo Tech teams earn industrial sponsor awards at ACM-ICPC Asia regionals

Two out of three competing Tokyo Tech teams earned the Preferred Networks Award at the 2018 Association for Computing Machinery (ACM) International Collegiate Programming Contest (ICPC) Asia regionals, held in Yokohama from December 8 to 10.



Team 60odnight (front right in left photo) in action at Asia regionals in Yokohama

Fifty-one teams from 38 universities in Japan and nine teams from eight universities in China and Taiwan battled it out for a place in the world finals. The three teams from Tokyo Tech — Team narianZ, Team 60odnight, and Team new\_moon\_with\_face — finished 8th, 16th, and 32nd respectively. Teams narianZ and 60odnight received the Preferred Networks Award for finishing in the top 20 teams from Japan. Unfortunately, none of the Institute's teams will be progressing to this year's finals. Among participating universities, Tokyo Tech finished 7th out of 46 competing institutions.

#### Commended teams and members

#### Team narianZ

- Riki Fukunari, 4th year, Computer Science
- Rikuto Kubota, 1st-year master's student in Computer Science
- Hiroki Katsumata, 2nd-year master's student in Information and Communications Engineering



Team narianZ: (from left) Katsumata, Fukunari, Kubota, coach Yoshiki Nakamura, 3rd-year doctoral student, Mathematical and Computing Sciences

#### Comments from team rep Fukunari

We trained hard for the nationals and regionals, and tried to implement what we had practiced during the actual competitions. As a result, we finished 2nd in the nationals, but only managed 8th place in the regionals, and will therefore not be representing Tokyo Tech at the world finals. That said, I can utilize the skills I acquired during the contest to improve my experimental programming in my cryptography research. This was the last ACM-ICPC for two of my teammates, and the next one will also be my last. Still, we look forward to being active in the programming community and upping our skills further. The sets of books on machine learning we received together with the Preferred Networks Award will allow us to expand our knowledge into new fields.

#### Team 60odnight

- Takuto Yoshida, 2nd year, Computer Science
- Hatsumi Yamane, 2nd year, Computer Science
- Reiji Nagata, 5th Academic Group



Team 60odnight: (from left) Yamane, Yoshida, Nagata, coach Nakamura

#### Comments from team rep Yoshida

After progressing through the national qualifications in July, we practiced both individually and as a team for this competition. We didn't get off to a good start, as we had only solved one problem 1.5 hours after the competition began. In the end, we managed to solve six problems, earning us 16th place overall. Our team consists of 1st and 2nd-year students, so we still have many opportunities to join and succeed in this competition. The skills required in this tournament will undoubtedly be useful in our studies. However, we aim to continue taking a broad approach to learning so that we can apply these skills to a variety of fields.

#### What is the ACM-ICPC?

Sometimes referred to as the "Olympics of Programming Competitions," the ACM-ICPC is the oldest and largest programming contest in the world. Teams consisting of three students from the same university work together to solve the variety of programming problems presented to them. A number of teams from each participating university join qualifiers on the national level, from which the best performers are selected for the regionals. The top teams from each regional contest from six different continents advance to the finals, with only one team from each university being eligible. Each year, over 30, 000 students participate in the contest.

The degree of difficulty of the problems range from simple calculations to complicated conundrums requiring the combination of numerous algorithms. Teamwork is essential as each group only has access to one computer.

In the national ACM-ICPC2018 in Japan on July 6, 411 teams from 86 universities participated in the preliminary online round. Eleven teams from Tokyo Tech joined, three of which reached the Asia regionals.

(Tokyo Tech news published: Public Relations Section • March 8, 2019)

## Tokyo Tech students win top prize in stroller development contest

Five Tokyo Tech students have won the top prize at Babycathon, a student idea contest held in Tokyo on March 20, for creating a unique stroller and application for babies and their parents. Sponsored by Pigeon Corporation, a baby and childcare product company, the contest aimed to "utilize IoT to develop the stroller of the future and bring added comfort to babies and their families."



(from left): Kazuya Izawa, Satomi Ono, Hajime Fuijta, and Yuki Onishi - four of five Tokyo Tech students present during announcement of winners

#### Babycathon — Pigeon's student idea contest 2019

Babycathon brought together students from Ochanomizu University, Shonan Institute of Technology, Chiba Institute of Technology, Nihon University, and Tokyo Tech. Each team put forth their proposals to the sponsors, who are working to realize a more comfortable childrearing environment by rapidly introducing IoT and other cutting-edge technologies into their products.

#### Tokyo Tech's proposal — Osampo Go

Team Tokyo Tech's proposal, Osampo Go, is a service that combines stroller sharing with an online application to make traveling with toddlers more carefree.

The main concept of the service is to provide users with the ability to "borrow and return different types of strollers whenever they want, wherever they want." In the future, the service will not only enable users to borrow strollers at their destination, but will also help them avoid stroller use at congested locations.

The strollers are linked to an "Osampo Map" application, which informs users of easy-to-use routes when using a stroller, and displays suitable spots for spending time with young children.

By mounting a heat and humidity sensor and inertial measurement unit to the stroller, users can ensure a smooth ride by viewing and recording in real time the child's experiences, how mothers and fathers are using the stroller, and how much irregularity there is on the surface of the road.

By combining stroller sharing and the Osampo Map, the Tokyo Tech team expects to continue developing and improving their creation before they launch Osampo Go as a package. They aim to develop this package by thoroughly carrying out the following steps.



Image of proposed service

- 1. Develop the sharing service, and as a result raise awareness of Pigeon's products
- 2. Accumulate and process user data in combination with public information
- 3. Generate data on the comfort of both babies and parents during stroller use
- 4. Reflect this data in Osampo Map
- 5. Further increase user rate of sharing service

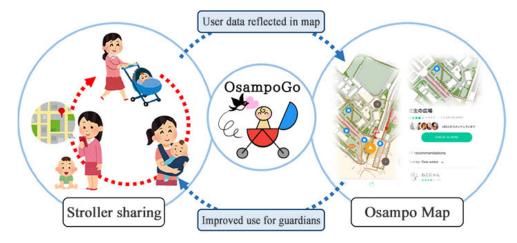


Image of proposed service

#### Participants and their roles

#### • Hajime Fujita

3rd year, Life Science and Technology

Role: Overall supervision, business model formulation, public relations

#### • Kazuya Isawa

2nd year, Computer Science

Role: User interface development

#### • Yuki Onishi

3rd year, Systems and Control Engineering Role: Module development

#### • Satomi Ono

3rd year, Life Science and Technology Role: Marketing surveys, concept development

#### Mei Fukuda

3rd year, Mathematical and Computing Science Role: Concept development

#### Comments from team leader Hajime Fujita

I participated in health++ 2018, a hackathon held at Stanford University last November. During that contest, where our team finished in 2nd place, I learned a lot about biodesign, a method for creating new business to fulfill unmet healthcare needs. While I felt that I could use my experience from last year at this competition, I also feel now that we could have done more. We strived to provide equal roles for all our team members, but perhaps there were times when more leadership was needed.

We approached the Babycathon from the perspective of support for the development of the baby, which can be viewed as one aspect of healthcare. I feel that, while the recent trend is to seek out a variety of new healthcare services, often the needs of the users of these services are not being identified properly.

When designing the "stroller of the future," the needs of the parents who control the stroller are obviously important. But even more so, we need to clarify the needs of the baby. Visualizing how a baby feels is not easy, and we are continuing our efforts through trial and error to see how we can best do this.

I will focus on designing a superior product accompanied by a sustainable business model, and look forward to continuing discussions with all those involved in this project.



Singer and guest judge Miki Fujimoto (left) with four winning members



Team Tokyo Tech (front row) accepting award

(Tokyo Tech news published : Hajime Fujita, Department of Life Science and Technology • April 15, 2019)

## Tokyo Tech kyudo rookies third in mixed and women's contests

The Tokyo Tech Kyudo Club placed third in both the mixed and women's rookie competitions at the 2019 Tokyo Metropolitan Intercollegiate Kyudo Federation-sponsored archery contest in March. Two women also collected individual Rookie Awards at the event, which is open to 1st and 2nd-year students.

#### 2019 mixed rookie competition

The 2019 mixed rookie competition, held from March 2 to 17 at various universities belonging to the Tokyo Metropolitan Intercollegiate Kyudo Federation, brought together 33 teams of men and women from 30 universities. During each bout of the tournament, six team members with 20 arrows each attempted to achieve the highest possible total score. Tokyo Tech had an outstanding run throughout the two-week period. In the third-place bout, the Institute defeated the University of Tokyo 76–72.



Rookie team members

#### Rookie team members

Aoi Omoto, 2nd year, Chemical Science and Engineering Reo Kobayashi, 2nd year, Architecture and Building Engineering Taijyu Sakanushi, 2nd year, Chemical Science and Engineering Kenta Hiromoto, 2nd year, Chemistry Takumi Fukuhara, 2nd year, Architecture and Building Engineering Kazuhiro Matsuda, 2nd year, Transdisciplinary Science and Engineering Ryo Isobe, 1st year, 5th Academic Group Taichi Ueyanagi, 1st year, 4th Academic Group Ryoma Okamoto, 1st year, 6th Academic Group Koya Okumura, 1st year, 3rd Academic Group Ryo Sekine, 1st year, 4th Academic Group Masahiro Hirasawa, 1st year, 7th Academic Group

#### Comments from team representative Ryo Isobe

Honestly, at first I thought we were not going to make it past the first week. Before the competition, less than half of our arrows as a group were hitting the target, and we were not confident. However, at the Kyudo Club spring break outing, we received plenty of advice from more experienced archers, particularly from the captain and vice-captain. As a result, we were able to achieve consistent results, and over half of our arrows were suddenly hitting the target. Some of the club members improved very quickly, and we were able to maintain a good flow in this tournament. We played five bouts during the two-week period, some of which were very tough, and I think we can build on this third-place finish in the future.

The second-year students in the club have all moved to the departments they were hoping to join, and I think we can continue to practice together despite being busy with our studies. I believe joining the Kyudo Club has made my university life more fulfilling.

#### 2019 women's rookie competition

The 2019 women's rookie competition, held from March 3 to 17, brought together 31 teams of women from 27 universities. During each bout in this contest, four team members with 20 arrows each attempted to achieve a higher total score than their opponents. Once again, Tokyo Tech's performance was outstanding. In the third-place bout on March 17, the Institute's women defeated Gakushuin University 45–25. Megumi Ito, a 2nd-year Civil and Environmental Engineering student, and Kotone Nagayama, a 1st-year student in the 7th Academic Group, both hit the target with 16 or more of their 20 arrows.



Women's rookie team members

#### Members

Megumi Ito, 2nd year, Civil and Environmental Engineering Yuna Tatsumi, 2nd year, Chemical Science and Engineering Eriko Nara, 2nd year, Life Science and Technology Minori Kaneshita, 1st year, 7th Academic Group Kotone Nagayama, 1st year, 7th Academic Group

#### Comments from individual award recipients

#### Megumi Ito

#### 2nd year, Civil and Environmental Engineering

I won the individual Rookie Award at this contest, but I am very pleased that both the men and women achieved third place. This was my second time at the rookie contest after joining last year's competition, which ended in disappointing fashion after just my first bout. This year, I was able to advance to the later rounds, and I really felt I achieved personal growth.

There are many more competitions to look forward to in the future. This contest was held during spring break, so we had plenty of time to prepare. That will change as classes begin, but I hope to find a suitable balance between my studies and kyudo activities.

#### Kotone Nagayama

#### 1st year, 7th Academic Group

I was not hitting the target before the competition, but on the last day of the club's spring outing, I was able to find my form and maintain it throughout the contest. I became accustomed to competing on consecutive days and the atmosphere of official competitions, and it turned out to be a great experience for me. I was awarded the individual Rookie Award, but my form is still far from perfect and I look forward to practicing more. The presence of so many alumni cheering us on provided a great source of encouragement.

In addition to the three regular sessions each week, I am able to practice independently at any time I wish, so I am confident that I can continue to fit kyudo in with my studies. Joining the kyudo club has allowed me to develop strong friendships and has enriched my life at university greatly.

#### 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 eighteen male and seven female members, most of whom are 2nd and 3rd-year students. 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 : Public Relations Section • April 15, 2019)

# Tokyo Tech wins 106th National and Public University DanceSport Championships

The Tokyo Tech Ballroom Dance Club has won the group category at the 106th National and Public University DanceSport Championships, held at the Chofu Campus of the University of Electro-Communications on February 3.

A total of 19 universities and colleges joined this winter's competition. Of the 30 Tokyo Tech Ballroom Dance Club couples participating in the championships, 18 received prizes while 14 advanced to the finals.



#### Comments from club captain

#### Satoshi Ishii, 3rd year, Mathematical and Computing Science

There were many 1st-year students at this year's contest, and many of them performed extremely well, so I am very pleased. The efforts of our club members and the alumni who support us are really paying off.

Personally, I am trying to balance my computer science studies with my passion for DanceSport. I hope we can continue with our practice sessions in the future, as they will surely lead to success.

#### Finalists and semi-finalists at 106th National and Public University DanceSport Championships International Standard



Satoshi Ishii, 3rd year, Mathematical and Computing Science Minami Sakae, Shirayuri University 12th in waltz for 2nd and 3rd-year students Photo courtesy of Haruka Kawachi



Shunsuke Tanaka, 2nd year, Life Science and Technology Miyu Ito, Shirayuri University 9th in tango, 12th in foxtrot, and 9th in quickstep for 2nd and 3rd-year students Photo courtesy of Kotone Ishizuka



Akito Suzuki, 6th Academic Group Maika Yoshimura, 7th Academic Group 2nd in tang for 1st-year students Photo courtesy of Haruka Kawachi



Haruki Watanabe, 2nd Academic Group Aoi Okonogi, 7th Academic Group 4th in waltz for 1st-year students Photo courtesy of Haruka Kawachi



Jun Seok Ahn, 4th Academic Group Nanaka Matsumoto, Sugino Fashion College 5th in tango for 1st-year students Photo courtesy of Haruka Kawachi

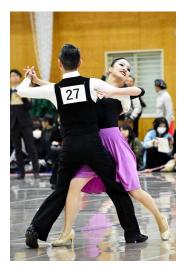


Haruki Watanabe, 2nd Academic Group Nanaka Matsumoto, Sugino Fashion College 1st in foxtrot for 1st-year students Photo courtesy of Haruka Kawachi

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Shunya Sugimura, 2nd Academic Group Mami Ogura, Shirayuri University 5th in forxtrot for 1st-year students Photo courtesy of Haruka Kawachi



Shunya Sugimura, 2nd Academic Group Juan lin, Sugino Fashion College 8th in tango for 1st-year students Photo courtesy of Haruka Kawachi



Akito Suzuki, 6th Academic Group Natsumi Shiriishi, Sugino Fashion College 4th in foxtrot for 1st-year students Photo courtesy of Haruka Kawachi



Jun Seok Ahn, 4th Academic Group Maaya Nakagawa, Shirayuri University 8th in foxtrot for 1st-year students Photo courtesy of Haruka Kawachi

#### **International Style Latin**



Daiju Sato, 3rd year, Transdisciplinary Science and Engineering Maoko Kawai, Tokyo College of Music 1st in samba and rumba, 2nd in cha-cha and paso doble for 2nd and 3rd-year students Photo courtesy of Kotone Ishizuka



Kazumu Kaneko, 3rd year, Earth and Planetary Sciences Manami Machida, Shirayuri University 5th in cha-cha and rumba, 8th in samba and paso doble for 2nd and 3rd-year students Photo courtesy of Haruka Kawachi



Akito Suzuki, 6th Academic Group Aoi Okonogi, 7th Academic Group 3rd in samba for 1st-year students Photo courtesy of Haruka Kawachi



Haruki Watanabe, 2nd Academic Group Maika Yoshimura, 7th Academic Group 5th in samba for 1st-year students Photo courtesy of Haruka Kawachi



Shunya Sugimura, 2nd Academic Group Nagisa Fujimura, Shirayuri University 4th in samba for 1st-year students Photo courtesy of Haruka Kawachi



Shunya Sugimura, 2nd Academic Group Himawari Ajiri, Shirayuri University 2nd in paso doble for 1st-year students Photo courtesy of Haruka Kawachi



Akito Suzuki, 6th Academic Group Nagisa Fujimura, Shirayuri University 3rd in paso doble for 1st-year students Photo courtesy of Haruka Kawachi



Haruki Watanabe, 2nd Academic Group Maaya Nakagawa, Shirayuri University 4th in paso doble for 1st-year students Photo courtesy of Haruka Kawachi

#### DanceSport

DanceSport is competitive ballroom dancing where couples are evaluated by a panel of judges. Collegiate championships have three main categories — International Style Standard and Latin, and formation dance. International Standard includes waltz, tango, foxtrot, and quickstep, during which couples traditionally dance in closed positions. International Latin consists of samba, cha-cha, rumba, and paso doble, and often involves men and women dancing in more open positions. Formation dance\* is a choreographed team dance consisting of a medley of between two and four International Style dances, which involves four to eight couples.

\*While formation dance features in other competitions, it is not a component of the National and Public University Championships.

#### Tokyo Tech Ballroom Dance Club

The Tokyo Tech Ballroom Dance Club is an official student club of the Institute, currently consisting of 19 Tokyo Tech students, 12 Shirayuri University students, and 6 Sugino Fashion College students.

(Tokyo Tech news published : Ballroom Dance Club · March 12, 2019)

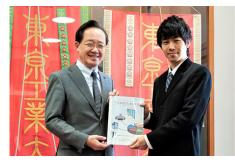
# Proposal based on results of 2018 Student Survey submitted to president

Student staff recently submitted the results of the 2018 Student Survey, together with a proposal based on these results, to Tokyo Tech President Kazuya Masu. A total of 2, 619 students — a new record high — completed the survey, which was carried out from June 11 to July 11, 2018.



Five student staff reps with Masu (front, third from right) and faculty working group

The Tokyo Tech Student Survey, an online inquiry conducted every other year, provides an opportunity for the Institute's students to express their opinions on topics such as curriculum content, campus services, and study and extracurricular facilities. The 2018 survey was the seventh time student staff members conducted the poll. Eleven student staff members gathered and analyzed the data, held discussions with relevant administrative groups, and put together a proposal for desired improvements at the Institute.



Student staff representative Kojima (right) presenting proposal to Masu





Students exchanging opinions with Masu

On March 18, 2019, five student staff representatives submitted the proposal to President Masu, explaining and discussing the key points. "The Institute will work to solve particularly study and food-related issues promptly," Masu declared to the students. "The management asks students for their continued cooperation in making Tokyo Tech a better place for everyone."

### Comment from 2018 Student Survey representative Yuki Kojima

#### 1st-year master's student, Physics

I also led the Student Survey in 2016, just after Tokyo Tech had implemented its education reforms. Back then, a lot of the feedback was related to confusion regarding these changes. Two years on, however, students had clearly settled into the new system. The 2018 survey data shows that students now are focused on awareness regarding the diverse, rapidly changing world, and are keen to help Tokyo Tech keep up with these changes. It is important for the Institute to create an environment where students' ideas are heard and implemented, and to keep evolving as a place of leadership where students can realize their visions.

I would like to thank the Tokyo Tech management, the various administrative groups who shared with us their precious time, and of course all the students who participated in the survey and made this all possible.

#### Summary of main proposals based on 2018 Student Survey

The main proposals based on the 2018 Student Survey included an improved attendance system, public information on grade distribution, and the promotion of more paperless activities on campus. In terms of facilities, students wanted longer weight training room hours, improved air conditioning for additional comfort in the library, and more user-friendly wireless LAN on campus. Facilities for students with varied religious beliefs and more varied lunch menus were also requested.

(Tokyo Tech news published : Student Initiative Support Office, Student Support Center • April 24, 2019)

### Tokyo Tech student clubs hold exhibits at Ookayama Library

Library Division, Research Promotion Department

The Tokyo Institute of Technology Railway Club, the Tokyo Tech Photo Club, and the Tokyo Tech Art Club held exhibitions at the Ookayama Library from November 2018 to February 2019.



Railway Club exhibition



Art Club exhibition

#### Tokyo Institute of Technology Railway Club Exhibition November 16 to December 6, 2018

This year, the Tokyo Institute of Technology Railway Club exhibited 98 photographs taken by members in locations all across Japan. In line with the theme of "Trains and the four seasons," works included shots of the railways surrounded by cherry blossoms in full bloom, autumn foliage, and snowy landscapes. Each shot was supplemented by a short commentary and description of the shooting location. Visitors commented that they "were able to experience a different side to their daily train commute" and "could sense the artists' passion not only for the railways, but also the various aspects that accompany trains in Japan."



Railway Club exhibition poster

#### Tokyo Tech Photo Club Exhibition

#### January 10 to 22, 2019

A total of 25 photos by members of the Tokyo Tech Photo club were displayed in four different locations of the library. Subjects included landscapes, people, animals, and buildings, all of which expressed the individuality of the photographers. "Each of the works tell their own story." "It was wonderful to see creations from so many different genres," visitors commented.



Photo Club Exhibition poster

### Tokyo Tech Art Club Exhibition

#### January 31 to February 5, 2019

The fourteen works by members of the Tokyo Tech Art Club included oil paintings, acrylic creations, and collages. In addition to the motifs themselves, works included different ways to utilize frames and canvases in expressing the unique views of each artist. "All the works were extremely aspirational," one visitor commented.

As in the past, members of the student clubs also created the posters for their respective exhibits.

The Tokyo Tech Library aims to provide every student with a calm, familiar environment, and looks forward to hosting student-led



Library Exhibition poster featuring a cheesecake - the nickname for the library

(Tokyo Tech news published : April 25, 2019)

### Education Minister Shibayama visits Tokyo Tech

Masahiko Shibayama, Japan's Minister of Education, Culture, Sports, Science and Technology, visited Tokyo Tech's Ookayama Campus on January 24.

The minister's campus visit began with a meeting with President Kazuya Masu and his executive team. Masu presented an overview of Tokyo Tech's recent reforms in governance under strengthened leadership by the president. He also explained the Institute's student-centered education system and the achievements of Tokyo Tech in creating new interdisciplinary fields of research together with industry and overseas institutions. Shibayama expressed interest in the roles of the deans and directors in the new governance system, and the updated curricula offered by Tokyo Tech.



Masu (second from left) in discussion with Minister Shibayama (second from right)

The tour continued to the Earth-Life Science Institute (ELSI), where Shibayama met Director Kei Hirose and Executive Director Mary Voytek. Hirose outlined the interdisciplinary nature of ELSI's approach to exploring the origins of Earth and life, and highlighted the growing number of collaborations with institutions such as Harvard University and the Institute for Advanced Study in Princeton.



Shibayama (left) at AGORA at Earth-Life Science Institute



Small group discussion with students

Shibayama also got a taste of Tokyo Tech's liberal arts program — a pillar of the recent education reforms that extends to all students. Institute for Liberal Arts Dean Noriyuki Ueda introduced the courses that constitute the core of the dynamic program. He explained that ILA encourages all students to develop their own vision, and aims to foster the social skills, humanity, and creativity required of 21st-century leaders creating a better future.

The minister's visit finished with an open discussion with students regarding the results of the Tokyo Tech Visionary Project and Liberal Arts Final Report courses. In true active learning style, Shibayama joined five bachelor-level students and one master's-level student on the floor of a newly refurbished room to listen to their experiences in combining science and technology studies with the liberal arts.

(Tokyo Tech news published: General Affairs Division, General Affairs Department · April 17, 2019)

# New "Lead the future" video for prospective students released

The Institute has released two versions of the new "Lead the future" video for high school students. Centered on images of Tokyo Tech students engaged in classes, research, and extracurricular activities, the video invites prospective students to envision the possibilities that await them at Tokyo Tech.

#### Tokyo Tech - Lead the future (short ver.)

https://www.youtube.com/watch?v=kBLc2BkoNGY

#### Tokyo Tech - Lead the future (long ver.)

https://www.youtube.com/watch?v=hKelaFI5-og

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