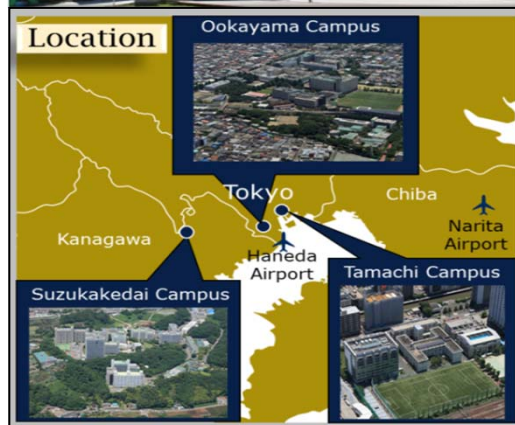




# Tokyo Institute of Technology (Tokyo Tech)

**Tokyo Institute of Technology (Tokyo Tech)** is **the leading science and technology university** established May 1881, in Japan. Tokyo Tech's longstanding tradition of **Monotsukuri** or technical ingenuity bears witness to the Institute's innovative spirit.



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## Composition and Organization

### Schools (6)

- Science
- Engineering
- Materials and Chemical Technology
- Computing
- Life Science and Technology
- Environment and Society

### Institute for Liberal Arts

### Overseas Offices(4)

- Thailand
- Philippines
- China
- Egypt

### Institute of Innovative Research

- Laboratory for Future Interdisciplinary Research of Science and Technology(FIRST)
- Laboratory for Materials and Structures(MSL)
- Laboratory for Chemistry and Life Science(CLS)
- Laboratory for Advanced Nuclear Energy(LANE)
- International Research Center of Advanced Energy Systems for Sustainability
- Advanced Research Center for Social Information Science and Technology
- Research Units

| Enrollments                     |           | (As of May 1,2016) |
|---------------------------------|-----------|--------------------|
| Regular Student (Undergraduate) | 4780(211) |                    |
| Regular Students (Graduate)     | Master's  | 3607(419)          |
|                                 | Doctoral  | 1445(441)          |
| Research Students               | 123(64)   |                    |

Note: The numbers in parentheses indicate the number of international students

| Academic and Administrative Staff |             |                      |            | (As of May 1,2016) |
|-----------------------------------|-------------|----------------------|------------|--------------------|
| Professors                        | 378         | Administrative Staff | 486        |                    |
| Associate Professors              | 349         | Technical Staff      | 124        |                    |
| Lecturers                         | 17          | Medical Staff        | 3          |                    |
| Assistant Professors              | 327         | <b>Total</b>         | <b>613</b> |                    |
| Research Associate                | 8           |                      |            |                    |
| <b>Total</b>                      | <b>1079</b> |                      |            |                    |

## Topics

Tokyo Tech President, Yoshinao Mishima has been leading internationalization through education and research, to become one of the world's top 10 research universities by 2030.

### Institute of Innovative Research (IIR)

The Institute of Innovative Research (IIR) was established in 2016 with the mission of creating novel research fields, finding solutions to problems in human society, and contributing to future industrial infrastructures. IIR consists of four Research Laboratories, two Research Centers, and ten Research Units located at the Suzukakedai and Ookayama campuses with more than 150 researchers in total. IIR aims not only to tackle common research projects through organic collaboration among these research bodies but also to produce novel research outcomes which lead to new technological innovations.

### International Network

Tokyo Tech admits international students from 79 countries and regions, and has university-wide academic cooperation agreements with 107 institutions in 29 countries and regions

- Global Scientists and Engineers Course: This program aims to foster scientists and engineers with global collaboration skills necessary to solve pressing issues relating to population change, energy, and the environment, while maintaining specialized knowledge and expertise.
- Inter-University Exchange Project: With the aim of promoting international educational exchange and cultivating world-class leaders, Tokyo Tech's three collaborative programs (with China and Korea, Turkey, and Russia) have been selected to receive support from Japan's MEXT.

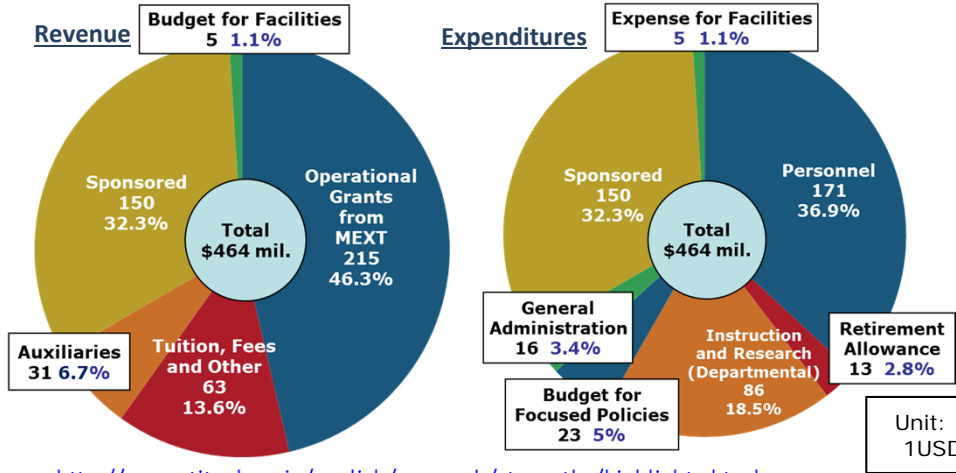


Global Scientists and Engineers Course

## Our target

Since his appointment as Tokyo Tech President in October 2012, Professor Mishima has been leading Tokyo Tech's educational reforms and spearheading international networks leads to the expansion of international exchanges in both education and research and contributes to the creation of globally competitive engineers with the scientific and technological Know-how, communication skills and international awareness to lead global research efforts and contribute to the solutions to world's most urgent problems. Under President Mishima's leadership Tokyo Tech seeks to continue as a leading research university in Japan and become one of the top ten leading research universities in the world.

## Financial Data (Budget FY 2016)



## Research Highlights

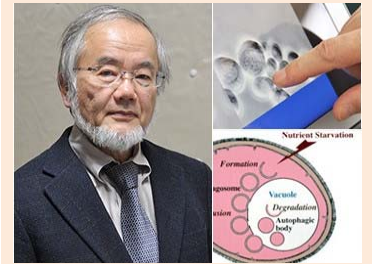
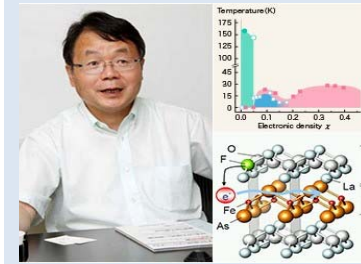
<http://www.titech.ac.jp/english/research/strengths/highlights.html>

### Discovery of a Superconductive Material that Defies Conventional Wisdom

Research Center and Director of the Materials Research Center for Element Strategy defied conventional wisdom when Professor Hosono discovered an iron-based high-temperature superconductor in 2008. His paper has been cited more than 5000 times by scientists around the world.

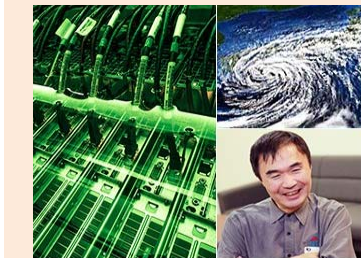
### Researching the Most Basic of Cell Functions: Autophagy

Autophagy is involved in various physiological functions such as inhibiting the growth of cancer cells and slowing down the aging process. Honorary Professor Ohsumi was the first person in the world to confirm autophagy with the naked eye. In 2016, he was awarded the Nobel Prize in Physiology or Medicine.



### Powering the future with low-cost, high-performance all-solid-state batteries

Toward low-cost, high-performance all-solid-state batteries Professor Ryoji Kanno has devised a low-cost approach to developing all-solid-state batteries, improving prospects for scaling up the technology for widespread use in electric vehicles, communications and other industrial applications. Compared to common lithium-ion batteries that contain lithium ion conducting liquids, all-solid-state batteries of the future promise a suite of advantages: improved safety and reliability, higher energy storage and longer life cycles. The discovery of 'superionic' conductors — solid crystals that enable fast movement of ions — is spurring the development of such dream batteries.



### TSUBAME –The world's most energy-efficient supercomputer

TSUBAME is the designation for a series of high-performance supercomputers developed by Professor Matsuoka and the Global Scientific Information and Computing Center to support advanced research and education at Tokyo Tech. TSUBAME 3.0, which offers even greater performance enhancements, has started to operate in August 2017, continuing the evolution of TSUBAME. It ranks 1st in the Green500 list (Ranking of the most energy efficient supercomputers).

### Solving the Mystery of the Earth and Life at the Earth-Life Science Institute (ELSI)

ELSI was established in 2012 through the MEXT's World Premier International Research Center Initiatives (WPI) program with the aim of becoming a globally competitive center to elucidate some of the most fundamental mysteries faced by humanity: how the Earth was formed and how its early environment allowed for the rise of initial life and its subsequent evolution to complex forms of life.

## Research Strengths

### World Rankings by Subject/Faculty

|  |    |              |                   |
|--|----|--------------|-------------------|
| Materials Science (2016)                     | QS | 3rd in Japan | 24th in the world |
| Engineering - Electrical & Electronic (2016) | QS | 2nd in Japan | 19th in the world |
| Chemistry (2016)                             | QS | 3rd in Japan | 21st in the world |

### Major Awards

- Nobel Prize in Physiology or Medicine (Yoshinori Ohsumi)
- Thomson Reuters Citation Laureates (Hideo Hosono)
- Nobel Prize in Chemistry (Hideki Shirakawa)
- Order of Culture, Japan Prize (Yasuharu Suematsu)
- Benjamin Franklin Medal (Kenichi Iga)

### Collaboration with Industry



etc.