

# NITech Topics



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<https://www.nitech.ac.jp/eng/>

2020



TOPIC  
01

## Ranked 2nd in Student Formula World Ranking!

NIT Formula Project ranked 2nd in Student Formula World Ranking announced on December 8th, 2019.

Students design and produce small racing cars by themselves in Student Formula. It is a competition which requires a comprehensive ability on innovation including the design process and cost for its production as well as racing time. Student Formula has been held all over the world and 100 teams participate in Student Formula in Japan, of which nearly 20 teams are from Asia and

Europe. The world ranking is made based on the past three years records of Student Formula held worldwide.

NIT Formula Project is an education project of Quality Innovation Techno-Center, NITech and participates in Student Formula in Japan every summer since the first championship in 2003 and has gradually made a progress. Consecutively ranked 3rd from 2015 to 2017 and eventually won the first prize in the 17th meeting in 2019.

TOPIC  
02

## Dr. Takatoshi Kinoshita, New President of NITech



In April 2020, Dr. Takatoshi Kinoshita was appointed as the 13th President of Nagoya Institute of Technology, NITech. Previously he was one of Executive Directors, Vice-President for Research Planning and Evaluation.

President Kinoshita is enthusiastic about the promotion of a global research environment, since NITech is located in the center of an industrial area and has been collaboratively working with those industries. In recent years NITech has shifted its mission of engineering from technological improvement to innovation, believing that creating new values will bring unprecedented happiness and satisfaction to all. In President Kinoshita's words, NITech practices "heart-oriented engineering," in order to contribute to building a society where everyone can feel rich and satisfied at heart.

As President of NITech, President Kinoshita will be addressing the numerous challenges facing today's rapidly changing higher education.

### Professional Career

- ▶ October 1981, Assistant Professor, Nagoya Institute of Technology
- ▶ December 1989, Lecturer, Nagoya Institute of Technology
- ▶ April 1991, Associate Professor, Nagoya Institute of Technology
- ▶ January 2001, Professor, Nagoya Institute of Technology
- ▶ May 2006, Vice President, Nagoya Institute of Technology
- ▶ April 2010, Executive Director and Vice President, Nagoya Institute of Technology

TOPIC  
03

## Established the NITech Education Research Emergency Support Fund to Students Influenced by COVID-19

Based on the state of emergency on COVID-19 announced by the Japanese government, NITech has restricted access to the campus to prevent the spread of infection. Due to the restriction, the students who are expecting graduation and completion had to suspend their research activities (experiment and training) and even if education and research activities in the university are resumed, the lost time is not retrievable.

In order to secure time for research after the resumption of research activities, first and foremost, we provide 50,000 yen as a livelihood support for graduate students (including international students) who live independently from their supporters' residence and are in trouble with paying a rent or making a living due to a drastic change in a family budget and income from part time job.

From now on, NITech is going to take various kinds of measures based on requests from students and their supporters. We have already received an offer to support toward students who are in trouble in spite of their desires to study and maintenance of learning environment such as remote classes. However, in order to sustain and develop education and research activities which NITech has been promoting with industry in Chukyo area, we would cordially ask all of you from industry, local society and our alumni further support to us.

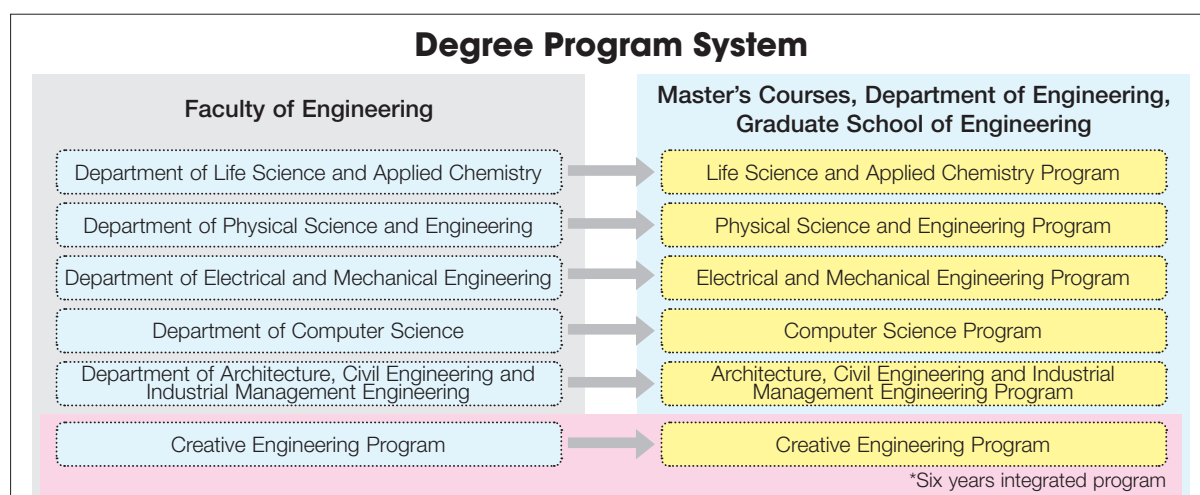
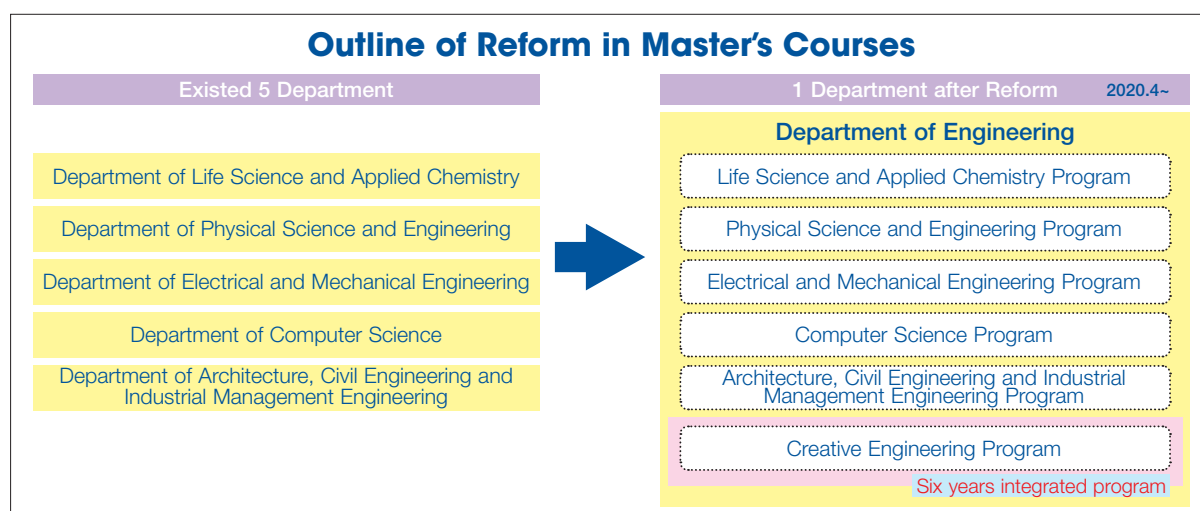
[Information on donation to NITech](https://www.nitech.ac.jp/kikin/)

<https://www.nitech.ac.jp/kikin/>

# Reform in Master's Courses —Transition into New Degree Program System—

With the environment of Research and Development being composite, it is necessary to establish flexible learning and instruction system crossing and integrating the engineering field. In order to achieve learning beyond the scheme of their own special fields along with the acquisition of a significant major subject, NITech decided to adopt a Degree Program System in April 2020. This system integrates master courses from five departments to one and transits into a Degree Program System. Also, it is applied to the last two years of the Creative Engineering Program which is a six-year integrated program.

NITech reformed its education system in 2016, setting up five departments and the Creative Engineering Program in Faculty of Engineering, and five departments in master's course. This reform enables us to foster human resources who are able to lead innovation with significant knowledge in their own special fields by accumulating specialization in science technology from basic to practical application, and who are able to create new values in technology from a bird's-eye view and with various senses of values. This transition aims at further developed education taking in an idea of new engineering education in addition to past achievements.



**> Degree Program System**

A goal to achieve which is appropriate to a degree to be conferred setting, a program to accomplish the goal is established. To integrate existing departments into one department and establish a degree programs respectively which corresponds to each department in the faculty. As such it achieves broad learning which was unable to accomplish in vertically divided department system along with securing connectivity between undergraduate school and graduate school in education.

TOPIC  
 05

## Prof. Keiichi Tokuda Awarded the Medal with Purple Ribbon in Spring 2020



A Medal with Purple Ribbon is awarded to those who made invention or discovery in the field of science and technology or achieve excellent accomplishment in the fields of academic, sports and artistic culture.

synthesizes sounds based on unified statistical model in related research fields. In addition to this, it enormously contributed to the development of related fields to have them established as one research field.

Comment from awardee:

I am honored to be awarded the Medal with Purple Ribbon unexpectedly. It was around 1995 that I firstly suggested this evaluated statistical voice synthesis. I would like to thank you from the bottom of my heart for the instruction, support and cooperation for a long period from my supervisor and other researchers concerned. Also, for a great number of students who participated in this research. From now on, I will do my best to contribute to the development of the whole research area and the restoration of research results as well as my own research.

Outline of accomplishment:

Regarding voice synthesis, it proposed a new approach based on unified statistical model and showed that an elective speaker's type of voice, speaking style, emotional expression and the like are generable at command. This is not only to solve an issue which was uneasy to manage with a conventional way which cuts and pastes speech wave but also widely pervade a new definition which

 TOPIC  
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## Initiative of Vehicle Network Laboratory (VeNeL) —toward the International Standards Test and the Establishment of Association for Assessment and Accreditation—

Outline:

In August 2019, NITech established the Vehicle Network Laboratory (VeNeL) as one of project laboratories and has been working on highly reliable research and international standardization on an onboard high-speed network. This time VeNeL has been commissioned to International Standardization Development Work on Energy Saving by the Ministry of Economics, Trade and Industry (METI), "International Standardization on System Safety of Onboard Ethernet Project" and Regional Invention Infrastructural Development Work by METI, "Next Generation Network Devise Development Support Project". As the development of these commissioned projects, we are going to contribute to related companies and research institution in Japan as follows.

Details:

[Vehicle Network Laboratory (VeNeL)]

In addition to NITech researchers, VeNeL as the implementing institution invites researchers outside. Regarding the intended following themes, it collaborates with an industry organization such as JASPAR (Japan Automotive Software Platform and Architecture) and implements highly reliable research and international standardization such as ISO, IEC and IEEE and aims to establish a test house to check and accredit related standards.

- ▶ EMC (Electromagnetic Compatibility)
- ▶ QoS (Quality of Service)
- ▶ Security
- ▶ SDN (Software Defined Networking)
- ▶ Wired Communication (Optical Solution)

- ▶ Wired Cable Communication (Copper Cable Solution)
- ▶ Wireless Communication

[Vehicle Network Research Consortium]

The Consortium disseminates the results of commissioned projects and related technique. It also invites engineers and researchers in the first line to hold workshops on

international standardization trend, a test method, related research trends and others. Also, it conducts dissemination of the latest information, networking, research exchange and fostering related engineers. The dissemination of information this year will be conducted mainly by e-mail.

TOPIC  
07

## Strategy for Fostering Female Researchers — Establishment of Start-Up Assistant Professor


NITech has established a system for fostering female researchers. In this system, when female assistant professors are newly employed, they enroll in a doctoral course at the same time and aim to acquire a doctoral degree during the terms of their positions.

This system was established to enhance research abilities contributing to the increase of excellent female researchers by providing female students with a great performance in a master course but did not proceed to a doctoral course and got a job with opportunities. Also, it aims to promote the environment of diversity and

inclusions in NITech with an enhancement of research abilities.

Targeting at female researchers with an aim to acquire a doctoral degree during the terms of their positions and become a tenure assistant professor through a tenure track assistant professor and we provide the start-up assistant professors with research funds and private office, encourage them to devote themselves to research activities.

The establishment of abovementioned system to foster female researchers is a new initiative in Japan.


Nagoya Institute of Technology

名古屋工業大学


### Strategy for Fostering Female Researchers

~Newly Launched Program of "Start-up Assistant Professor"~

Nagoya Institute of Technology has launched a program for fostering female researchers; employ as an assistant professor and encourage them to obtain doctor degree. This program provides an opportunity for talented female researchers, who give up pursuing a doctor degree and seek a career after their master course, to become a researcher in academia. This program helps to increase the number of female researchers, and enhance diversity-inclusion environment and research capabilities.

**Overview**

1. International Open Calls for Application.  
Applicants are:
  - those who are expected to obtain master degree, including those who already have obtained.
  - those who wish to pursue a research career in academia as a Tenure Assistant Professor through fixed-term position.
2. Support available at Center for Innovative Young Researchers in NITech.
  - Title: Assistant Professor ("Start-up Assistant Professor" in NITech)
  - Fixed term acceptance: 5 years. No reappointment. However, 1 year extension can be allowed for "Program for Researcher Oversea Visits."
  - Salary: Annual Salary System.
  - Research Environment: NITech provides 350,000 JPN/year for research allowance. Especially for the first year, 400,000 JPN will be added as a Start-up allowance.
  - Office room will be assigned on campus.
  - "Funding Program for Researcher Overseas Visits" is available to conduct research activities in foreign countries up to a year.
3. Candidates should obtain a doctor degree during the term and accumulate research achievement.  
NITech will employ as a "Tenure-track Assistant Professor," 10 years in total from Start-up Assistant Professor.
4. Candidates have an opportunity to take a tenure review.  
Once they pass it, they can obtain "Tenure."
5. Candidates can be promoted to Associate Professor and Professor, depends on their research achievement and contribution.

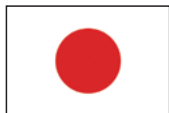


**Career Path for Start-up Assistant Professor**

Mentor and advisor will support Start-up Assistant Professor in career development, education and research.

TOPIC  
08

## Selected by “International Partnerships for Excellent Education, Research and Innovation” (INTPART) Program, Norway



“International Partnerships for Excellent Education, Research and Innovation” (INTPART) Program with SINTEF, one of Europe’s largest independent research organizations, a representative, and other universities consisting of Norwegian University of Science and Technology (NUST), Tokyo University of Marine Science and Technology, Doshisha University and Nagoya Institute of Technology (NITech) partners has been successfully selected this time.

This program is currently in progress and will continue for three years, and jointly funded by the Research Council of Norway and the Norwegian Agency for International Cooperation and Quality Enhancement in Higher Education (Diku) with both Education and Research being two of the most fundamental factors. It focuses on the seafood cold chain and plans to organize interdisciplinary



seminars, collaborative research, workshops and lectures both in Norway and Japan. In NITech, Vice-President, Prof. Yasushi Ido and Assoc. Prof. Yuhiro Iwamoto (Electrical and Mechanical Engineering) are going to play a main role in this program and have already started to correspond and collaborate with partner institutions.

Also, the Creative Engineering Program, Faculty of Engineering, NITech and Faculty of Engineering, NUST have concluded Agreement for Academic Exchange and Cooperation, and MoU for a Student Exchange Program in March, 2020. Based on this program, now it is highly expected to achieve the establishment of an education and research platform for knowledge exchange between researchers, students and industry between Norwegian and Japanese institutions and to enhance the cooperation with NUST under the agreements.

 TOPIC  
09

## Vice-president, Prof. Ken-ichi Kakimoto, has been accredited as an ambassador of Friedrich-Alexander University Erlangen-Nuremberg (FAU)

Vice-president, Prof. Ken-ichi Kakimoto who is also the head of NITech Europe Liaison Office has been accredited as an ambassador of [Friedrich-Alexander University Erlangen-Nuremberg \(FAU\)](#). This is the 6th case in FAU. On November 4, 2020, the ceremony for accreditation was held, however, due to the COVID-19 situation, the participation was remotely arranged. It is introduced on FAU’s website “We praise his special contribution to FAU’s international evaluation in both research and education and enhancement of the profile, and decided to accredit him as an ambassador of FAU. Prof. Kakimoto is a researcher in the field of material science and also holds a post of Vice-president of NITech. He has been promoting a close relationship with FAU on both research and education in the field of material science over ten years.”

Japanese-German Graduate Externship (Cotutelle

program) has been jointly launched with FAU from October 2019. Cotutelle program is a doctoral dissertation joint research guidance program that has become the mainstream educational modules in Europe in recent years.



The ceremony for accreditation  
(Sourced from FAU)



Taken in November 2019 in FAU.  
(Sourced from a [twitter of President Joachim Hornegger](#))  
From the left, Prof. Peter Greil (FAU), Vice-president Prof. Kakimoto, Prof. Dr. Joachim Hornegger (President of FAU)