

**Tokyo University of Agriculture and Technology
Graduate School of Engineering Doctoral Course**

**International Specialized Program for Engineer Leader Education
through ASEAN and Japan Cooperation**

**Application Guidelines for
Privately Financed International Students
for October 2020 Enrollment (Secondary Admission)**

Tokyo University of Agriculture and Technology Graduate School of Engineering Doctoral Course offers a curriculum “International Specialized Program (English course)” at all departments, and nurtures engineer leaders who have the skills to create innovative added value for industrial products that support a super-smart society, centered on excellent foreign students from ASEAN countries.

I. Fields of Study and Students Recruited

1. Fields of study and prospective supervisors

- (1) Applicants should select the departments and prospective supervisors they wish to choose from among the research fields of the Graduate School of Engineering provided on pages viii to xxiv.
- (2) If there is no recommendation from the prospective supervisor chosen by the applicant, application will not be accepted (this will be confirmed during the application process). Prior to application, applicants should consult with their supervisor about their desired research topic.

2. Students recruited

Privately financed international students 3

II. Eligibility and Requirements

1. Applicants

Doctoral course-level international applicants who will come to Japan or are residing in Japan and wish to obtain a doctoral degree from our Graduate School of Engineering

2. Nationality

No nationality requirements.

3. Age

No restriction.

4. Academic background

Applicants must be a graduate of a Japanese university or have academic abilities equivalent to or greater than those of a Japanese university graduate. Eligible applicants other than those who have graduated from Japanese universities are defined as follows:

- 1) Applicants must either have acquired a master's degree or an equivalent degree in a specialized field overseas, or expect to acquire the degree by the end of September 2020.
- 2) Applicants must have been recognized for having academic ability equivalent to a postgraduate's degree or a specialized field through individual admission screening, and must be 24 years of age at the time of 1 October 2020.

5. Health

Applicants should be in good mental and physical health.

6. Language skill

Applicants are required to fulfill at least one among the following English proficiencies .

- 1) A score of qualification or examination test equal to or more than B2 equivalent of Common European Framework of Reference for Languages (CEFR) in English at the time of enrollment in a regular course.
- 2) Applicants who completed the curriculum that satisfies entrance qualifications for a Japanese graduate school doctoral course in English as the main language.
- 3) Applicants who are recognized by our Graduate School of Engineering as having the English proficiency specified in 1) above.

7. Arrival in Japan

Applicants must arrive in Japan by October 14, 2020.

8. Other remarks

- 1) Admission shall be cancelled if a candidate who expected to graduate failed his/her graduation before the end of September 2020.
- 2) In case the candidate does not meet the "4. Academic background, 1)" requirement, evaluation is required prior to the admission. Please inform your prospective supervisor at our Graduate School of Engineering by February 7, 2020.

III. Application Procedure

Applicants should submit, via their university or institution, the following documents before February 28, 2020.

(All the applicants must apply after contacting the prospective supervisor of our Graduate School of Engineering and obtaining approval of acceptance.)

1) Submittal of application

All the documents should be sent by registered mail to the prospective supervisor of our Graduate School of Engineering. (The applicant should contact the prospective supervisor and obtain an acceptance from him or her in advance.)

2) Documents to be submitted

- (1) 2020 academic year application form (use enclosed form)
- (2) Field of study and research plan (use enclosed form)
- (3) An abstract of bachelor's thesis, or equivalent paper in Japanese or English within 600 words.

- (4) Either a graduation certificate or a corresponding certificate issued by the applicant's school indicating that the applicant will be graduating from undergraduate or master's programs, which applicant lately graduated or graduating. A transcript of academic record and a degree certificate of undergraduate or master's programs that is issued by university authorities, which applicant lately graduated or graduating.
- (5) A certification that shows the applicant's birth, nationality, citizenship, or residence in the applicant's home country such as a transcription of domiciliary register or a proof of citizenship.
- (6) A letter of recommendation, by the dean or head of the applicant's affiliated institution. This letter is addressed to the president of Tokyo University of Agriculture and Technology. Please use the envelope issued by your university and an official seal of your university.
- (7) Original certificate for language
(e.g., TOEFL-iBT, IELTS, etc.)
(If the applicant does not have a certificate to prove your language skills, please contact the prospective supervisor as soon as possible.)
- (8) A certificate of health (use enclosed form and this certificate should be obtained within the past 6 months before the submission.)
- (9) A photocopy of passport (If you have already your passport. The pages where the name and the photograph can be identified.)
- (10) Entrance examination fee of JPY 30,000
(to be paid by using the prescribed payment form. Applicants outside Japan are advised to refer to their prospective supervisor for details)

3) Remarks

- i) All the documents should be typewritten in either English or Japanese and printed two-sided in A4 size with enclosed form. (In the case the document is not English or Japanese, please attach the translation in English or Japanese with it.)
- ii) The submitted documents will not be returned.
- iii) All documents should be correctly completed and submitted before the deadline. Documents submitted after the deadline and incomplete applications will not be accepted.
- iv) The documents and forms are subject to change.
- v) The prescribed payment form for the entrance examination fee can be requested from Admissions Section of Koganei Student Support Office. Please request it early beforehand to avoid being late. After payment, please submit a receipt (right side of the money transfer bill) with application documents.

4) Screening and aim of this special course

- i) The screening will be conducted based on the submitted documents in "III. Application Procedure." In addition, an oral examination will be conducted after examination by documents. For the date and time of the oral examination, please contact the prospective supervisor.
- ii) The notification of acceptance will be sent by your preferred supervisor directly by the end of April 2020.
- iii) Classes and instructions are given mainly in English and this program offers a Doctor of Engineering or a Doctor of Philosophy in 3 years. The enrollment identification is a full time doctoral course student.

5) Expenses necessary at the time of enrollment

- i) Entrance fee of JPY 282,000.
- ii) Tuition fee for the fall semester (Oct. 2020 to Mar. 2021) is JPY 267,900 (JPY 535,800 per year). Tuition fee and entrance fee will be adjusted at any time without notice.
- iii) The Students Education and Research Accident Insurance insures students against unforeseen accidents and injuries (but not illnesses) in curricular and extracurricular activities. The expense is JPY 2,600 for 3 years.
- iv) The Student Liability Insurance Program provides compensation in the event that the student injures another person or damages another person's property during the regular course, internship, volunteer activities, off-campus research (surveys, tours, training), museum curator training, or extracurricular activities (such as overnight field trips and expeditions) The cost of this insurance is JPY 5,400 for 3 years. A member fee for the University Co-op of JPY 5,000 is also required but will be reimbursed at the end of the Doctor's program. (*The costs of the insurance fee and the member fee for the University Co-op are subject to change.) All the enrolling students are required to join the Student Liability Insurance Program in addition to the Students Education and Research Accident Insurance.

IV. References for All Applicants

- i) Before arrival in Japan, students are advised to obtain information about climate, customs, manners, and universities of Japan. Please understand that you have to use Japanese in out-of-class life.
- ii) Please refer to the TUAT website for research, education and other details.
(<https://www.tuat.ac.jp/en/>)
- iii) Personal information given on application will only be used in accordance with the privacy policy of the University.
- iv) If you have any inquiry about these application guidelines, please contact the address below in writing.

Postal address:

Admissions Section of Koganei Student Support Office
Graduate School of Engineering
Tokyo University of Agriculture and Technology
2-24-16 Naka-cho, Koganei-shi
Tokyo 184-8588 JAPAN
Fax: +81-42-388-7013

V. Admission Policy and Fields of Study

1. Purpose of learning

The Graduate School of Engineering accepts a range of students from home and abroad who have an interest in the natural environment and scientific technology, constantly seek enlightenment, have broad knowledge and perspective, possess the ability to get things done supported by a high degree of self-reliance and strong ethical character, and seek to become engineers and researchers capable of playing a role in international society. Recent development of scientific technology is notable: Information technology is advanced and sophisticated while interdisciplinary and boundary areas related to various specialized fields also see significant progress. The Graduate School of Engineering uniquely aims to provide a variety of academic education that meets the needs of the times, ranging from basic science and engineering to advanced application technology, and to cultivate creative researchers and engineers with broad knowledge and high-level research ability.

2. Admission policy

Based on the purposes of its education, research and human resources development, the Graduate School of Engineering seeks the following students who:

1. Have a broad perspective and basic academic skills for studying their major fields and are equipped with high morality.
2. Have inquisitive and creative minds exploring the truth of nature, have an interest in scientific technology in the fields of science and engineering, think independently through research activities, and work hard to contribute to the solution of research challenges and the development of society in cooperation with other people.
3. Have the ability to set their research themes independently by considering challenges faced by humankind from many perspectives and are highly motivated to try to address those challenges.
4. Have high communication skills in Japanese or foreign languages.

Department of Biotechnology and Life Science

We aim to develop students' international mindset, communication skills, and domestic and global presentation skills and to nurture human resources with the ability to find new needs and discover seeds who can meet the needs of modern society as experts of advanced biotechnology and life science and can work in the center of society as researchers, experts or professionals. So we seek the following students who:

1. Have an interest in research in the biotechnology and life science fields and are highly motivated to contribute to international society through activities in those fields.
2. Have sufficient basic knowledge and problem discovery and solving skills in the biotechnology and life science fields and are willing to venture into new research areas.

Department of Applied Chemistry (Division of Advanced Chemical Science and Technology)

We aim to foster human resources who have advanced professional research and teaching skills for playing a leading role as chemists, resolve problems related to resources, energy, materials, and the global environment, and contribute to the development of basic and applied research and the formation of sustainable society. So we seek the following students who:

1. Create new value from the perspective of atom- and molecule-based chemistry and have the desire and creativity to contribute to international society.
2. Have sufficient basic knowledge and problem discovery and solving skills in the chemistry and related technological fields and are willing and ready to venture into new research areas.

Department of Applied Chemistry (Division of Organic and Polymer Materials Chemistry)

We aim to develop human resources who can play a leading role in the development of highly specialized science and technology related to broad organic materials chemistry, including organic and polymer materials and even inorganic materials and metal complexes, and to help realize the safe living environment throughout the world. So we seek the following students who:

1. Have an interest in chemical/physical properties of organic and polymer materials and their use and application and are motivated to contribute to society as experts in this field, including peripheral and interdisciplinary areas.
2. Have basic academic skills for chemistry or physics and work hard in research to advance their material scientific insights and problem discovery and solving skills to the level required for professional instructors.

Department of Applied Chemistry (Division of Chemical Engineering)

To contribute to shaping sustainable society, we aim to develop chemical engineers who solve chemical and technological problems related to energy, the global environment, drugs, food, and materials, have advanced professional teaching skills for playing a leading role, and utilize those results for social and international purposes. So we seek the following students. For the doctoral course, those motivated to further advance the ability gained in the master's course are preferred.

1. Have an interest in chemical and technological research related to energy, the global environment, drugs, food, and materials and are willing to contribute to international society through activities in those fields.
2. Have sufficient basic knowledge and problem discovery and solving skills in the chemical and technological fields and are willing to venture into new research areas.

Department of Mechanical Systems Engineering

We aim to nurture sophisticated engineers and researchers who design and create unique and best advanced mechanical systems to globally realize sustainable, environment-friendly, science technology-based society, based on basic analytical skills of physics and mathematics and broad, deep expertise in mechanical engineering, and who use deep understanding and insight of global society and culture and rich communication skills for international society. So we seek the following students who:

1. Have academic application skills for doing state-of-the-art research on mechanical engineering and advanced mechanical systems and have a strong intention to contribute to humankind and society through international activities in their specialized fields.
2. Have problem discovery and solving skills based on sophisticated analytical skills, expertise and insights in the fields of physics, mathematics and machinery engineering and are highly motivated to venture into challenges in new research areas or interdisciplinary areas.

Department of Electronic and Information Engineering (Division of Applied Physics)

We aim to develop human resources who can find solutions to unknown challenges in the advanced physics, physical engineering, and interdisciplinary fields by providing leading knowledge in those physical fields and cultivating problem discovery skills, practical research skills, technological development skills, international mindset, information transmission skills, and flexibility to social needs—abilities required for independent researchers. So we seek the following students who:

1. Have an interest in physical research and are motivated to contribute to international society through activities in the physics field.

2. Have sufficient basic knowledge and problem discovery and solving skills in the physics field and are willing to venture into new research areas.

Department of Electronic and Information Engineering (Division of Applied Electronics Engineering)

We aim to equip students with advanced technologies in electrical and electronic engineering and related expertise and to develop human resources with practical research and development skills based on social needs who contribute to the development of electrical and electronic engineering technologies through research activities in their specialized fields and partnerships with the business community. So we seek the following students who:

1. Have an interest in research in the electrical and electronic engineering field and are motivated to contribute to international society through activities in that field.
2. Have sufficient basic knowledge and problem discovery and solving skills in the electrical and electronic engineering field and are willing to venture into new research areas.

Department of Computer and Information Sciences (Division of Computer Science)

We aim to nurture human resources who can find solutions to unknown challenges in the information engineering and interdisciplinary fields by providing leading knowledge on information engineering and cultivating problem discovery skills, practical research skills, technological development skills, international mindset, information transmission skills, and flexibility to social needs—abilities required for independent researchers. So we seek the following students who:

1. Have an interest in information engineering research and are motivated to contribute to international society through activities in that field.
2. Have sufficient basic knowledge and problem discovery and solving skills in the information engineering field and are willing to venture into new research areas.

Fields of Study (Academic Advisors)

Fill in the section Preferred Supervisor with the name of staff except for ones marked ※1.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Cell engineering	Associate Professor Mikako SAITO mikako(at)cc.tuat.ac.jp	Disease model cells of diabetes. Regenerative cell engineering. ES cells. Single-cell gene engineering. Femtoinjection. Food safety control and regulatory science.
	Associate Professor Tetsushi MORI※1 moritets(at)go.tuat.ac.jp	Exploitation and elucidation of the characteristics, role and molecular traits of novel/uncultivable environmental microorganisms using molecular biology based approaches.
Biomolecular and structural informatics	Professor Yutaka KURODA ykuroda(at)cc.tuat.ac.jp	Biophysical and bioinformatics studies of protein/peptide aggregation, function, and immunogenicity at atomic/molecular level using recombinant DNA technologies, NMR, X-ray crystallography, and computational simulation.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Structure and cellular function of biomolecules	Associate Professor Yasumoto NAKAZAWA※ 1 yasumoto(at)cc.tuat.ac.jp	i) Structural analysis of silk fibroins. ii) Development of the medical implantation devices such as artificial cardiac valves and cardiovascular patches based on the silk fibroin.
Molecular biology and pathophysiology	Associate Professor Masaki INADA inada(at)cc.tuat.ac.jp (Collaborative faculty)	Molecular pathological investigation using gene targeted mice and disease models on mice.
	Associate Professor Yoshihiro OHTA ohta(at)cc.tuat.ac.jp	Development of novel techniques for organelle imaging and their application to mitochondrial study. Cell death, Ca ²⁺ signaling and generation of reactive oxygen species are mainly focused.
	Professor Chisato MIYAUURA miyaura(at)cc.tuat.ac.jp (Collaborative faculty) *Retires in March 2021	Investigations of refractory diseases for clinical drug development are employed for lifestyle-related diseases such as Cancer, Osteoporosis, Rheumatoid Arthritis and Periodontitis. Functional analysis of molecular biochemistry using mammalian cell to individuals are promoted research.
	Senior Assistant Professor Michiko HIRATA※1 hirata (at)cc.tuat.ac.jp	Molecular pathology is investigating that based on gene editing techniques in molecular biochemistry. Focusing fields are development of drug screening models and diagnostic-imaging methods on life related diseases and skeletal disease including osteoporosis, periodontal disease and its related cancers.
Nanobiotechnology	Professor Kazunori IKEBUKURO ikebu(at)cc.tuat.ac.jp	Nucleic acid engineering of aptamers for the application to diagnosis and novel bottom-up nanotechnology.
	Associate Professor Ryuji KAWANO rjkawano(at)cc.tuat.ac.jp	The goal of my research is to establish a system that uses biological nanopores for single-molecule detection. Channel membrane proteins have nanochannels around 1 nm in size. These biological nanopores are capable of detecting and electrically recognize even single molecules with a high signal-to-noise ratio. However, the channel size is limited by the inherent protein structure. I plan to develop artificial nanochannels such as synthetic nanopores or polypeptides combined with biomaterials (proteins and lipid bilayers) on the basis of MEMS technology for novel nanopore sensing.
Biobusiness	Associate Professor Wakako TSUGAWA tsugawa(at)cc.tuat.ac.jp	Development of novel biodevices for the in vitro diagnostics and environmental monitoring systems based on proteins or enzymes.
Molecular Biochemistry	Associate Professor Ryutaro ASANO ryutaroa(at)cc.tuat.ac.jp	Artificial protein design based mainly on antibody molecules and their detailed functional analyses for development of next-generation biologicals and biosensors.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Plant biotechnology	Professor Yoshihiro OZEKI ozekey(at)cc.tuat.ac.jp *Retires in March 2022	Molecular biological and biochemical studies on the enzymes involved in plant secondary metabolisms.
	Associate Professor Akiyo YAMADA※1 yamaden(at)cc.tuat.ac.jp	Molecular biological analysis of the genes based on the function of the proteins related to salt-tolerance phenotype of the halophyte.
Marine Biotechnology	Professor Tomoko YOSHINO y-tomoko(at)cc.tuat.ac.jp	Development of novel bio-nanomaterials through genetic engineering by microorganisms for biosensing and biomedical applications.
Biomolecular engineering	Associate Professor Atsushi ARAKAKI arakakia(at)cc.tuat.ac.jp	Molecular analysis of biomineralization mechanism. Biomimetic synthesis of organic/inorganic hybrid nanomaterials using biological molecules.
	Professor Tsuyoshi TANAKA tsuoyo(at)cc.tuat.ac.jp (Collaborative faculty)	Production of biofuels, chemicals and pharmaceuticals on the basis of biological functions of various microorganisms. Development of Bio-sensing system based on lab-on-a-chip technologies.
Bioelectronics	Professor Nobuhumi NAKAMURA nobu1(at)cc.tuat.ac.jp	Bioelectrochemistry and Raman spectroscopy of metalloproteins and construction of biofuel cells. Development of ionic liquids as ion conductors, solvents for biomass extraction and energy conversion.
	Associate Professor Takahiro ICHIKAWA t-ichi (at)cc.tuat.ac.jp	Lipid molecules form bilayer structures that play an important role as a field for various functional biomolecules. In our laboratory, we aim for the construction of novel fields by controlling self-organization behavior of amphiphilic molecules.
Synthetic organic chemistry Bioorganic chemistry/chemical biology	Professor Kazuo NAGASAWA knaga(at)cc.tuat.ac.jp	Total synthesis of biologically active natural products. Development of organocatalyst.
	Associate Professor Kaori SAKURAI sakuraik(at)cc.tuat.ac.jp	Development of novel chemical tools to study biological functions of glycolipids and natural products.
	Associate Professor Masayuki TERA※1 tera(at)go.tuat.ac.jp	Design and synthesis of functional molecules controlling nucleic acids, proteins, and cellular surfaces.
Biosociety engineering Biomolecules and proteomics	Professor Masafumi YOHDA yohda(at)cc.tuat.ac.jp	Structure and function of molecular chaperones. Genetic analysis systems for SNP genotyping and bioremediation.

Department : Biotechnology and Life Science		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Associate Professor Kyosuke SHINOHARA※1 k_shino (at)cc.tuat.ac.jp	We examine the role of cilia in our body. Cilia are nanomachine motor device that protrude from cell surface and play important role on transport of fluid in airway, brain, and oviduct. Using knockout mouse, electron microscopy, and protein engineering, we address molecular mechanism of motility and mechanical property of cilia: How cilia move or how cilia acquire their stiffness and integrity.
Theoretical linguistics	Associate Professor Yuji HATAKEYAMA※1 hatayu(at)cc.tuat.ac.jp	Syntactic structure, semantic structure, and information structure.

Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Opto-electronic Materials	Professor Yoshinao KUMAGAI 4470kuma(at)cc.tuat.ac.jp	Growth of compound semiconductor crystals from vapor phase based on the thermodynamic analysis and construction of growth system.
	Associate Professor Hisashi MURAKAMI murak(at)cc.tuat.ac.jp	Crystal growth of semiconductor materials by chemical vapor reaction and characterization of optical and structural properties.
Energy Chemistry & Electrochemistry	Professor Katsuhiko NAOI k-naoi(at)cc.tuat.ac.jp *Retires in March 2023	Energy chemistry. Electrochemical energy storage by use of nano-structured materials. Lithium-ion battery, electrochemical supercapacitor. Hybrid nanoenergy device.
	Associate Professor Etsuro IWAMA※1 iwama@cc.tuat.ac.jp	Material design and characterization of nanostructured materials for electrochemical energy storage. Modification of the material/electrolyte interfaces in electrodes for high power and energy-efficient applications.
Molecular Transformation	Professor Hiroki OGURI h_oguri(at)cc.tuat.ac.jp	Synthesis of natural products and functionalized small/medium-sized molecules. Development of synthetic strategies for systematic diversification of skeletal, stereochemical and functional group properties of biologically-relevant molecules. Chemical biology and drug development of the natural product inspired molecules.
Molecular Design	Professor Takashi YAMAZAKI tyamazak(at)cc.tuat.ac.jp *Retires in March 2023	Development of stereoselective construction methods of fluorine-containing compounds. Clarification of effect of fluorine atoms towards a variety of characteristics of compounds.
	Associate Professor Akio SAITO akio-sai(at)cc.tuat.ac.jp	Development of novel and efficient procedures for the synthesis of heterocyclic compounds

Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Molecular Catalysis	Professor Masafumi HIRANO hrc(at)cc.tuat.ac.jp	Activation of inactive bond in organic molecules by transition-metal complexes and the application toward molecular transformation with high atom efficiency.
	Associate Professor Keiji MORI※1 k_mori(at)cc.tuat.ac.jp	Concise construction of fused-cyclic skeleton by sequential C–H bond functionalization and development of π - π interactions based novel chiral ligand.
Inorganic Solid State Chemistry	Associate Professor Kazuyuki MAEDA k-maeda(at)cc.tuat.ac.jp	Development of novel nanospace materials such as zeolite-related materials and coordination polymers, especially inorganic-organic hybrid nanosheets and related nanospace materials.
	Professor Tatsuo NOMA※1 noma(at)cc.tuat.ac.jp (Collaborative faculty)	Synthesis and application of functional ceramic films including ferroelectrics, dielectrics and photo catalysts. Designing of processing method using high electric field at elevated temperatures.
Capacitor Technology (Sponsored Laboratories)	Kenji TAMAMITSU※1 tamamitu(at)cc.tuat.ac.jp	Development of energy storage devices and their functional nanomaterials. Electrochemical energy storage by electric double layer capacitors. Lithium-ion capacitors and hybrid supercapacitors.
Organic and Polymeric Materials for Electronics and Optoelectronics	Professor Takeshi SHIMOMURA simo(at)cc.tuat.ac.jp	*Functional Polymers for Flexible Molecular Electronics *Development of Conducting Polymer Nanofibers *Polymer Energy Devices Using Low-Dimensionality and Flexibility *Development of Soft Devices with Self-Assembling Properties
	Associate Professor Koji NAKANO k_nakano(at)cc.tuat.ac.jp	*Development of organic functional materials based on organic synthetic chemistry *Design and synthesis of new π -conjugated molecules, and their application to organic electronic/optoelectronic materials *Development of highly-active and selective polymerization catalyst
Fundamental Organic Chemistry for Molecular and Polymeric Materials	Professor Noriyuki YONEZAWA yonezawa(at)cc.tuat.ac.jp *Retires in March 2021	Design of Organic Molecules and Transformations on the Basis of Fine Molecular Structure Analysis Enabling Satisfactory Reactivity and Selectivity, as Protocols for Exhaustive Use of Carbon Resources: *Superacid-mediated Activation of Conventional Organic Molecules Performing C–C Bond Formation *Chemistry of Aromatic-Rings Accumulated Molecules with Non-coplanar Configuration *Fundamental Organic Chemistry for Polymer Materials

Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Senior Assistant Professor Akiko OKAMOTO※1 aokamoto(at)cc.tuat.ac.jp	*Design and Analysis of Spatial Organization of Aromatic-Rings-Accumulated Organic Molecular Compounds: Single Molecular Spatial Organization in Crystal, Crystalline Molecular Packing, and Molecular Structure in Solution *Synthetic Study of Aromatic Condensation Polymers having Repeating Units of Non-coplanarly Accumulated Aromatic Rings
Polymeric Biomaterials	Professor Yoshihiko MURAKAMI muray(at)cc.tuat.ac.jp	*Biomaterials *Surgical Tissue-Adhesive Materials *Gels for Endovascular *Drug-Release Matrix *Polymers Agent *Polymeric Film for Bioanalysis
	Associate Professor Takahiro MURAOKA※1 muraoka(at)go.tuat.ac.jp	*Bio-inspired synthetic organic chemistry and supramolecular chemistry for 1) protein manipulation and stabilization, 2) membrane functionalization, and 3) cellular activity control.
Physical Chemistry of Organic and Polymeric Materials	Professor Toshiyuki WATANABE toshi(at)cc.tuat.ac.jp	*Development of photoresponsive polymers *Development of reversible thermoresponsive recording of fluorescent image *Synthesis of diamond from carbon dioxide *Development of photoresponsive drug delivery systems
	Associate Professor Hiroyuki OZAKI hiroyuki(at)cc.tuat.ac.jp	*Electronic and Geometric Structure Analysis of Extrathin (4–10 Å) Molecular Aggregates on Clean Surfaces *Creation, Characterization, and Manipulation of a Single Sheet (or Chain) of a Polymer
Organic and Polymeric Materials with Integrated Molecular Structure	Professor Hiroaki USUI hirousui(at)cc.tuat.ac.jp *Retires in March 2023	*Physical Vapor Deposition of Organic Materials *Polymeric Film Formation by Vapor Deposition Polymerization *Interface Control of Thin Films Pertinent to Polymeric Materials *Electronic Devices Based on Organic Thin Films
	Senior Assistant Professor Yoko TATEWAKI※1 ytatewa(at)cc.tuat.ac.jp	*Development of organic functional materials for electronics devices *Synthesis of conducting and magnetic materials *Preparation of self-assembly nanomaterials *Conducting and magnetic properties of organic devices
Material Systems Mathematics	Professor Hiroshi GODA goda(at)cc.tuat.ac.jp	*Knots, links and 3-dimensional manifolds
	Senior Assistant Professor Eri HATAKENAKA※1 hataken(at)cc.tuat.ac.jp	*Invariants of knots and manifolds in low dimensions

Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Material Technology for Organic and Polymeric Substances	Professor Hiromu SAITO hsaitou(at)cc.tuat.ac.jp	*Polymer Blends *Mechanical and Optical Properties of Polymers *Morphology Design of Polymers by Supercritical Fluids *Crystallization of Polymers
Material Science & Technology aiming Human Health Support (Sponsored Laboratories)	Professor Yoriko ATOMI yatomi(at)cc.tuat.ac.jp Associate Professor Miho SHIMIZU※1 mshmz(at)cc.tuat.ac.jp	Material health science based on body-mind integrative science. Elucidation of the cell-body level of the essence of exercise essential to human health and its cooperation. Keywords: Slow muscle (Soleus), cytoskeletal protein (tubulin/microtubule), extracellular matrix (type I, III, V, X collagen, decorin), molecular chaperone (small HSPs, α B-crystallin), mitochondria, trunk exercises, natural wound healing materials, eggshell membrane cosmetics, supplements. Students from various backgrounds (simulation, organic chemistry, biophysics, biomechanics, biochemistry, molecular biology, physiology) are welcome.
Process Systems Engineering	Professor Yoshiyuki YAMASHITA yama_pse(at)cc.tuat.ac.jp	Design and application of smart and dependable process control systems, process monitoring for connected industries, process simulators, and decision support for various process systems.
Chemical Reaction Engineering	Associate Professor Makoto SAKURAI sakuraim(at)cc.tuat.ac.jp	Research on the creation and design of the following new reaction field and reaction process. Development of high functional structured catalyst for application to the micro chemical process. Application of fine bubble process to the environmental field. Development of unsteady operation for high efficiency chemical process. Design of new high efficiency energy conversion process by thermochemical cycles.
Interfacial Chemical Engineering	Professor Hiroshi TAKIYAMA htakiyam(at)cc.tuat.ac.jp	Research and development of industrial crystallization technology for producing crystalline particles such as pharmaceuticals, foods, battery materials and functional materials.
Chemical Energy Engineering	Professor Wuled LENGGORO labwl(at)cc.tuat.ac.jp	At the intersection of chemical processing and bio-systems, to address the issues on "green processing" (energy-use or resources), agriculture and health-care fields. Including aerosol technology and powder synthesis for "engineered" or "unwanted" materials systems.

Department : Applied Chemistry		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Associate Professor Chihiro FUSHIMI※1 cfushimi(at)cc.tuat.ac.jp	Development of a novel high-efficiency gasifier. Development of thermal/biomass power plants that can mitigate fluctuation of power demand and supply. Process development of biochemical production. Efficient utilization of bioenergy by integrating other renewable energy.
Environmental Bio-Engineering	Professor Akihiko TERADA akte(at)cc.tuat.ac.jp	Development of bioreactor systems and materials for water/wastewater treatment by controlling complex microbial community in natural environments and control/prevention of biofilms for environmental/medical applications.
	Associate Professor Shohei RIYA※1 sriya@cc.tuat.ac.jp	Development of recycling system for agricultural waste or sewage sludge. Waste treatment using anaerobic digestion, and residue processing into soil amendment. Study on nutrient or greenhouse gas dynamics in the soil amended with waste-derived material.
Material Separation Engineering	Associate Professor Hideaki TOKUYAMA htoku(at)cc.tuat.ac.jp	Development of functional polymers and gels and process for metal separation, organic compound separation, drug delivery system, etc. Preparation of micro- or nanoparticles and porous materials.
	Associate Professor Hidenori OHASHI※1 fr1057(at)go.tuat.ac.jp	Functional membrane development and systematic device design in energy and life-science fields based on the molecular transport understanding. (from lithium ion battery, protein refolding, to chemical grafting)

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Fluid Mechanics	Professor Masaharu KAMEDA kame(at)cc.tuat.ac.jp	Bubble dynamics, high-speed aerodynamics, and fluid measurements. Current research topics are (1) pressure-sensitive paint for unsteady aerodynamics, (2) fragmentation of vesicular magma in volcanic eruption, (3) supersonic air-inlets, and (4) mass transport by bubbling.
	Associate Professor Yoshiyuki TAGAWA tagawayo(at)cc.tuat.ac.jp	Main research field of Yoshiyuki Tagawa's lab is in multiphase flow / micro-fluidics. Current research topics are on supersonic microjets impacting on soft matters. Here we investigate the fundamental mechanism of generation of the microjets and their applications for medical devices / industrial processes. Also the dynamics of droplets are investigated.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Materials Engineering for Machinery	Professor Toshio OGASAWARA ogasat(at)cc.tuat.ac.jp	Experimental and analytical studies of advanced composite materials and composite structures for aerospace systems, automobiles, and robots. Development of novel composite materials such as carbon nanotube composites, ceramics/intermetallics composites, high temperature polymer matrix composites, ablator.
	Associate Professor Akinori YAMANAKA a-yamana(at)cc.tuat.ac.jp	Multi-scale simulation of microstructure evolution and elastoplastic deformation behavior in metallic materials (especially in steel) using phase-field method and crystal plasticity finite element analysis based on homogenization method and its experiental validation.
Strength of Materials	Associate Professor Satoshi TAKADA※1 Takada(at)go.tuat.ac.jp	Physics of granular materials and its application to powder technology. Analysis of response to external forces based on particle simulations and continuum modeling.
Elasto-Plasticity and Material Forming	Professor Toshihiko KUWABARA kuwabara(at)cc.tuat.ac.jp	Numerical simulation of material forming, constitutive modeling of metals based on multi-axial stress tests, development of experimental methods for evaluating the formability of metals, development of novel material forming technology, intellectualization of forming machines and dies.
	Associate Professor Keiichi NAKAMOTO nakamoto(at)cc.tuat.ac.jp	The research work is focused on the area of machine tool and machining technology to realize “Intelligent Shape Creation with True CAM (Computer Aided Manufacturing)”. Our target is to develop effective manufacturing software regarding process planning and tool path generation in multi-axis control machining. In addition, we are working on various researches to machine the mold of optical elements with high efficiency and high precision.
Analysis of Mechanical Components	Professor Yasuhisa ANDO y-ando(at)cc.tuat.ac.jp	Studies on micro/nano tribology and application of new functions to surfaces using micro fabrication technologies. Studies on applications and development of MEMS (microelectromechanical systems), such as 3D-microstages.
Vibration Analysis and Control	Professor Takayoshi KAMADA kama(at)cc.tuat.ac.jp	Active vibration control, smart structure, health monitoring, earthquake resistance technology, base isolation and vibration control of building, vehicle control, elevator technology.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Associate Professor Ikuo MIZUUCHI mizuuchi(at)cc.tuat.ac.jp	Design, implementation, control methods, sensing mechanisms, actuation mechanisms, software architecture, artificial intelligence, and other aspects of intelligent robots: ongoing subjects include musculoskeletal humanoid robots inspired from human body structure, kitchen assistant robots, intelligent robots, and so on.
Thermal and Fluid Systems	Professor Akira MURATA murata(at)cc.tuat.ac.jp	Heat and fluid flow related to gas turbines, Numerical simulation of turbulent heat transfer, Flow visualization, and Heat transport device utilizing phase change.
	Professor Kaoru IWAMOTO iwamotok(at)cc.tuat.ac.jp	Efficient thermal-fluid control techniques for energy saving and environment impact mitigation will be developed. Efficient turbulence control techniques for drag reduction of airplanes, those for material engineering (efficient production of high-quality materials), those for bioengineering (effect of fluid pulsation) and those for chemical engineering (efficient production of hydrogen).
Thermal and Fluid Systems	Associate Professor Takuma HORI※1 Hori(at)go.tuat.ac.jp	Research on heat transfer: Heat and mass transfer in energy harvesting or storage devices, Thermal conduction in nanomaterials, Structure optimization, Coarse grained and multiscale simulations, Thermo-fluid dynamics in interfaces.
Simulation Engineering	Professor Hiroshi MOURI h-mouri(at)cc.tuat.ac.jp	Aiming to automatic driving, recognition technology of the surrounding circumstances using on-board sensors, state estimation techniques and the vehicle control technology have been studied, e.g. the localization technique based on the data of laser range finder, camera and satellite. In addition, investigation on vehicle dynamics control and the one on analysis of human drivers' error based on driving recorder data have been achieved.
	Associate Professor Pongsathorn RAKSINCHAROENSAK pong(at)cc.tuat.ac.jp	Research interests include the development of active vehicle control technologies with integrated sensing of human driver, vehicle motion and road surroundings for safety and security of motorized society, e.g. the safety devices for personal mobility, vehicle dynamics and control, and human-centered driver assistance systems.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Precision Measurement	Professor Wataru NATSU summer(at)cc.tuat.ac.jp	The main research topics are: research and development on environmental-friendly production system for shape generation with ECM, EDM and polishing; phenomena elucidation and application technology for electrochemical machining; research and development on machining simulation technology; shape generation for Hard-to-machine materials with electrochemical and mechanical polishing; and research on micro deep-hole machining by EDM.
	Associate Professor Masayoshi WADA mwada(at)cc.tuat.ac.jp	Wheeled mobile robots, multiple mobile robot coordination, motion control of electric vehicles, human-machine interface, mechatronics systems for welfare applications and other research topics covering wide area of engineering technology includes machine design, electric circuit design, computer programming, and control theories.
Control Systems	Professor Yasutaka TAGAWA tagawa(at)cc.tuat.ac.jp	Research is under way in developing novel devices for modeling and controlling of mechanical systems. Basic research and device development are performed for vibrational testing systems for the next generation, advanced motion simulator, and power assist systems for man-machine cooperative motion. Design method is studied for controlling systems based on transfer functions.
	Associate Professor Gentiane VENTURE venture(at)cc.tuat.ac.jp	The main research topics are at the edge of robotics and biomechanics. We are focusing on finding motion features that characterize the humans; and that can be understood by the robots. Research includes development of formalisms and methodologies to understand the human (actions, emotions) and the human motions from their dynamics, as well as to measure the humanoid dynamics. The range of applications includes human-robot interaction, medical diagnostics support, rehabilitation monitoring, sport science, entertainment.
Manufacturing System Engineering	Professor Hiroyuki SASAHARA sasahara(at)cc.tuat.ac.jp	Rapid manufacturing. Physical simulation to predict the machining process. Development of a new machining/processing method which can give a functional additional value to the generated surface of a workpiece by cutting and frictional stir burnishing. New machining technology for energy saving and clean processing.

Department : Mechanical Systems Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Mechanical Information Engineering Precision Measurement	Associate Professor Kentaro IWAMI k_iwami (at) cc.tuat.ac.jp	Main research topic of Iwami group is Nano/Microelectromechanical Systems (NEMS/MEMS) based on nanooptics/nanophotonics. It covers basic engineering of micro/nanofabrication and scientific exploratory of plasmonics, and our interest is focusing on some practical applications such as massively-parallel electron beam lithography, nanomechanical sensing systems, and so on.
	Associate Professor Itsuo HANASAKI※1 hanasaki (at)cc.tuat.ac.jp	Cross-disciplinary approaches on the phenomena typically at micro/nano spatio-temporal scales with an emphasis on the theoretical aspects mainly based on the concepts of statistical mechanics and dynamical systems.
Algebraic Mechanical Engineering	Associate Professor Katsuyuki NAOI※1 naoik(at)cc.tuat.ac.jp	Representation theory of infinite-dimensional Lie algebras and their q-analog
Geometric Mechanical Engineering	Senior Assistant Professor Nobutaka NAKAZONO※1 Nakazono(at)go.tuat.ac.jp	Study of discrete integrable systems. (Keyword: Painlevé equation, soliton equation, Toda lattice)
Intelligent Systems for Mechanical Engineering Mechanical Information and Communication	Associate Professor Hiroyuki NISHIDA hnishida(at)cc.tuat.ac.jp	Research on magnetohydrodynamics, aerodynamics and flight dynamics of advanced space propulsions and reusable space vehicles. For example, research on control of high-energy plasma flow for advanced propulsion, development of flow control device and application of the flow control device to reusable space vehicle. Numerical simulation and experiment are conducted to address these objectives.
Mechanical Information and Communication	Associate Professor Yuichi ASAI※1 asai(at)go.tuat.ac.jp	My major research fields are cultural anthropology, linguistic anthropology, and environmental anthropology. My research focuses on how human language constructs socio-cultural phenomenon and the natural environment. Since 2007, I have engaged in fieldwork in the Fiji Islands, South Pacific, and examined unique characteristics of Fijian ritual and mythical cosmology, through linguistic analysis of Fijian language.

Department : Electronic and Information Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Quantum Functions	Professor Kenji IKUSHIMA ikushima(at)cc.tuat.ac.jp	Quantum devices and their applications. Through fundamental studies of quantum transport in semiconductors, ultra-sensitive terahertz detection is targeted.
Atomic Processes	Professor Masatoshi UKAI ukai3(at)cc.tuat.ac.jp *Retires in March 2023	Physics of electronic, atomic, molecular, and photonic collisions and following relaxation processes in the gas and the condensed phases. Development of new experiments for atomic spectroscopy.
	Professor Atsushi HATAKEYAMA hatakeya(at)cc.tuat.ac.jp	Experimental studies in atomic, molecular and optical physics on the basis of laser spectroscopy, laser spin polarization, and laser cooling. The physics of atom-surface interactions and its applications to precision measurement and quantum manipulation.
Semiconductor Quantum Electronics	Professor Kenzou MAEHASHI maehashi(at)cc.tuat.ac.jp	Synthesis of nanocarbon such as carbon nanotubes and graphene, and fabrication of quantum devices and high sensitive biosensors using nanocarbon-based devices.
Quantum Beams	Professor Hiroki MINODA hminoda(at)cc.tuat.ac.jp	Development of transmission electron microscopy and its applications to biological specimens and functional materials in their actual environment.
Quantum Electronics	Associate Professor Godai MIYAJI※1 gmiyaji(at)cc.tuat.ac.jp	Experimental study on nonlinear optical interaction process between light and mater with intense femtosecond laser pulses and its application to material nano-processing technique.
Complex Functions of Materials	Associate Professor Yoshihiro MURAYAMA ymura(at)cc.tuat.ac.jp	Soft matter physics, Biophysics, and Non-equilibrium physics. Experimental studies on dynamical properties of biomolecules and living matter.
	Associate Professor Daisuke YOSHINO※1 Dyoshino(at)go.tuat.ac.jp	Research for mechanobiology of human health and disease. Development of biomedical devices and medical techniques for vascular diseases.
Superconducting Materials	Associate Professor Akiyasu YAMAMOTO akiyasu (at)cc.tuat.ac.jp	Experimental research on superconductivity, superconducting materials, and superconducting application. Especially development of novel strong magnets using new high temperature superconductors.
Organic Electronics	Associate Professor Toshihiko KAJI※1 kaji-t(at)cc.tuat.ac.jp	Organic electronics and optics. Experimental research on organic electronic devices, such as solar cells, and on nanostructure/crystallinity control of organic thin films.

Department : Electronic and Information Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Physical Information and Communication	Professor Yukiko MORI※1 argo(at)cc.tuat.ac.jp *Retires in March 2023	The study of the drama and the films from the viewpoint of visual communication. Included are the researches on the audience, the cultural backgrounds, and the development of visualizing techniques.
Electronic System Engineering	Professor Toshiyuki SAMESHIMA tsamesim(at)cc.tuat.ac.jp *Retires in March 2021	Researches on passivation of defects of crystalline semiconductors and their surfaces, and on new processing and devices of semiconductor solar cells and transistors.
	Associate Professor Ya Zhang※1 zhangya(at)go.tuat.ac.jp	Fundamental and applied research on semiconductor quantum nanostructures and nanoelectromechanical systems. Development of the next-generation electronics, such as single electron transistors, quantum information processing devices, high-sensitivity terahertz sensors, etc.
Power Electronics	Professor Mingcong DENG deng(at)cc.tuat.ac.jp	Fault detection and fault tolerant control system design of thermoelectric conversion elements, robust nonlinear compensation of smart material actuators and micro-hands.
Electronic Device Engineering	Professor Jun-ichi SHIRAKASHI shrakash(at)cc.tuat.ac.jp	Novel nanofabrication techniques, single-electron transistors (SETs), and ferromagnetic nanostructures.
	Associate Professor Wakana KUBO※1 w-kubo(at)cc.tuat.ac.jp	Development of solar cells, optical devices, and functional materials based on light management technology realized by plasmonic metamaterials.
Integrated Functional Electronics	Professor Tomo UENO tomoueno(at)cc.tuat.ac.jp	Development of Integrated Circuit based on novel device and process technology. Low temperature insulating film fabrication, OLED fabrication, electrical measurement, physical & chemical analysis.
	Associate Professor Hiromasa SHIMIZU h-shmz(at)cc.tuat.ac.jp	Research on Semiconductor / Magnetic Hybrid Materials, and Their Application to Novel Opto-Spintronics Devices.
Optoelectronics and Photonics	Professor Yasuhiro TAKAKI ytakaki(at)cc.tuat.ac.jp	Three-dimensional display, Holography, Three-dimensional camera, and Optical information processing.
	Associate Professor Yosuke TANAKA tyosuke(at)cc.tuat.ac.jp	Multi-function and high-speed optical signal processing, optical sensing system, and related devices and data processing technique.

Department : Electronic and Information Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Environmental Energy Engineering	Professor Ken NAGASAKA bahman(at)cc.tuat.ac.jp *Retires in March 2022	Power System Engineering, New Energies including Wind, Solar, Micro Hydro and Geothermal Generation, Planning and Operation of Micro Grids, Smart Grid, Load Forecasting, Power Deregulation, Energy Conservation, Application of Intelligent Engineering such as Neural Network to Power Systems, etc.
Radio Communication System Engineering	Associate Professor Kenta UMEBAYASHI ume_k(at)cc.tuat.ac.jp	Wireless communication network, Signal processing and resource control for efficient and reliable wireless communication, Advanced signal processing for multiple antennas based communications, Cognitive radio techniques, Physical layer security, Nano-devise and Terahertz wireless communications.
	Associate Professor Takehito SUZUKI takehito@go.tuat.ac.jp	Terahertz antennas, Extreme materials in the terahertz waveband, Terahertz metamaterials, Extreme-sensitivity terahertz polarization measurements, ultrahigh-speed wireless communication in the terahertz waveband, Terahertz application systems.
Intelligent Systems	Associate Professor Kunihiro FUJIYOSHI fujiyosi(at)cc.tuat.ac.jp	Computer-Aided Design and Design-Automation of VLSI layout problem, using combinatorial algorithm and graph theory.
Electromagnetic Wave Engineering	Professor Toru UNO uno(at)cc.tuat.ac.jp *Retires in March 2022	Antennas and propagation, Computational electromagnetics, Bio-electromagnetics, Geophysical sensing, Electromagnetic environment, Electromagnetic metamaterials.
	Associate Professor Takuji ARIMA t-arima(at)cc.tuat.ac.jp	Computational electromagnetics, New materials for electromagnetic waves, Bio-electromagnetics.
Medical Information System Engineering	Professor Akinobu SHIMIZU simiz(at)cc.tuat.ac.jp	Medical Imaging, Computer-aided Diagnosis, Pattern Recognition, Multidimensional Signal Processing.
	Associate Professor Ken TAKIYAMA※1 ken-taki (at)cc.tuat.ac.jp	Main themes are 1. elucidation of neural mechanisms that relate to motor control and learning and 2. proposal of efficient training to improve motor skill. Main techniques are neural network model and human behavioral experiments. We plan to utilize electroencephalograms and machine learning techniques.

Department : Electronic and Information Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
Image Processing	Associate Professor Toshihisa TANAKA tanakat(at)cc.tuat.ac.jp	Mathematical signal processing and its applications to: brain signal processing for brain-machine interfacing, image processing and pattern recognition, adaptive signal processing, and radar signal processing.
Algorithmics	Professor Keiichi KANEKO k1kaneko(at)cc.tuat.ac.jp	Algorithms for interconnection networks, parallel/distributed processing, dependable computing.
Mathematical optimization	Associate Professor Ryuhei MIYASHIRO※1 r-miya(at)cc.tuat.ac.jp	Mathematical programming, discrete optimization, algorithm, modeling.
Systems Software	Professor Mitaro NAMIKI namiki(at)cc.tuat.ac.jp	Systems software (operating systems, compiler, protocol stack, window system), embedded systems, high performance computer systems, distributed processing, network architecture, low power computer systems, information systems.
	Associate Professor Hiroshi YAMADA※1 hiroshiy(at)cc.tuat.ac.jp	Operating systems, system virtualization, parallel and distributed systems, system software for dependable computing and cloud computing.
Computer System Engineering	Associate Professor Yu NAKAYAMA※1 yu-nakayama(at)go.tuat.ac.jp	Mobile, IoT, and spatial information technologies for next generation information networks, applications, and schemes for utilizing them.
System Design	Professor Takafumi SAITO txsaito(at)cc.tuat.ac.jp	Computer graphics, visualization, image/video processing, shape processing.
	Associate Professor Katsuhide FUJITA※1 katfuji(at)cc.tuat.ac.jp	Artificial intelligence related to autonomous agents, multi-agent systems, data mining, complex networks, knowledge management.
Biologically-inspired computing	Professor Toshiyuki KONDO t_kondo(at)cc.tuat.ac.jp	Neurocomputing, evolutionary computation, cognitive robotics, cognitive interface design, brain-computer interface.
Image and vision computing	Associate Professor Ikuko SHIMIZU ikuko(at)cc.tuat.ac.jp	Computer vision, shape and appearance modeling, image recognition.
Computer networks	Professor Nariyoshi YAMAI nyamai(at)cc.tuat.ac.jp	Research for administration, deployment, management, operation, and evaluation of large-scale distributed systems including the Internet, such as Internet architecture, network security, and so on.

Department : Electronic and Information Engineering		
Speciality&Major Research Fields	Academic Advisor	Research Subject
	Associate Professor Hironori NAKAJO nakajo(at)cc.tuat.ac.jp	Processor micro-architecture, parallel processing, VLSI design, high performance computing, embedded computer.
Statistical classification and retrieval	Associate Professor Seiji HOTTA※1 s-hotta(at)cc.tuat.ac.jp	Classification and clustering, invariances in recognition, information retrieval.
Human computer interaction	Professor Kinya FUJITA kfujita(at)cc.tuat.ac.jp	Human-centered smart interface, telework, online communication, virtual reality.
Information theory	Associate Professor Shun WATANABE※1 shunwata(at)cc.tuat.ac.jp	Information theory, Communication Engineering Cryptography, Information security.
Natural Language Information Science	Professor Kazuko SHINOHARA※1 k-shino(at)cc.tuat.ac.jp	Cognitive linguistics, Conceptual Metaphor Theory, Spatial cognition and language.
	Associate Professor Ryoko UNO※1 ryokouno(at)cc.tuat.ac.jp	Grammatical analysis and constructive approach to explore the cognitive basis of grammar
Mathematical Informatics	Professor Nobuo HARA nhara(at)cc.tuat.ac.jp	Algebraic geometry and commutative algebra in positive characteristic. In particular, study of algebraic varieties and their singularities via the Frobenius morphism
	Associate Professor Mikio MURATA※1 mmurata(at)cc.tuat.ac.jp	Discretization and ultradiscretization of differential equations, Cellular automaton, Integrable systems and Painleve equations.

2020年度東京農工大学大学院工学府博士後期課程
ASEAN・日本連携エンジニアリーダー育成プログラム国際専修入試 入学申請書
(私費外国人留学生)

Tokyo University of Agriculture and Technology Graduate School of Engineering Doctor Course
—International Specialized Program for Engineer Leader Education
through ASEAN and Japan Cooperation— In 2020 Academic Year
(Privately Financed Applicants)

Instructions (記入上の注意)

1. The application should be typed if possible, or neatly handwritten in block letters. (明瞭に記入すること。)
2. Numbers should be in Arabic numerals. (数字は算用数字を用いること。)
3. Years should be written using the Anno Domini system. (年号はすべて西暦とすること。)
4. Proper nouns should be written in full and not abbreviated. (固有名詞はすべて正式な名称とし、一切省略しないこと。)

* Personal data entered in this application will only be used for admission selection purposes, and contact information such as e-mail addresses will only be used for forming related human networks after the student returns home and for sending of information by our university.)

(本申請書に記載された個人情報については、本学入学資格の選考のために使用するほかは、特に E-mail アドレス等の連絡先については、帰国後における関係者のネットワークを作ること及び必要に応じ本学より各種情報を送信する以外には使用しない。)

1. Name in full in native language _____, _____ (Sex)
(姓名 (自国語)) (Surname) (Given name) (Middle name) Male (男)
 Female (女)
- In Roman block capitals _____ (Marital Status)
(ローマ字) (Surname) (Given name) (Middle name) Single (未婚)
(Please write your name exactly as it appears in your passport.) (綴りはパスポートの表記と同一にすること) Married (既婚)

- 2-1. Nationality (国籍) _____
- 2-2. Japanese nationality (日本国籍を有する者)
 Yes, I have (はい)
 No, I don't have it. (いいえ)

3. Date of birth and age as of October 1, 2020 (生年月日及び2020年10月1日現在の年齢)

_____, _____ Age
Month (月) Day (日) Year (年) (年齢)

4. Present status with the name of the university attended or employer
(現職 (在学大学名又は勤務先名まで記入すること。))

Paste a passport sized photograph
or digital image taken within the
past 6 months. Write your name
and nationality in block letters on
the back of the photo.
(4.5cm×3.5cm photo)
(写真(4.5cm×3.5cm))

5. Present address, telephone/facsimile number, and E-mail address
(現住所及び電話番号、FAX 番号及び E-mail アドレス)

現住所(Present address) : _____

電話番号/FAX 番号(Telephone/facsimile number) : _____

E-mail address: _____

※If possible, write an email address that can be used continuously before, during and after your stay in Japan.

(可能な限り、渡日前～日本留学中～帰国後にわたり使い続けることが予想される E-mail アドレスを記入すること。)

6. Field of specialization studied in the past (Be as detailed and specific as possible.)
(過去に専攻した専門分野 (できるだけ具体的に詳細に書くこと。))

7. Academic Background: (学歴)

	Name and Address of School (学校名及び所在地)	Year and Month of Entrance and Completion (入学及び卒業年月)	Duration of Attendance (修学年数)	Diploma or Degree Awarded, Major Subject, Skipped Years/Levels (学位・資格・専攻科目・飛び級の状況、他に特記すべき事項)
Primary Education (初等教育) Elementary School (小学校)	Name (学校名) Location (所在地)	From (入学) To (卒業)	years (年) and months (月)	
Secondary Education (中等教育) Middle School (中学)	Name (学校名) Location (所在地)	From (入学) To (卒業)	years (年) and months (月)	
High School (高校)	Name (学校名) Location (所在地)	From (入学) To (卒業)	years (年) and months (月)	*-1
Tertiary Education (高等教育) Undergraduate Level (大学)	Name (学校名) Location (所在地)	From (入学) To (卒業)	years (年) and months (月)	
Graduate Level (大学院)	Name (学校名) Location (所在地)	From (入学) To (卒業)	years (年) and months (月)	
Total number of years of the aforementioned schooling (以上を通算した全学校教育修学年数) *as of October 1, 2020 (2020年10月1日現在)			years (年)	

Notes:

- Exclude kindergarten education and nursery school education. (幼稚園・保育所教育は含まれない。)
- Preparatory education for university admission is included in secondary education. (いわゆる「大学予備教育」は中等教育に含まれる。)
- If the applicant has passed the university entrance qualification examinations, indicate this in the column with “*-1.”
(「大学入学資格試験」に合格している場合には、その旨*-1欄に記入すること。)
- Any school years or levels skipped should be indicated in the fourth column (Diploma or Degree Awarded, Major Subject, Skipped Years/Levels).
(Example: Graduated high school in 2 years.) (いわゆる「飛び級」をしている場合には、その旨を該当する教育課程の「学位・資格・専攻科目・飛び級の状況」欄に記入すること。(例) 高校3年次を飛び級により短期卒業)
- If you attended multiple schools at the same level of education due to moving house or readmission to university, then write the schools in the same column and include the number of years of study and current status for each school. (住居の移転や大学の再入学等を理由に、同教育課程で複数の学校に在籍していた場合は、同じ欄に複数の学校の在籍を記載し、すべての修学状況を修学年数に含めること。)
- Calculate and write the total number of years studied based on duration as a student. (including extended leave such as summer vacation)
(修学年数合計は在籍期間を算出し、記入すること。(長期休暇も含める))

7. You may use a separate piece of paper if the above space is insufficient. In such a case, please stipulate that the information is on a separate page.
 (上記に書ききれない場合は、別紙に記入することも可能。しかしその場合は、別紙に記入する旨を上記学歴欄に明記すること。)

8. State the titles or subjects of books or papers (including graduation thesis authored by the applicant), if any, with the name and address of the publisher and the date of publication. (著書、論文(卒業論文を含む。)があればその題名、出版社名、出版年月日、出版場所を記すこと。)

9. Employment Record: Begin with the most recent employment, if applicable. (職歴)

Name and address of organization (勤務先及び所在地)	Period of employment (勤務期間)	Position (役職名)	Type of work (職務内容)
	From To		
	From To		

10. Japanese language proficiency: Evaluate your level and insert an X where appropriate in the following blank space.

(日本語能力を自己評価のうえ、該当欄に×印を記入すること。)

	Excellent (優)	Good (良)	Fair (可)	Poor (不可)
Reading (読む能力)				
Writing (書く能力)				
Speaking (話す能力)				

11. Language ability: Evaluate your level and insert an X where appropriate in the following blank space.

(語学力を自己評価のうえ、該当欄に×印を記入すること。)

	Excellent (優)	Good (良)	Fair (可)	Poor (不可)
English (英語)				
French (仏語)				
German (独語)				
Spanish (西語)				

12. Person to be notified in applicant's home country in case of emergency (緊急の際の母国の連絡先):

i) Name in full:

(氏名) _____

ii) Address with telephone/facsimile number, and email address. (住所: 電話番号, ファックス番号及びE-mail アドレスを記入のこと。)

Present Address (現住所): _____

Telephone/facsimile number (電話番号/FAX 番号): _____

E-mail address: _____

iii) Occupation:

(職業) _____

iv) Relationship to applicant:

(本人との関係) _____

13. Immigration Records to Japan (日本への渡航記録)

Date (日付)	Purpose (渡航目的)
From To	
From To	

Date of application:

(申請年月日)

Applicant's signature:

(申請者署名)

Applicant's name

(in Roman capital letters):

(申請者氏名)

(別紙)

専攻分野及び研究計画

Field of Study and Study Program

Full name in native language _____

(姓名 (自国語))

(Family name)

(First name)

(Middle name)

Nationality _____

(国 籍)

Proposed study program in Japan (State the outline of your major field of study on this side and the details of your study program on the backside of this sheet in concreteness. This section will be used as one of the most important references for selection. Statement must be typewritten or written in block letters. Additional sheets of paper may be attached if necessary.)

(日本での研究計画；この研究計画は、選考の重要な参考となるので、表面に専攻分野の概要を、裏面に研究計画の詳細を具体的に記入すること。)
記入はタイプ又は楷書によるものとし、必要な場合は別紙を追加してもよい。

If you have Japanese language ability, write in Japanese.

(相当の日本語能力を有する者は、日本語により記入すること。)

1 Field of study (専攻分野)

2 Study program in Japan in detail and concreteness (研究計画：詳細かつ具体的に記入すること。)

健康診断書

CERTIFICATE OF HEALTH (to be completed by the examining physician)

日本語又は英語により明瞭に記載すること。 Please fill out (PRINT/TYPE) in Japanese or English.

氏名 Name: _____, _____, _____
Family name, First name Middle name
□男 Male 生年月日 Date of Birth: _____
□女 Female

1. 身体検査 Physical Examination

- (1) 身長 Height: _____ cm 体重 Weight: _____ kg
(2) 血圧 Blood pressure: _____ ~ _____ mm/Hg 脈拍 Pulse: □整 Regular □不整 Irregular
血液型 Blood Type: □A □B □O □AB Rh: □+ □-
(3) 視力 Eyesight: 裸眼 Without glasses (R) _____ (L) _____ 矯正 With glasses or contact lenses (R) _____ (L) _____
色覚異常の有無 Color blindness: □正常 Normal □異常 Impaired
(4) 聴力 Hearing: □正常 Normal □低下 Impaired 言語 Speech: □正常 Normal □異常 Impaired

2. 申請者の胸部について、聴診とX線検査の結果を記入してください。X線検査の日付も記入すること (6ヶ月以上前の検査は無効。)
Please describe the results of physical and X-ray examination of the applicant.
(X-rays taken more than six months prior to the certification are NOT valid.)



肺 Lungs: □正常 Normal □異常 Impaired

心臓肥大 Cardiomegaly: □正常 Normal □異常 Impaired

← Date: _____

異常がある場合 If impaired

Film No. _____

心電図 Electrocardiograph: □正常 Normal □異常 Impaired

Describe the condition of applicant's lungs: _____

3. 現在治療中の病気 Disease currently being treated: □No □Yes (Disease _____)

4. 既往症 Past history (いずれも該当しない場合は、"なし"にチェックすること。)
Please indicate applicant's past history with No or Yes and fill in the date of recovery.
(If the applicant has not contracted any of the disease, please check "None".)

- Tuberculosis □No □Yes(. .), Malaria □No □Yes(. .), Other communicable disease □No □Yes(. .)
Epilepsy □No □Yes(. .), Kidney disease □No □Yes(. .), Heart disease □No □Yes(. .)
Diabetes □No □Yes(. .), Drug allergy □No □Yes(. .), Psychosis □No □Yes(. .)
Functional disorder in extremities □No □Yes (. .) □なしNone

5. 検査 Laboratory tests

検尿 Urinalysis: 尿糖 glucose (), 尿蛋白 protein (), 尿潜血 occult blood ()
赤沈 ESR: _____ mm/hr, 白血球数 WBC count: _____ / μL, Hemoglobin: _____ g/dL, 貧血 Anemia: □No □Yes
GPT (ALT): _____ IU/L

6. 診断医の印象を述べて下さい。(問題がない場合も、その旨ご記入ください。)
Please give your impression of the applicant's health.
(If you do not have a particular opinion, please write as such.)

7. 志願者の既往歴、診察・検査の結果から判断して、現在の健康の状況は十分に留学に耐えうるものと思われますか?
In view of the applicant's history and the above findings, is it your observation that his/her health status is adequate to pursue studies in Japan?

□ Yes □ No

日付 Date: _____ 署名 Signature: _____

医師氏名 Physician's Name in Print: _____

検査施設名 Office/Institution: _____

所在地 Address: _____

【工学府国際専修入学検定料払込用紙の請求方法について】

【Graduate School of Engineering International Specialized course】

How to request the prescribed payment form for Entrance examination fee

- ※ 検定料の払込みは、出願期間内に行ってください。
The payment must be finished before deadline of application
- ※ 海外の応募者は指導教員予定者の指示に従ってください。
The applicants who live abroad should follow advice of their supervisor.

○配付時期 Distribution period

窓口：2020年2月3日（月）～ 2020年2月28日（金）

（土日、祝日を除く9：00～17：00まで）

郵送：2020年2月3日（月）～ 2020年2月26日（水）迄の請求に限る

Reception desk Thursday, February 3, 2020 ~ Friday, February 28, 2020

（9:00～17:00 Saturday and Sunday, holiday excluded）

Mail: Monday, February 3, 2020 ~ Wednesday, February 26, 2020

○配付・請求場所 Address (distribution, request)

〒184-8588

東京都小金井市中町2-24-16

東京農工大学 小金井地区事務部 学生支援室入学試験係

TEL：042-388-7014（土日、祝日を除く9：00～17：00まで）

Entrance Examination Section of Koganei Student Support Office

Graduate School of Engineering

Tokyo University of Agriculture and Technology

2-24-16 naka-machi, Koganei City, Tokyo 184-8588, Japan

TEL：042-388-7014(9:00～17:00 Saturday and Sunday, holiday excluded)

○配付方法 How to distribute

●窓口による場合 Reception desk

小金井地区事務部 学生支援室入学試験係に直接お越しください。

窓口で「工学府国際専修入学検定料払込用紙請求」と伝えてください。

Please come to Entrance Examination Section of Koganei Student Support Office directly and request a prescribed payment form for Entrance examination fee of International specialized course.

●郵送による場合（日本国内からの請求に限る）Mail (only request from Japan)

362円分の切手をはった定型封筒（長形3号：12cm×23.5cm）に貴方の住所・氏名を記入した返信用封筒を【配付・請求場所】に送ってください。請求用の封筒表面には、必ず「工学府国際専修入学検定料払込用紙請求」と請求先住所の横に朱書きで明記してください。裏面には、貴方の氏名・電話番号を記入してください。

Please send the self-addressed envelope (12cm×23.5cm)(with a stamp for 362yen, your address and your full name) to the address mentioned above .

On the surface of envelope, please write “Request of prescribed payment form for Entrance examination fee of International specialized course” with red ink beside the address above. On the back side, please fill in your full name and your phone number.