

Cooperation of Three National Universities in Western Tokyo

Global Human Resource Development Education

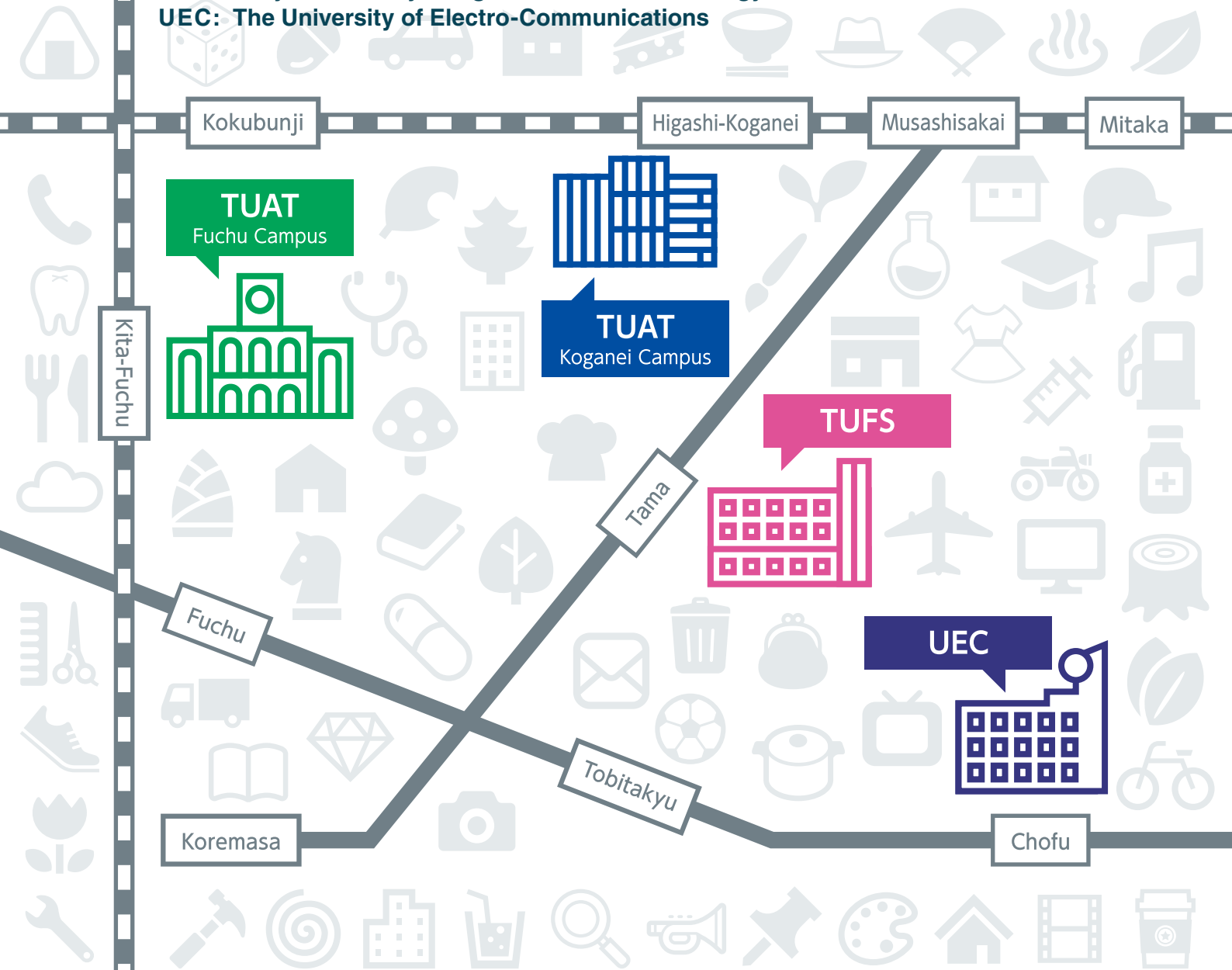
Joint Doctoral Program for Sustainability Research



TUFS: Tokyo University of Foreign Studies

TUAT: Tokyo University of Agriculture and Technology

UEC: The University of Electro-Communications



We offer the specializations of TUFs-TUAT-UEC to Ph.D. students, who contribute to the resolution of global issues

Joint Doctoral Program for Sustainability Research

Expectations from the establishment

- Making substantial contributions to international peace and development, including the Sustainable Development Goals (SDGs)
- Addressing diversified global issues such as environmental degradation, energy conservation, poverty alleviation, and international conflicts
- Addressing the urgent demand for human resources with in-depth and broad knowledge from humanities to natural sciences

Key features

- Training Ph.D. students through the cooperation of three universities: TUFs-TUAT-UEC
- long-term inter-university partnership
- multidisciplinary, facilitating effective interdisciplinary education
- locating in vicinity, facilitating efficient inter-university education

Human resources

Training students to become inter- / transdisciplinary practical professionals who can tackle global issues in their field for a sustainable development, at the same time, can contribute to innovations by placing their knowledge in a wider context with other research areas

Academic degree

Doctor of Philosophy

Development of cooperative training of three universities, TUFs-TUAT-UEC, for human resources

Strength of TUFs

Language, Liberal Arts and Regional Studies with a Global Perspective

TUFs: Graduate School of Global Studies
Intake: 3

Strength of TUAT

Food, Energy, and Life Science

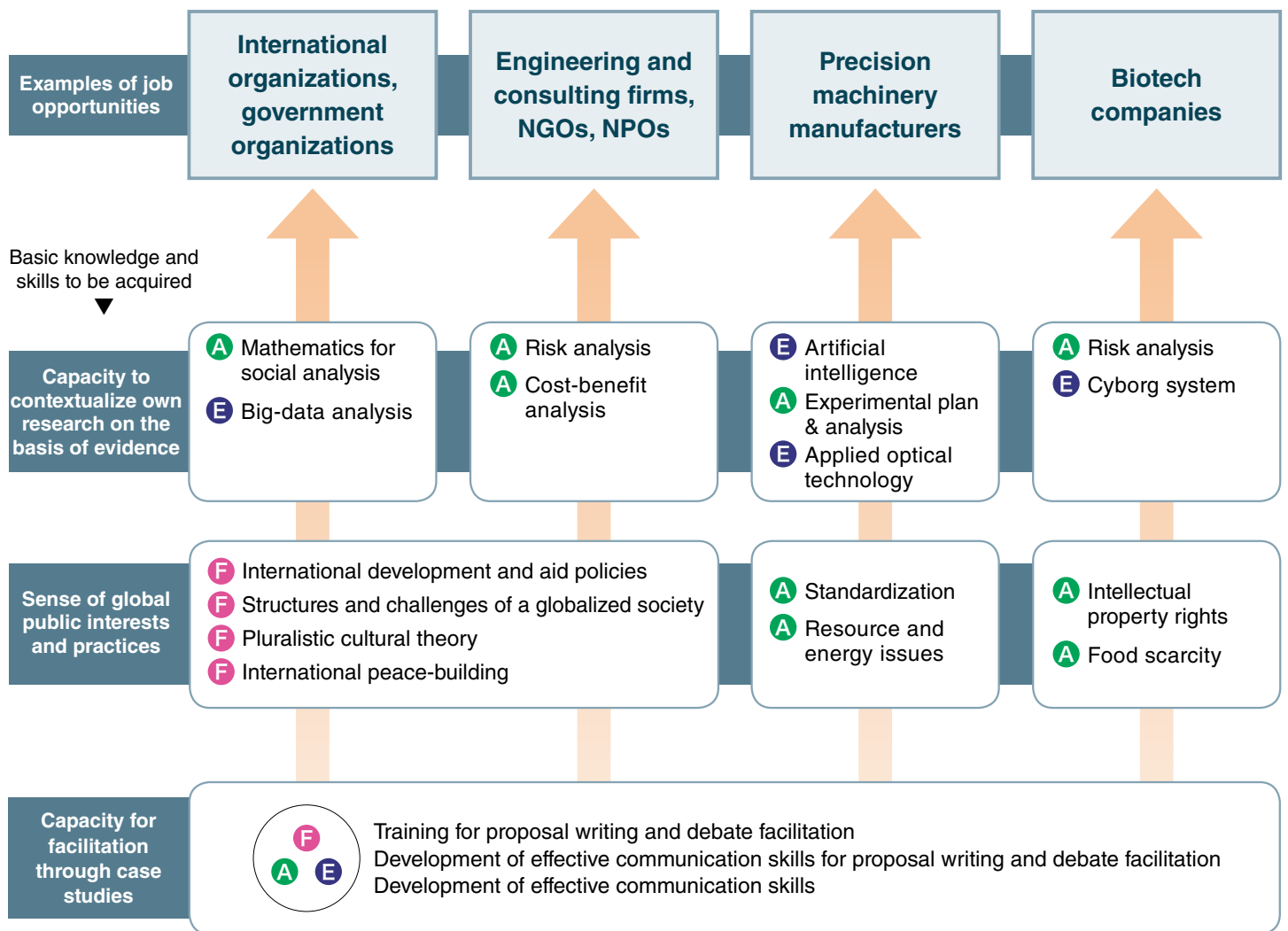
TUAT: Graduate School of Engineering
Intake: 4

Strength of UEC

Big Data, ICT, Artificial Intelligence, and Optoelectronics

UEC: Graduate School of Informatics and Engineering
Intake: 4

Knowledge and skill acquisition and career prospects



- F** Tokyo University of Foreign Studies
- A** Tokyo University of Agriculture and Technology
- E** The University of Electro-Communications



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Tokyo University of Foreign Studies
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Joint Doctoral Program for Sustainability Research

For more information see <http://www.tufs-tuat-uec.jp/page/coproduction.html>



教員一覧

Faculty Members

本専攻で指導を担当する教員は次のとおりです。主任指導を希望する教員が所属する大学に申し込んで下さい。

三大学の教員が協働して指導に当たります。

Below are research advisors for this Program. Applicants must apply to the university to which their preferred research advisor belongs. The faculty members of the three universities collectively advise the students.

中山 智香子 Chikako NAKAYAMA

グローバルスタディーズ Global Studies

担当教員自身は経済・社会思想、特に20世紀以降のドイツ語圏のそれを専門とする。本専攻の講義や演習ではグローバルスタディーズにおいて、社会科学や人文知を柔軟に援用して科学の基盤を問い、人間とグローバル世界の経済を、国家と国際関係、国を超えた地域 (EU, AU 等) やコミュニティ、NGO など多様なアクターと構造から考察する。

Chikako Nakayama specializes in economic and social thought, focusing mainly on those of German-speaking countries since the 20th century. She will provide lectures and seminars on global studies, analyzing the foundation of sciences with perspectives of social science and humanities, and dealing with global and human economy through the analysis of structures and actors of our contemporary world, such as nation-states, international relations, regions and communities, and NGOs. Sustainable development is an important purpose of education and research.



東京外国語大学

Tokyo University of Foreign Studies

武内 進一 Shinichi TAKEUCHI

地域動態論 Area Studies

担当教員自身はアフリカ研究、特に政治、開発、紛争と平和構築といったテーマを専門とするが、本専攻の講義や演習では、世界各地で生起する諸問題を体系的な手法に沿って考察するために、国際政治学、比較政治学、社会人類学などの方法論や、個別具体的な場所の特質を数量的データから理解する方法などを学ぶ。

Shinichi Takeuchi specializes in African studies, particularly in themes such as politics, development, peacebuilding, and international conflict. In this course, he will provide lectures and seminars aiming at building a capacity to analyze contemporary issues using systematic methods. For this purpose, students are required to conduct critical analyses of methodologies including international politics, comparative politics, and social anthropology.



李 孝徳 Hyoduk LEE

カルチュラル・スタディーズ Cultural Studies

担当教員自身は文化研究、特にレイシズム、ポストコロニアリズム、表象文化を専門とする。本専攻の講義や演習では、世界各地で生起する諸問題を体系的な手法に沿って考察するために、文化やメディアの政治学、ジェンダー・人種・階級についての関係論などの方法論を学ぶ。

Hyoduk Lee specializes in Cultural Studies, particularly in themes such as racism, nationalism, post-colonialism, and cultural representation. In this course, he will provide lectures and seminars aiming at building a capacity to analyze contemporary issues using systematic methods. For this purpose, students are required to conduct critical analyses of methodologies including gender, class, and racial-ethnic relations.



電気通信大学

The University of Electro-Communications

山本 佳世子 Kayoko YAMAMOTO

社会システム工学 Social Systems Engineering

自然環境問題の解決などの現代社会のニーズに応えるため、多様な情報の利活用方法を習得し、上記の課題を解決するための社会システムの設計に関する研究に取り組む。そのためには、G空間情報などの多様なビッグデータの解析、数理モデル、アルゴリズム、コンピュータ技術、調査結果を分析するために必要不可欠な統計的手法を学修する。

In order to tackle the issues facing modern society, such as environmental problems, it is necessary to develop the methods that can utilize a wide variety of information and design a new social system to achieve global goals. To that end, it is essential to learn various kinds of analytical methods that are capable of processing big data for the analysis of survey results, including geospatial information, mathematical models, algorithms and computer technology, and statistical techniques.



橋山 智訓 Tomonori HASHIYAMA

情報・通信工学 Computer Science, Informatics/ Telecommunications Engineering

グローバル社会課題を解決し、現代社会のニーズに応えるため、情報・通信・ネットワーク・メディア処理・ヒューマンマシンインタラクションや、これらを支える数理情報解析技術・機械学習・人工知能技術・コンピュータ・電気電子システム技術など、高度コミュニケーション社会の基盤となる情報・通信・ネットワーク技術に関する研究に取り組む。

The development of computer and network technologies has enhanced the quality of our daily life. Various kinds of interconnected electronic devices will be an important part of the prospective society called "society 5.0." The aim of our research projects includes further development of Artificial Intelligence to enable human intelligence to acquire a better understanding of the connected world.



三沢 和彦 Kazuhiko MISAWA



生体医用システム Biomedical Engineering

最新の先端的な診断と医療は、エレクトロニクスや情報などの工学技術と、生物学や医学とが緊密に協働すること無くしては語ることができない。本研究室では、生体医用システムを対象に、「超高速光学」に基づく基礎研究から実用化研究、実用化へと至るシームレスな研究開発を行なっている。

To realize qualitative improvement of life, home medical care, and patient welfare, the demand for progress and innovation in medical diagnosis and treatment is increasing every year. Engineering technology (e.g., electronics), in close collaboration with biology and medicine, plays a key role in the latest advances in diagnosis/treatment. Based on "ultrafast optical science," my group conducts comprehensive research and development, ranging from basic to applied research in biomedical engineering systems.

香取 浩子 Hiroko KATORI



エネルギー科学 Energy Science

担当教員自身は様々な磁気相転移に焦点を当てた物理学を専門とする。持続発展可能な社会を実現するために、磁気相転移の研究から学んだ磁性体に関する知識や研究手法をエネルギー問題に適用し、「新しい原理によるエネルギー問題解決手法の提案」「新たな手法によるエネルギー変換技術の実現」「エネルギーや環境に配慮した新しい生産プロセスの開発」などの課題に取り組む。

Hiroko Katori specializes in physical sciences focusing mainly on variety of magnetic phase transitions. Using the knowledge of magnetic materials and the research methods acquired from the magnetic phase transition study, we will work on energy-related issues: for example, "Proposal of energy problem solving methods using new principles," "Realization of energy conversion technology using new methods," and "Development of energy-efficient and environment-friendly production process." biological functionality of agricultural and fishery resources.

千年 篤 Atsushi CHITOSE



国際農業開発 International Agricultural Development

発展途上国の経済発展、食料安全保障の強化、さらに貧困問題の解決などの現代社会のニーズに応えるため、食料問題、貧困問題、経済問題、環境問題、資源・エネルギー問題が互いに密接に係り合っている点に念頭に置き、経済学的アプローチから、発展途上国農業・農村の現状と課題及びその背景にある関連主体の経済的・社会的行動を探求する。

Provided with an overview of developing countries, we explore the current situations and challenges in agriculture and rural livelihoods as well as the behavior of relevant stakeholders in developing countries. Students are required to proceed with their research from an economic perspective, paying due attention to the fact that poverty, food insecurity, economic performance, resource and energy issues, and environmental problems are all interrelated in a society.

野村 義宏 Yoshihiro NOMURA



生物資源機能化学 Biological Resources Functional Chemistry

途上国の開発戦略に関する現代社会のニーズに応えるため、化学的又は生物学的アプローチにより、未利用生物資源の新規用途開発及び生物資源の再生利用に関する先端的かつ実践的な研究を行う。未利用生物資源の有効な利活用を目指し、国内外の様々な農林水産資源の機能成分の分析及び社会実装化のための課題の抽出と解決に取り組む。

Given the needs of developing countries in modern society, we conduct advanced research for the development of new applications through utilizing the unused biological resources and reusing the used biological resources. Students are required to conduct their research relying on the chemical analysis of functional elements in agricultural and fishery resources, and further identifying challenges and finding solutions for new product innovation by capitalizing on specific biological functionality of agricultural and fishery resources.

横井 浩史 Hiroshi YOKOI



計測・制御 Measurement/Control Engineering

多様な分野で機器の自動化・高機能化が進行し、特に計測・制御技術に基づくメカトロニクス、生体及び医用工学は急速に発展している。以上の現代社会のニーズに応えるため、計測・制御を基盤に、感覚・知覚や運動などの人間の特性や機能を体系的に理解したうえで、メカトロニクス、生体及び医用工学に関する研究に取り組む。

High-performance intelligent functions and automation are developed and further enhanced for various fields. In order to respond to the needs of modern society, we establish the research and education of mechatronics and medical engineering for supporting life and for recognizing living body function based on the measurement and control technology. The educational course is designed to enable the students to systematically understand human characteristics and functions such as sensation/perception and exercise.

岡田 佳子 Yoshiko OKADA-SHUDO



光工学 Optoelectronics

持続的な発展により豊かで安心なグローバル社会の実現するため、光工学の先端技術は、高度情報化社会のニーズに応える次世代光通信、高分解能計測・制御、高感度精密光センサー、次世代高速量子コンピューティングなどの基盤技術を支え、新しい技術開発を可能にする。新しい光科学・光技術の基盤となる光機能材料、光デバイス、光通信・情報処理に関連した基礎から応用を学ぶ。

In order to achieve a prosperous and secure global society through sustainable development, advanced optical engineering will support and develop basic and novel technologies such as next-generation optical communication, high resolution measurement control systems, sensitive precision optical sensor and next-generation high-speed quantum computing. Students acquire basic knowledge and application skills related to optical functional materials, optical devices, optical communication, and information processing, which form the basis for future optical science and optical technologies.