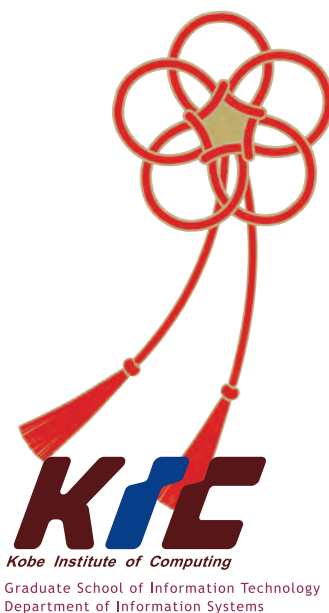




# ICT Innovator Course Master's Degree Program

Graduate School of Information Technology,  
Kobe Institute of Computing  
Department of Information Systems

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# Into the KIC Diversity

## Our Diverse Environment

where students from over 80 countries\* and territories create a collaborative learning environment.

We are living an era when not only company employees but also fresh graduates opt to enroll in professional graduates in order to sharpen and upgrade their skills to match the new business opportunities.

So far, many employees in both the private and the government sectors in various parts of the world have successfully completed the Innovator course at KIC and found valuable opportunities with their new skills.

Wouldn't you like to be like them and rapidly broaden your knowledge in the ICT sector and consequently gain higher value as a human resource? KIC diverse environment is the place where you can achieve your ambitions and reach your targets. The language of instruction and guidance of the Innovator course at KIC is English, but you will have the opportunity to use other languages while chatting with our students from 64 countries and territories.

\*as of April 1st, 2022. Including short-term training.

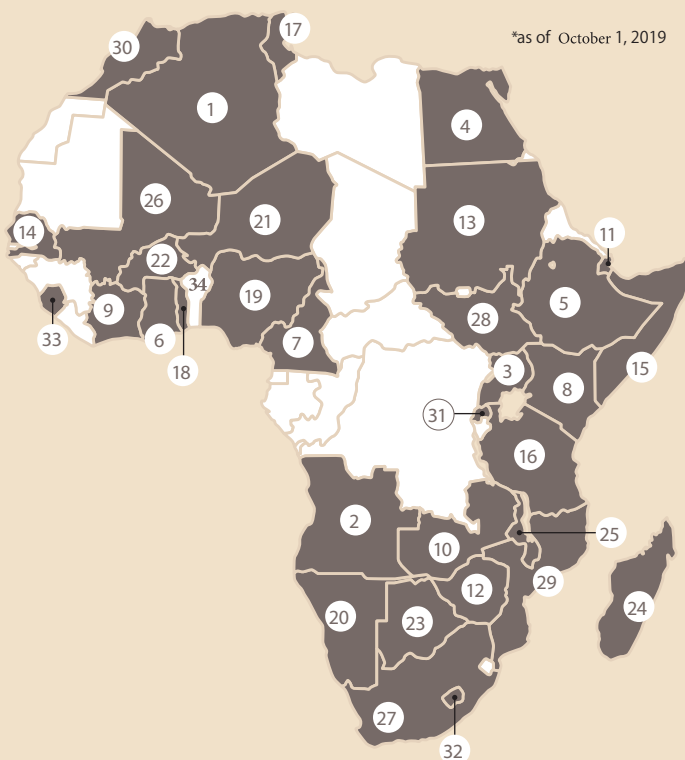


### Acceptance from African countries

1 People's Democratic Republic of Algeria	1	18 Republic of Togo	2
2 Republic of Angola	2	19 Federal Republic of Nigeria	8
3 Republic of Uganda	2	20 Republic of Namibia	1
4 Arab Republic of Egypt	1	21 Republic of Niger	1
5 Federal Democratic Republic of Ethiopia	17	22 Burkina Faso	1
6 Republic of Ghana	4	23 Republic of Botswana	9
7 Republic of Cameroon	1	24 Republic of Madagascar	2
8 Republic of Kenya	8	25 Republic of Malawi	9
9 Republic of Cote d'Ivoire	4	26 Republic of Mali	2
10 Republic of Zambia	2	27 Republic of South Africa	5
11 Republic of Djibouti	1	28 The Republic of South Sudan	2
12 Republic of Zimbabwe	2	29 Republic of Mozambique	10
13 The Republic of the Sudan	3	30 Kingdom of Morocco	5
14 Republic of Senegal	3	31 Republic of Rwanda	42
15 Federal Republic of Somalia	1	32 Kingdom of Lesotho	2
16 United Republic of Tanzania	19	33 Republic of Sierra Leone	1
17 Republic of Tunisia	1	34 Republic of Benin	1

34 countries 177 students

\*as of October 1, 2019



Acceptance of ABE initiative students : 26 countries 103 students \*as of October 1, 2019





Kobe Institute of Computing

**PRESIDENT / PROFESSOR SUMITANI, Toshiki**

**Profile**

Completed a master's degree in physics from the Graduate School of Science, University of Tokyo  
Visiting Professor at the Kenichi Ohmae Graduate School of Business (Business Management, Problem Solving)  
Managing Director of the Learnnet Global School

## Why do you learn ICT?

Is it for yourself in order to make your living? That is fine, but we believe you could achieve much more than that. KIC's motto is "Social Innovation by ICT and yourself," which means you come up with ideas for solving issues in your society utilizing ICT, and take leadership in implementing these solutions for your community, for your country for society as a whole. We believe technology should be used for social good, not for evil.

In order to achieve this, every KIC student learn "Tankyu Practice," our original method to find issues, come up with solution ideas, and improve the ideas through verification processes. Students from 64 countries have learned this method and found it very useful.

By learning Tankyu Practice, you are more likely to succeed in your projects.

KIC has more international students than local Japanese students, which is very unique as a Japanese university. Highly motivated and talented students from various countries learn from each other, as well as from our experienced faculty members.

## We provide learning opportunities to students to gain ICT skills and know-how to utilize ICT to solve social issues.

It is indeed the most sought after fundamental abilities that modern society requires. For that purpose, it crucial to carry out self-improvement with interest in the latest technology daily, and to hone the curious mind of "Why?". Above all, it is necessary to take these as "jibungoto (Your Issue)" and to take the initiative to take on the challenge of solving problems.

Let's learn together, explore (TANKYU) together, grow together, and contribute to the realization of a sustainable society.

**Profile**

Prior to assume current position, served as Senior Advisor, Director for ICT at JICA. Program Manager at the World Bank.  
A member of Internet for All, WEF.

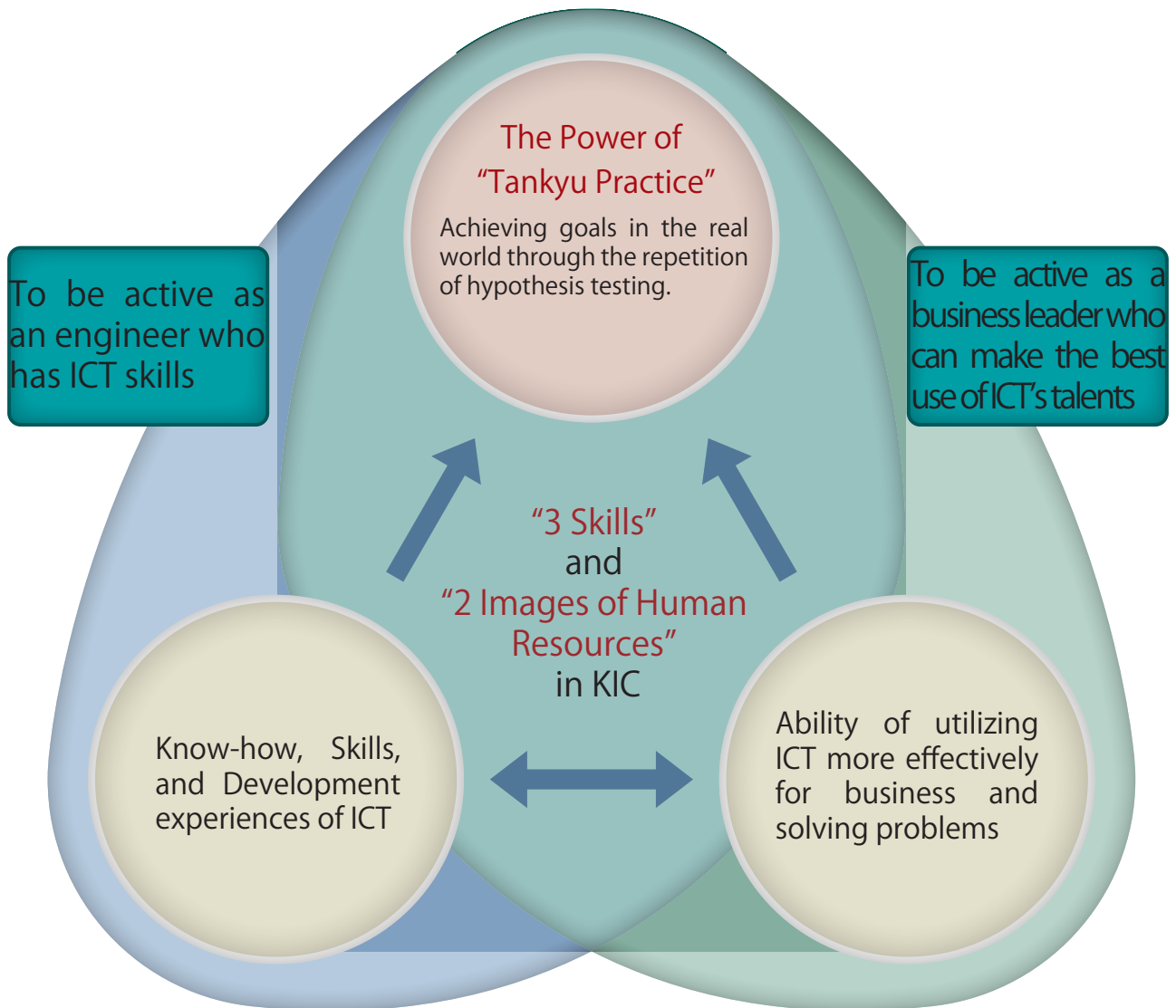


Kobe Institute of Computing

**VICE PRESIDENT / PROFESSOR**

**NAITO, Tomoyuki**

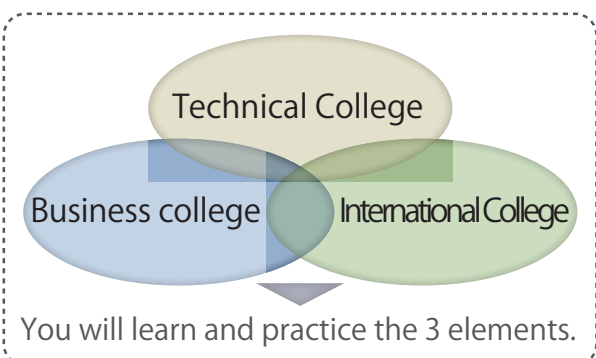
# Social innovation by ICT and Yourself



## The master's course program

which increases your value as human resources, and broadens your active field

Kobe Institute of Computing (KIC), Graduate School of Information Technology, is an educational institution aiming to produce experts who have ICT skills as well as business skills. At KIC, you will acquire expertise necessary to introduce services and solutions utilizing ICT for education, medical services, industry, agriculture, finance, and many other fields. You will be able to support governments, companies, as well as individuals. We are living an era when not only company employees but also fresh graduates opt to enroll in professional graduates in order to sharpen and upgrade their skills to match the new business opportunities. Many ambitious foreign students from different background including companies and national governments in the world have joined our program. It is advantageous environment to actively acquire business senses and communication skills required for the global market in the future.





## KIC's original "Tankyu Practice" program

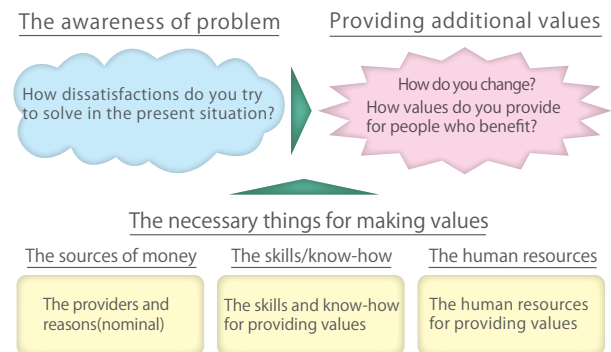
which is based on the problem solving procedures from world-famous consulting firms

Our program targets,

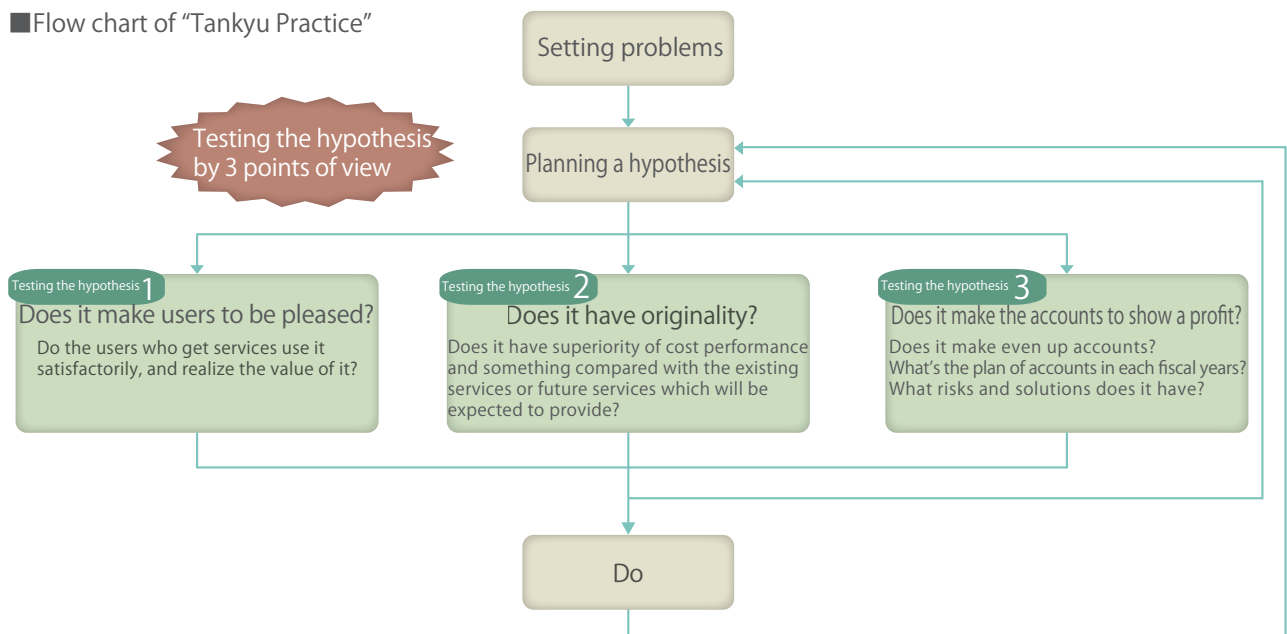
1. Find social problems by yourself,
2. Improve and utilize your strength,
3. Practice system development in real-world, try to solve problems with testing the hypothesis over and over.

You will acquire the expertise of adopting the methods and behavior patterns necessary for solving social problems through practical training. Our "Tankyu Practice" was first adopted to innovation programs at home and abroad; but in recent years, training programs at international agencies have also started utilizing it. There is an increase in its value as a method of finding a solution to a given problems.

■ "Tankyu" chart (A hypothesis of Problem solving/Value creation)



■ Flow chart of "Tankyu Practice"



### Curriculums

By teachers who have enough business experience  
**ICT field**

Teachers who have long business, development, and management experiences in ICT and Electronics field prepare and deliver lectures starting from the foundation stage.

You will learn the principle of computer and application operation through OSS innovative teaching materials, and then try to solve problems through project for study activities.



Covering from Social Development (ICT4D) to Venture Business  
**Business and Social Development field**

We train the human resources to be able to decide what things are necessary for a specific solution of a social problems and for providing new services through utilizing ICT.

Experienced teachers who are well versed in variety of problems deliver lectures that include practical activities from case studies, excises, projects, and prototype development.



### To contribute as both engineer and leader combined in one person who has high-level skills

We train human resources on a wide spectrum of skills ranging from system development to sustainable management. Regardless of your current major/study, you will obtain the know-how and experience on different subjects covering the foundations and advanced subjects in ICT and management in the 2 years you are enrolled at KIC. \*(The system allows an extension for this period up to 4 years).

KIC graduates are considered human resources with different applicable images including 'ICT Specialist', 'ICT Architect', and 'ICT Project Manager'.

#### The image of human resources High ICT technical expert

##### ICT Specialist

The human resources who can analyze the needs of users and have the skills and know-how about utilizing ICT for creating and developing Application, Software, Product, and Service.

##### ICT Architect

The human resources who can define ICT solution and System requirements based on strategy, combine the most suitable technologies to design whole architecture.

##### ICT Project Manager

The human resources who can manage projects and carry out tasks such as planning, performance analysis, and result evaluation to steer the project to success.

#### The places for employment and promise of employment in recent years

- |                             |                                |                             |                                 |
|-----------------------------|--------------------------------|-----------------------------|---------------------------------|
| ■ Nomura Research Institute | ■ The Japan Research Institute | ■ Kanden System Solutions   | ■ Japan SGI                     |
| ■ SONY                      | ■ JR WEST IT SOLUTIONS         | ■ SonyEMCS                  | ■ Nissei Information Technology |
| ■ YAHOO                     | ■ NTT Software                 | ■ NEC Personal Products     | ■ Sky                           |
| ■ NTT COMWARE               | ■ SRA                          | ■ Mainichi Communications   | ■ TRI-AD                        |
| ■ NEC System Technology     | ■ OGIS-RI                      | ■ YAMATO SYSTEM DEVELOPMENT |                                 |

etc...

### To be active as a leader of coming change and business entrepreneur

We train ICT human resources who can plan solutions to social by utilizing ICT and further implements their solutions and help in solving problems in cooperated by ICT technicians.

We welcome students from developing countries and Japan who aim to contribute to the world welfare and who have various visions to be enrolled in our programs. All courses at KIC are offered in English and this means that you can broaden your active field to become the whole world.

#### The image of human resources High ICT utilizing expert

##### Business Innovator

The human resources who can plan business strategies such as marketing and production, and create new services and business chances by utilizing ICT. And the human resources who can steer the business reform to success as a leader.

##### Process Innovator

The human resources who can analyze user requirements and business problems, and improve the business process by utilizing ICT. And the human resources who can steer the process improvement to success as a leader.

##### Social Innovator

The human resources who can research and analyze social problems, and architect a new infrastructure by utilizing ICT. And the human resources who can steer the reform of social infrastructure to success as a leader.

#### Organizations and careers of KIC students who are active in the world after completion

##### Japanese students

- Middle East Embassy: Staff in Japan
- International Organization: Staff in foreign
- Think Tank of IT field: Consultant

etc...

##### International students

- |   |   |
|---|---|
| ● Administrative organ:<br>Africa liaison officer in Japan    | ● Urban Development Corporation:<br>Urban Environmental Designer in Middle East |
| ● Ministry of ICT: Assistant Engineer in Asia                 | ● Ministry of Finance: Staff in Africa  |
| ● Ministry of Mines and Petroleum:<br>Engineer in Middle East | ● Air Company: Supervisor (Finance) in Africa                                   |
|   | ● IT Company: Software Developer in Africa                                      |

etc...



FinTech

Finance  
×  
ICT

RetailTech

Retail  
×  
ICT

AgriTech

Agriculture  
×  
ICT

Infinite chances of active involvement for persons by "X-Tech (Cross Tech)"

"X-Tech (Cross Tech)" means trying to generate new values, services, products ... by combining technologies and existing industries.

At KIC, you will acquire the skills necessary to master ICT development and utilization in all industrial fields.

EdTech

Education  
×  
ICT

TransportTech

Transport  
×  
ICT

AdTech

Advertisement  
×  
ICT

MediTech

Medical  
×  
ICT

LegalTech

Legal  
×  
ICT

GovTech

Government  
×  
ICT

## Foundation Subjects

### Foundation of Computer Systems

In a civilized society, as human intellectual activity increases, more information is generated. How to efficiently collect, organize, and use this information depends on how well the computer system is used. This lecture aims to understand the basics of the hardware elements that make up a computer system as well as the network and operating system and software to use it. At the same time, we introduce computer systems used in various situations today, and consider future usage forms and availability.

### Fundamentals of Computer Programming

Programming is the foundation of every other subject in ICT. By becoming proficient in programming, students will be able to actively participate in projects involving system creation. Programming is also necessary for testing ideas, constructing and maintaining networks and servers, and in many other areas. The course first reviews the fundamentals of procedural programming through experimental exploration, using the dynamic, interactive, object-oriented Python.

### Fundamentals of Database Systems

This course covers database design and use in applications. It does NOT cover the design of database engine design. The course begins with a description of the relational model and continues to cover SQL statements. There will be a programming project which covers database design, management, and utilizations. In this projects students show the skills they acquired in the course. SQLite (<http://sqlite.org/>) is the database engine accompanying this course. It has been selected for its ease of installation, popularity, and support for different platforms.

### Fundamentals of Software Engineering

Software is playing an increasingly important role in the evolution of ICT systems. However, developing software on time, on budget, and on target is very difficult. Many software projects fail or end with challenges. This class provides a comprehensive and interdisciplinary learning opportunity for software practitioners to solve various problems in software projects and ensure their success.

### Fundamentals of Information Networks

In this course, students learn concepts, schemes, features, structures and behaviors of computer networks. Learn the protocols from the physical layer, the network layer, the transport layer, and the application layer, and understand how the Internet and network applications are working.

### Engineering Ethics

Engineers are part of the society hence need to reflect the ethical standards of the profession itself while working with others which categorically includes resources with technical and non-technical background. This course will enlighten the students regardless of their major with the standards Engineers need to comply in a nontechnical manner hence compatible to all disciplines. The course will bring in on the ground ethical issues with an invitation to open discussion within the time frame and deliverables to accomplish.

## Core Subjects

### Linux Applications

This course is a Linux primer for beginners. Unlike Windows and Mac, Linux users can enjoy its full performance by using various commands including shell and filters. Also users should understand the model of process, memory, file system of Linux. This course will provide a knowledge and skills of using basic Linux commands and also a basic idea of the internal structure of Linux.

### Web Application Development

This course introduces the way the web operates and the design of web applications using the popular programming languages Java and JavaScript. It starts with an introduction to the HTTP (and maybe FTP) protocol and namespace of the web, and then continues to cover the design of web application for the client side (HTML, CSS, and JavaScript) and server side (Java). The course also covers the deployment of web applications in Apache Tomcat HTTP server. The course includes a project to complete by its end.

### Data Structure and Object Oriented Programing

This course introduces the students to the Object Oriented (OO) paradigm in general and to the data structures used in it. It is NOT intended as an introduction to programming. The course utilizes the popular programming language Java to introduce the concepts of programming in OO and the implementations of different data structures in it such as the arrays, lists, queues and trees. The course serves as a base for any developer who intends to use Java in developing web, mobile, and desktop applications.

### IoT Development

IoT (Internet of Things) is an important area of programming for both developed and developing countries, which belongs to the general field of embedded systems, also called dedicated computers. It can help solving a wide range of technical and social issues. Some examples include wireless sensor networks for remote data collection or disaster prevention, RFID for inventory control, human body sensors for remote medicine etc. When compared to common PCs, IoT and embedded systems use different hardware and software platforms, and to use them require understanding of special concepts like direct hardware I/O (input-output), interrupts, real-time control, cross-development environments etc. By finishing this course, the student will be able to recognize opportunities of effectively using IoT systems to solve ICT4D issues, and to propose and initiate projects, based on concrete experience with working with such systems.

### Information Security

In this course students learn basics of information security, in both management aspects and technical aspects. Students will understand of various types of security incidents and attacks, and learn methods to prevent, detect and react incidents and attacks. Students will also learn basics of application of cryptography which are one of the key technologies to implement security functions.



## Project Management

Today, various projects are undertaken from software development to providing social services. In this class, the students will learn the fundamental concepts of project management from both managerial and technical aspects through lectures. They will also learn how to apply the skills required for project managers through group discussions and exercises.

## Advanced Software Development

This course serves as an introduction to Cloud Computing environment. It is designed to show how different technologies are used in to realize Cloud Computing and how to use this environment for hosting web applications. This course implements PBL as an instructional approach. It includes several practical activities on building a Cloud and on utilizing Cloud services provided in the public domain. The course also introduces a project on designing and deploying an application in the Cloud.

## Advanced Information Network

In this course the students study the advanced technologies for constructing and operating computer network on the Internet infrastructure. The aim is to gain an understanding and knowledge of the Internet technologies. The course consists of lectures along with the layered network technologies that are the essential structure of the Internet technologies and changing of them in future. The lectures contain the content about the link technology, IP/TCP/UDP technologies, some network applications and investigation how they are changed in future.

## Software Development Experiments

This course includes a number of exercises that require the students to use the skills and knowledge they acquired to complete. For each exercise, a problem description is provided and every student is required to design, prototype, and test a solution. At the end, the students, in groups or individually, will have to work on a system that involves all the prototypes developed in the earlier exercises. This course DOES NOT include lecture slides, the lecture time will be spent on developing the requirements and writing code. Each student is required to complete both desktop and web applications in the programming language he/she is comfortable with.

## Requirement Analysis and Design

This course intends the students to comprehend all processes of information systems, and to understand the upstream processes, requirements definition, and systems architecture design, using case study. According to a case study, class begins from receiving the RFP(Request for Proposal).

## Information Network Exercises

The students experience the technologies for constructing and operating computer network and communication functionalities in programming. The aim is to gain an understanding and knowledge of the Internet technologies. The course consists of workshops along with the IP technologies on routers that are the essential technology of the Internet. Moreover, students will experience how to employ communication function on the Internet in their programming, such as Socket and HTTP.

## Requirement Analysis and Design Experiments

This course intends students to acquire the practical ability of knowledge and technique on "Requirement Analysis" and "Architectures Design" by practicing through playing rolls of acquirer and supplier. Each member belongs to a team, and the team will play the rolls either acquirer and supplier in the class.

## Core Subjects (Tankyu)

### Tankyu Practice

This course will cover the concept and process of "Tankyu Practice", which is the basis of the whole ICT innovator program. Students will identify social issues in developing countries, build possible solutions, verify them from three perspectives, and make presentations on the solution ideas in group work settings.

### Specific Theme Study A

This subject is taught in research activities. Students will have the opportunity of finding a research subject to pursue. The topic selected during this course will be continued in the 2nd year in "Specific Theme Study B".

### Specific Theme Study B

Using the Tankyu practice framework and based on the knowledge & skills learned in Specific Theme Study A, students work on their research project to design and implement the proposed system. Finally, the result is summarized as master's thesis and is presented in the final presentation.

## We offer other various courses

Practice of Creativity Development

International Development Cooperation

ICT for Developments

Urban Planning

ICT Business Development

ICT Business Exercises

ICT4D Project Exercises

ICT4D Special Experiment

Social Development

Leadership Development Exercises

International Development Cooperation

Public Relations etc..

\*Course offerings are subject to change in consideration of educational effectiveness.

## Main Faculty Members



**MARKON, Sandor**  
PROFESSOR

### Profile

Budapest Technical University, Department of Electrical Engineering,  
Doctor of Engineering (Kyoto University).  
ICME Society councilor, IEEE full member.

### Message

I can say with confidence from my experience at companies, research institutes, and at the university, that the shortest way to enter the IT world is by “making things” with our own hands.

Here the “things” are not limited to physical devices, but also include software systems and services; the important thing is, to make something that actually works and is useful to people.

It will, of course, require a variety of knowledge and skills to make things, but people who have the drive to specific goals, rather than vague study, will make fast progress. It is always more effective to search for knowledge that will be used to solve the issues needed to create something.

Another important point is that you'll need to love these techniques. For example, my area of teaching responsibility is programming, and if I were not liking it, I'm sure I would feel it a very boring work. Having to remember countless conventions and rules, exposed to a severe world that do not allow even one letter of mistakes, it would be nothing more than pain.

But for me, programming is also a hobby, and it is also a way to reach a power surpassing the “flesh and blood” thinking ability of the human mind. For that reason, it becomes fun to learn a new programming language, and fighting mistakes in a program (“bugs”) becomes a challenge like solving a puzzle.

The educational system at our graduate school is designed to support such learning. Students learn a systematic knowledge in lectures and exercise courses, but they get the chance of such “making things” in the “Special Theme Research” that leads to the master's thesis. This is a too important opportunity to be passed over, I sincerely recommended that you leverage it fully. Both the outcome that you reach, and the road how you reached it, will become the treasure of a lifetime.



**SHIMA, Hisato**  
PROFESSOR

### Profile

Master of Engineering in Mechanical Engineering, Osaka University, Japan.  
Master of Science in Computer Science at Stanford University, USA.  
Engaged in the development of home network products  
and related industry standards at Sony Corporation.  
Member of IEICE, IPSJ, IEEE.

### Message

#### Understand the background of technology

If you just learn a new technology as knowledge, you can only use it as it is. Since the progress of technologies are very rapid, the latest technology learned in the graduate school also will eventually become obsolete.

It is important to understand the background of the technology, and how various challenges been resolved. By doing so, when you face a new challenges, you will be able to design a new solution by applying the knowledge you have learned.

#### Prosperous world using the network technology

In recent years, equipment and devices work together and people communicate with each other by using network technologies.

Network applications, such as Web Services and SNS, etc. has become commonplace. The combination of smartphone and services on cloud enables us to develop a new innovative service easily.

On the other hand, security and privacy of the computer networks have become an issue. These negative impact should be minimized using the appropriate technology.

IT technology has been developed to enrich the lives of people. By providing new functionalities and convenience, a new business can be created.

I expect students to challenge the new possibilities by studying in our graduate school.



**ITO, Mamoru**  
PROFESSOR

### Profile

M.S. in Instrumentation Engineering, Kobe University, Japan.  
Engaged in the development of information and communications devices,  
automotive software, CAD/CAE systems and so on at Panasonic Corporation.  
Member of IEEE, PMI®, PMAJ, and the Society of Project Management.  
Certified as PMS (PMAJ) and PMP® (PMI®).

### Message

#### Be a professional engineer

We can say that professional engineers are those who will grasp market demands properly and be able to realize the demands in a realistic manner. However, the engineers cannot meet various market demands only by use of their own technical knowledge and skills. It is important for us to share our wisdom and experience with the people of the world and think logically and with flexibility in order to achieve customer satisfaction. Let's work together to aim to be a true professional engineer.

#### Create Innovations

If market demands are clear, we can obtain customer satisfaction by developing products according to the demands. But the market demands are actually becoming vague and ambiguous more and more. It is required by society not to wait for requirements of customers but to create new values by innovations that move the customers. ICT is a powerful tool to create innovations. Please join us to create innovations with courage.



**OKUDA, Ryosuke**  
PROFESSOR

### Profile

Bachelor's degree and Ph.D. degree in electronics engineering, Kyoto University.  
Joined Mitsubishi Electric Corporation in 1990.  
Involved in R&D of semiconductor products, including design automation,  
SoC for mobile phone and digital TV, and embedded software for MCU and DSP.  
Joined the Graduate School of Information Technology, Kobe Institute of Computing in 2015.

### Message

I have found engineering to be difficult through my experience of working in the industry for 25 years. New technology may become more conventional according to a change in social and industrial needs. Therefore an engineer should be ready to change his or herself according to the change in society and markets. In order to do so, I think it would be very important to have a general technological knowledge as well as knowledge in a specialized field.

Have an interest in all matters, please spend your student days meaningfully.





**YAMANAKA, Toshiyuki**  
PROFESSOR

#### Profile

PhD, International Public Policy, Osaka University, Japan.  
Master of Esoteric Buddhism, Koyasan University.  
Master of Business Administration, Business Breakthrough University, Japan.  
Master of Philosophy, University of Cambridge, UK.  
Bachelor of Law, University of Tokyo, Japan.

#### Message

Let's gather to innovate the societies through ICT  
I believe that KIC Innovator course is a wonderful place where many leaders gather to innovate the societies through ICT. I am going to deal with not only with practical skills but also ethics in my lecture. I experienced a very different culture in Egypt at the age of 23, as a diplomatic trainee, when I lived with an Egyptian family. There was a huge gap between the rich and the poor, about Islamic culture, and the way of thinking of Arab people. Even though I had already lived with an American host family for a short time, the experience in Egypt affected me to a great deal. After the career at Ministry of Foreign Affairs and a consultancy. I started my own business. I have visited more than 90 countries and discussed various issues such as innovation, leadership and global issues with global leaders. I look forward to meeting you.



**TSUCHIDA, Masayuki**  
PROFESSOR

#### Profile

Ph.D. in knowledge science  
Japan's national certification: Professional Engineer (IT),  
Small and Medium Enterprise Management Consultant, Career Consultant  
Bachelor and Master degrees in Applied mathematics and physics,  
Faculty of engineering, Kyoto university.  
Joined Panasonic Corporation, and researched design automation CAD systems at R&D section.  
Moved to Human resources development section,  
and in charge of MOT (Management of Technology) and engineers training in Panasonic Group.  
While working for Panasonic,  
got a doctoral degree from JAIST (Japan Advanced Institute of Science and Technology).

#### Message

In the rapid evolution of ICT, Developing or mastering new ICT is important, and making use of it effectively to help society is also important. It is required to create customer values or social values through developing business or solving social problems using technologies effectively.  
It becomes more and more important to understand both "ICT" and "value creation", and to move action of (1) value creation using existing ICT, or (2) new ICT development for customers or social value creation. I expect you to think deeply about them and get the skill and knowledge of developing new business or new technologies.  
I would like to try to research about "value creation using ICT" with lab members, through learning the way of thinking about value creation as well as mastering ICT.



**LUKUMWENA, Nsenda**  
PROFESSOR

#### Profile

-Born in the D R Congo. Received the degree of architect and Master in Architecture, Institut du Bâtiment et Travaux Publics, DR Congo.  
-Master and Ph.D. degrees in urban planning and design, city planning and regional development from Osaka University, Graduate School of Environmental Engineering.  
-After working with a few architectural firms, in Japan and abroad, established own architectural, design, planning and consulting firm-designatelier-da in 2010 in Ashiya.  
-Taught architecture design at Kwansei Gakuin University for 15 years before joining KIC.

#### Message

KIC is multicultural environment and a place of passive encounters that are likely to bear transformative effects on each and everyone, and more importantly on students whose two years may feel long at start and short as we approach to end of the cycle.  
Whether you are familiar or not with urban planning and smart cities you all will be able to gain and to further extend your knowledge into how transformative technologies such as ICTS will help shape efficiently cities of tomorrow—SMART CITIES. My familiarity with experiential cultural diversity will surely be a two-way avenue between you and me during your two-year journey through the wonders of KIC and KOBE. WELCOME TO KIC WELCOME TO KOBE, a UNESCO DESIGN CITY.



**HIRAISHI, Teruhiko**  
PROFESSOR

#### Profile

Osaka Prefecture University Graduate School of Engineering(Master of Engineering).  
In Panasonic Corporation, Research and development of information systems,  
Development of image processing algorithm, Development of embedded systems  
Responsible for software-related training.  
Member of Japan Information Technology Service Industry Association,  
Requirement Engineering Promotion Working group.  
Member of Software Engineers Association  
Evangelist of practical management philosophy

#### Message

##### Challenge

Always challenge yourself. Don't be afraid to fail. You may find it is more important to fail through challenging yourself than to do nothing at all.

##### Act

If you don't act, you can't discover many new things. However, if you act spontaneously, you may find that your ability to solve issues is limited.

##### Don't Struggle Alone

If you are in trouble, don't struggle alone. If you have a strong desire to solve a problem, someone can always help you out.

## Main Faculty Members



**KOYABU, Yasushi**  
ASSOCIATE PROFESSOR

### Profile

Graduated from the Department of Commerce, Kansai University  
Engaged in the development of social infrastructure and so on at Panasonic Corporation (PC)  
After this, taught about project management in human development section of PC  
At the same time, build an e-learning platform system and launch a scheme for operation and management of this.  
Project Management Professional, certificated by PMI  
Application Systems Engineer, certificated by IPA

### Message

To be top-notch in the field of business, it is important to keep learning.  
I hope that you will become aware of the interest in learning at our school and the importance of continuing to learn, then you will continue to maintain your intellectual curiosity and become a person who will continue to be at the forefront as a business person.



**TAKAHARA, Toshiro**  
SPECIALLY APPOINTED PROFESSOR

### Profile

Master of Science in Information System, Graduate School of Information Technology, Kobe Institute of Computing, (First badge of Innovator Course)  
After obtained Bachelor of Visual Arts at Osaka University of Arts, I went to Senegal as JICA volunteer and worked in National Park Service. Since then, I worked with JICA in various African countries such as Niger, Benin and Djibouti. I obtained Master of KIC in 2015, and started working as Special Appointed Professor from December 2018.

### Message

The principal nature of this world is diversity: many different cultures and various way of thinking. ICT can connect all these people and it enables us to live together. But the principal actor is always human, as well as the subject to learn. Let's make a breakthrough to the status quo of common sense by questioning why and search a better way to make a good change. Only human interaction and dialog make this possible. It is an intellectual adventure.



**SUN, Yi**  
ASSISTANT PROFESSOR

### Profile

Graduated from Kobe University Graduate School of Intercultural Studies, Ph.D.  
Member of Japan Society for Educational Technology,  
Information Processing Society of Japan and China Computer Federation.

### Message

ICT technology is a knowledge developed in order to solve practical problems. If you want to learn ICT technology, not only to learn the theory of knowledge but more importantly, learn how to use this knowledge to solve practical problems. But, if you just have the desire and the idea of how to solve the problem, but you don't have the skills to implement it, then everything you say is nothing more than an empty talk. At KIC, under the coaching of experienced professors, you can learn the effective ICT techniques in a combination of theory and practice.



**YAMANAKA, Atsushi**  
SPECIALLY APPOINTED PROFESSOR

### Profile

MA, International Political Economy, The American University (Washington DC).  
BS, Physics, Rensselaer Polytechnic Institute (Troy).  
ICT for Development professional experiences include UNDP, WHO, CSO, Private Sector, and ICT.  
Advisor at Government Institution of Rwanda - supported by JICA.  
Currently holding position as Senior ICT Advisor at Ministry of Youth and ICT (MYICT) of Republic of Rwanda and Executive Advisor of Rwanda Private Sector Federation ICT Chamber (PSF ICT Chamber).

### Message

We expand the boundary of ICT for Development from Japan  
I am extremely honored to be able to join the KIC's dedicated professionals who would expand the boundary of ICT for Development from Japan.  
I have chosen my professional career as an ICT for Development practitioner and have devoted more than 15 years of services with various International Organizations, Private Sector, and Civil Society Organizations. My interest in this field started during my graduate study, when I learned the power of ICT in a very personal manner during the calamity of Kobe earthquake in Japan in January 1995. During the disaster, different ICT tools helped coordinate, mitigate, and provided critical support information to the affected people, including my family. This personal experience led me to realize the power of ICT and gave me conviction to concentrate my study, and eventually led to my professional career. Since that time, I have been supporting, both directly and indirectly, over 100 countries' clients. The experience of witnessing ICT's tangible impacts in the client countries provided me with substantive understanding of challenges and emerging opportunities of using ICTs in the developing countries which I would like to share with the prospective ICTD practitioners. I am confident that the professional guidance and first-hand knowledge that you will receive at the KIC from the professional team will be instrumental for your professional growth and career prospective as an ICTD practitioner.





**TAKADA, Hiroyuki**  
VISITING PROFESSOR

### Profile

After graduating university, worked as a sociologist for a rural development project in Zambia as JICA volunteer. During graduate school student, stopped school for two years and worked as project coordinator for JICA volunteers' rural development project in Indonesia.

Thesis topic was Rural Development Policy in Indonesia and gained an MA for International Development.

After graduating the school, joined JICA in 1997.

Since then, worked as Director of the training program in JICA Tsukuba, Deputy Chief Representative of JICA Turkey, Director of TICAD and Planning Division in Africa Department, Chief Representative of JICA Rwanda and others.

### Message

We are lived in the 4th industrial revolution and 5G era whether one likes it or not; the new wave is going to cover the world.

In such big evolutionary era, the role of ICT has become much important than ever to solve challenges as described as SDGs.

KIC targets to encourage students to find their challenges and to propose a practical and original solution for them through Tankyu practice and ICT.

The students of KIC come from not only Japan but also Africa and around the world. It provides KIC divert environment to discuss the issues of the world and contributes to improving humanity of the students as of the school mission.

Based on the over thirty years of working experience of international cooperation in developing countries, I would like to work with you to solve the challenges for better future for all.



**TAKEUCHI, Tomonari**  
VISITING PROFESSOR

### Profile

BA in Political Science, Keio University, Japan.

MSc in ICTs for Development, University of Manchester, UK.

After working for an IT company in Japan, participated

in JOCV (Japan Overseas Cooperation Volunteer), and worked as an IT teacher in Ethiopia. Embassy of Japan in Ethiopia.

JICA (Japan International Cooperation Agency).

ABeam Consulting Ltd.

Deloitte Touche Tohmatsu Ltd.

### Message

When I was an IT teacher in Ethiopia as JOCV, satellite network distance learning system was introduced in high schools all over the country by Ethiopian government. It inspired me to work for ICT4D. Afterward, I worked for various kinds of ICT4D projects in JICA such as projects for ICT infrastructure improvement and projects utilizing ICT as a tool for development in developing countries. ICT is a powerful tool for development as well as business. Along with newly emerging technologies such as IoT, Big Data, AI, and Block Chain, in addition, it is required to consider broader aspects such as national development plan, legal framework, culture and ethics, etc. to make the best use of ICT. However, there are not many experts who understand both development and ICT. This course provides a valuable opportunity for you to acquire knowledge and skill in the both fields. Such a Master Degree course is very few in the world. In my lectures, based on my extreme experiences as an IT teacher in Ethiopia, seeing the reality in the ICT4D project, as JICA staff, managing many development projects, as a constant, implementing ICT4D projects, I would like to share my broad knowledge and skills which will be fundamental for you to design and implement ICT4D projects.

## TAKAHARA, Toshiro

PSPECIALLY APPOINTED  
PROFESSOR

Laboratory  
Introduction

### D - CUBE

Laboratory

### Diversity - Development - Design

#### Outline of the lab

ICT4D is my main field of interest. We live in a world of a great cultural diversity, and how we can use ICT to live better? To answer this question, we should design a solution by deepening the understandings of our own way to perceive the world, then collaborate with others, share our knowledge to achieve the common goal.

#### Main research topics

ICT4D, HCI (Human Computer Interaction), UX (User Experience)

By combining various level of ICT and methods of social development, I am devoted to create a good service/ product design which contributes to make people's life better. Multidisciplinary is the key of the research method.

#### Methods of instruction and research

The principal nature of this world is diversity: many different cultures and various way of thinking. ICT can connect all these people and it enables us to live together. But the principal actor is always human, as well as the subject to learn. Let's make a breakthrough to the status quo of common sense by questioning why and search a better way to make a good change. Only human interaction and dialog make this possible. It is an intellectual adventure.



We have more great members

## MARKON, Sandor PROFESSOR

Professional confidence comes from creating things!

### Outline of the lab

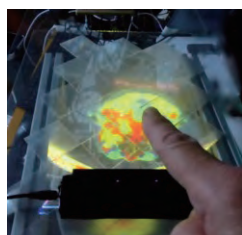
Prof. Markon has worked at the research and development division of a leading elevator manufacturer for about 30 years, and was one of the firsts who have succeeded in incorporating Open Source Software into manufacturing in Japan. In addition, at the same company he has produced a "world first" control technology, originating in Japan, as an achievement in the application of IT technology. His goal is helping to develop a unique education for professional graduate schools, based on manufacturing field experience and on enthusiasm for programming. To share the feeling of "making things move" with the students in the laboratory, the lab is always finding new research challenges, with students and faculty working together. In addition, there are interns and joint researchers from other universities, also researchers of companies, with everyone working together in an effort to contribute to society. More recently, there are African students assigned to the laboratory, embarking on research and development of applying technology in their country.

### Main research topics

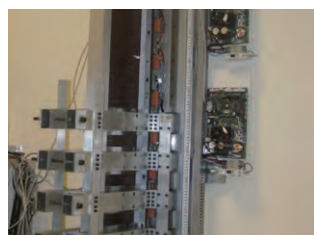
The main theme of the past few years is research and development of Human - Computer Interaction (HCI). A new technology called "floating image" can project display screens in the air without any physical screens, so that users can touch it and interact. We are developing both the basic technology and practical uses for it. One of the applications that has received much attention is the visualizing complex medical information, like for example MRI or CT scan data, in a natural form. The goal is to avoid the risk of misunderstanding of such difficult information by health care professionals. Other applications include game and amusement, various visualization applications, digital signage, etc. Another theme, studied at a long term, is improving both the efficiency of development and software reliability in embedded systems, by software construction techniques. In addition, we are working in collaboration with universities in Turkey and Germany in order to revolutionize traffic handling in buildings by the development and commercialization of linear motor elevators. We are advancing the basic research steadily, but the prospect of practical application requires the solution of many remaining challenges.

### Methods of instruction and research

By always challenging the leading-edge technology, students get guidance and help to proceed step by step, to grow while reaching it. To nurture independence, and the strength to confront problems, they are given the chance to experience problem-solving, and to taste the joy of finding the solution. The goal is to reach a point in the second half of the second year when they have the autonomy and self-confidence to say, "I have nothing more to ask from my professor". As a rule, students present their research results at international conferences, research meetings and in academic journals to get evaluated properly. They are given the opportunity of interaction with as many researchers as possible by joint research with other universities, companies and research institutes.



CT scans displayed and manipulated in floating images



A working model of a linear motor elevator, developed jointly with a Turkish university

## SHIMA, Hisato PROFESSOR

Research of network applications and its security

### Outline of the lab / Main research topics

In our laboratory, we research for a variety of applications through collaboration of cloud servers and devices.

We also research technologies for the security of such applications.

Recently, many equipment works in conjunction with the service on the cloud via the Internet, various innovative services has been introduced. The servers on the cloud, combined with high-performance smart phones, various network applications can be developed easily.

In addition, various sensors connected to the Internet, which is called IoT (Internet of Things) enhance the new possibility of network applications. We propose an application to solve a variety of issues by using these technologies.

We are also interested in ICT4D (ICT for Development) which uses the network services to solve the social issues, such as those in developing countries. Recently, smart phones have become popular and everyone has access to Internet. By combining applications on the cloud mobile phones, we can provide various services such as banking and health care.

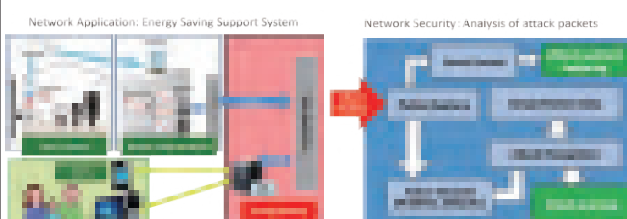
Network security becomes an important issue as variety of services and equipment are connected. Therefore, we study how the combination of techniques, such as authentication, firewalls, or cryptography can be used to make a secure service. Based on my experience in developing many leading networking products and security technologies, I would want to tell the method to develop a useful equipment and services for society and business.

### Methods of instruction and research

Our goal is not simply to study the technology as a technology. I expect our members to be a person who can actually develop useful equipment and services to solve social issues or to create a new business. For that aim, we discuss issues in society and the business and their solutions and communicate with related companies and users. Students and supervisors are jointly study to develop a practical and balanced system to solve the issue.

In addition, we believe the hands-on experience of developing of software and configuring server yourself. Students in my lab develops working system of your own using various programming language and system depending on the purpose.

In our laboratory, students of various nationality are joined. We welcome students who are interested to work with students from Japan and many other countries.



## ITO, Mamoru PROFESSOR

## Laboratory

Co-creation of social value  
through ICT innovations

## Outline of the lab

We call ITO laboratory as i-lab. "i" stands for intelligence, innovation, and international, which we think highly of. This laboratory provides every student with an opportunity to conduct a project to create practical and innovative solutions for social issues, utilizing various ICT technologies. Through project execution, the students can improve their skills on system design and service design as well as project management.

In this laboratory, we aim for Tankyu-based ICT practitioners who are actively engaged in social innovation. The students will be able to:

- Build up problem finding skills to identify social issues
- Find and develop own strengths to apply them to solve the actual issues
- Enhance creativity to produce innovative solutions
- Improve design and management skills through project execution

Those who can share the basic concept of the value of this laboratory are largely welcomed.

- Respecting each other as an independently thinking individual
- Acting on the student's own initiative like a project manager
- Cultivating an untrapped mind to see things as they really are

## Main research topics

Society is made up of various individuals who live and work together, which create many problems and issues locally and globally. We pick up social problems in real life which includes personal problems, interpersonal problems, and community and wider societal problems to provide useful and realistic solutions. The followings are examples of the research projects we tackled.

- Public transport management and ticketing
- Disseminating personalized agricultural knowledge
- Driving license management and online verification
- Preventing traffic accidents caused by young drivers

## Methods of instruction and research

A project is a temporary and worthwhile attempt undertaken to create a unique product or service. We take a project based approach as follows:

- Form a project team with the other students
- Collaborate with the external organizations and/or the other laboratories
- Take up an actual problem or need as our joint project theme
- Break down the problem for role sharing among the students
- Work together as a team for achieving the project objectives

Be professional and innovative together for better life and better society.

## OKUDA, Ryosuke PROFESSOR

## Laboratory

Let's jump into the world of IoT  
and Ubiquitous Computing

## Outline of the lab

Invention of internet in 1980s enabled highly reliable communication between the computers of all over the world using unreliable and cheap network. As a result, services of mail, telephone and retail sale were replaced by internet. Further new services such as SNS was enabled. However there still remains a restriction that computer terminal is needed to enjoy services. A technology expressed in a word as IoT (Internet of Things) or Ubiquitous Computing is the technology which links a thing besides the computer terminal to the internet, and realization of newer service is expected by this. The elemental technology with which IoT is supported is studied at our laboratory as well as achieving new service to prove the validity of the elemental technology.

## Main research topics

IoT and Ubiquitous Computing is based on various elementary technologies such as communication, security and calculation resources. Our laboratory focuses on sensing, recognition and Web based application.

**Sensing:** A visible problem to achieve IoT is small device size, communication and long life power supply, however those are in a trade-off relation with the precision and frequency of the sensors. For most of use-cases, we do not know the precision and frequency of the sensors are sufficient or not until actual experiments are executed.

**Recognition:** Sending all the data gathered from the sensors to the server is not realistic in the aspect of the communication channel capacity. Therefore processing of recognition which extract meaningful information from the raw data would be important.

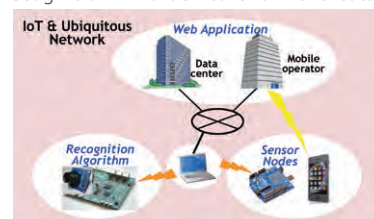
**Web Application:** "Sensing" and "Recognition" are just elementary technologies. They require application to prove their usefulness.

## Methods of instruction and research

In the theme of sensing, actual small hardware composed of a set of sensors and a microcomputer and communication method is developed. The purpose is to know the gap between the performance of the current sensing technology and the requirement of an assumed application in the point of sensing precision and frequency.

In the theme of recognition, algorithms which recognize extract meaningful information from the raw sensing data such as image or position of objects. Further those algorithms would be implemented on Linux machine to be validated their effectiveness.

In the theme of Web application, a web application system is developed combining the elementary technologies achieved by the sensing and recognition in order to show the total effectiveness.





## YAMANAKA, Toshiyuki PROFESSOR

## Laboratory

Leadership & Entrepreneurship  
for Social Innovation

## Outline of the lab

<Special Theme Study focusing on creating new business>

The lab focuses on creating new business which leads to social innovation. The students discuss various issues such as economic and political movements in the world, new trends of ICT and newly-developed marketing methods. The students learn various points through interactive discussions. The students spend a lot of time learning how to improve presentation or how to write academic thesis, too.

<One to One meeting>

In order to deepen the understanding of social issues, it is crucially important to have one to one meeting between the students and the professor. Therefore, the lab put a premium on one to one meeting.

<Outing to companies and institutions which are related to students' concerns>

There are many opportunities of outing such as companies or facilities in which the students are interested.

## Main research topics

<Leadership & Entrepreneurship>

The lab focuses on developing knowledge and skills as entrepreneur. Entrepreneurial leadership needs both vision and influence. The students learn skills through discussions at the lab and various events.

<Marketing & Innovation in digital era>

Marketing and innovation in digital era is different. In the lab, the students study Marketing 3.0. In addition, the students spend much time on discussing how to introduce "Tankyu" into real business plans.

<Area study in Africa and Middle East>

In order to solve social problems in Africa or the Middle East, it is crucially important to know about the real situation in these areas. Toshiyuki Yamanaka who frequently visits these areas facilitates the discussions on Africa and the Middle East.

## Methods of instruction and research

<Visit many places and discuss various issues with various people>

As mentioned earlier, the students deepen their thoughts by visiting various facilities and interviewing many people. Armchair theory must be avoided.

<Data Analysis>

The lab emphasizes not only the qualitative analysis but also quantitative analysis such as data analysis and experiment by using device.

<Creative Thinking>

The students spend much time on strengthening creativity or insight by various types of discussions.

<Book on innovation>

Read books on innovation and discuss how to achieve social innovation.

## TSUCHIDA, Masayuki PROFESSOR

## Laboratory

## Value Creation using ICT

## Outline of the lab

We do researches on "Value Creation using ICT" in our laboratory.

For value creation using ICT, we have mainly two approaches;

(1) New value-added business development or social problem solution using existing technologies.

(2) New technology development for customers or social value creation.

Both approaches are important. Our research field includes both approaches and it is interdisciplinary and integrated.

## Main research topics

For subject setting (identifying issues), the most important point is working out how to create value (who will be happy and how? ) and how to take advantages using our strength. Under the above viewpoint, we promote our researches on new business development or social problem solution.

Examples of research output;

(1) Creating business plan based on social research such as customers questionnaires or interviews.

(2) Developing value-added technology or a prototype system.

(3) Integration of above both

etc. Various types of outputs could be possible.

Student is expected to have the subject he wants to study, but if he does not have it yet, let's start to create concept of research subject together.

## Methods of instruction and research

The process of research activities is mainly based on "Tankyu Practice". The main flow is

(1) Identifying issues

(2) Hypothesis building

(3) Hypothesis verification

(4) Implementation

(5) Analysis and improvement

It may be difficult to do them all perfectly. But we try to do the research together. There is no absolute right answer such as new business development or social problem solution in the field we study in our laboratory. It is important to think various cases and make a hypothesis and verify it. It is a student that promotes a research, and teacher is a guide.

At a meeting the discussions among students are highly recommended. In social life, having the human skills to explain individual idea and involve stakeholders is also very important. Through making efforts to explain the individual idea clearly at a meeting, the student will learn the skills of logical thinking and presentation.

**LUKUMWENA, Nsenda** PROFESSOR**Laboratory****Innovation and smart cities using ICT in developing countries.****Outline of the lab**

This Lab investigates ways in which ICT4D can be utilized to bring about socially innovative and resilient delivery in urban and peri-urban areas — this year special emphasis goes to social infrastructure in developing countries.

Students are encouraged to read and interpret the space physical arrangement of the urban area in which they reside during their research time as a reference for improving their respective cities, in countries of origin.

The Lab has four (M1 ABE & PEACE) students, two from Afghanistan and two from Mozambique. Their researches cover various subjects. They include solid urban waste, Environmental Impact assessment of Mining with GIS Remote Sensing, flood management with emphasis on prevention; and urban agriculture to deal with food security. This lab is culturally diverse, it is also pluridisciplinary, creating an environment that affords all the students an opportunity to take back home a trans-border body of knowledge that KIC can be proud of.

**Main research topics**

Main research is Reading, Analyzing and Interpreting the Space Physical arrangement in urban and peri-urban areas using ICT4D for smart Delivery.

Main Topics include

- Urban solid waste management in and around Kabul city
- Environmental Impact assessment of Mining with GIS Remote Sensing
- Urban and Peri-urban Agriculture Model Based on Transit Oriented Development (TOD) to Ensure Better Quality of Life (QoL), Food Security and Nutrition in Mozambique (Inhambane Province – Inhambane City).
- An Integrated Information System for flood Management in Mozambique (Web-QGIS)-Case Study Zambezia Province.

**Methods of instruction and research**

- Basically, instruction is achieved through a Triangular Learning approach—Instructor to student, Student to student, Students to Instructor.
- Literature review provides for referential data, the use of ICT4D and Tankyu Practice learned at KIC provide the students with the needed technologies while the field survey provide for (i) quantitative data through questionnaire and qualitative through interviews by the researcher in the country of origin.
- The combination of the above makes up the framework of the research.

End note

Given the cultural environment found at KIC, it is my belief that, at completion of the research program, each student will take back a body of knowledge going beyond borders of a list three countries, a trans-borders knowledge, one that KIC can excellently offer.

**HIRAISHI, Teruhiko** PROFESSOR**Laboratory**

Based on the supervisor's experience of product development and training to engineers in a company, members of the laboratory work on a practical study, through requirement engineering, software engineering, project management embedded system development, and so on

**Outline of the lab**

In today's society, you cannot imagine a life without system and software.

In addition, it is easily supposed that considering the progress of IoT, not only for enterprise systems, but also for the embedded systems, scale, complexity, and further quality level are required at different level.

In our laboratory, we mainly focus on the following three abilities

(1)Ability to establish essential social issues and their solutions  
Based on data, logical thinking, statistics, and verification, we foster the ability to find the essential social issues and the ability to find effective solutions.

(2)Technical skills to solve the social issues

We focus on fostering the ability to learn "the ability how to study by yourself", to prepare for rapid technological advances, or to open up new technology, not only to learn the specific technology necessary to solve the problem.

(3)Work as a member of a project

**Main research topics**

To develop products, through technologies such as requirement engineering, software engineering, embedded system development technology, etc., you learn related technologies such as quality control, statistics, electric / electronic engineering, information communication technology.

Through these activities you will challenge to solve the issues which you established by yourself.

**Methods of instruction and research**

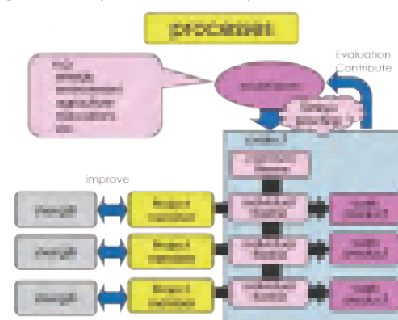
In our laboratory, we promote the research by project activity. Members are responsible to accomplish their roles in the project.

Members can experience the meaningfulness of accomplishing great outcomes through project activities that you cannot complete by yourself alone.

In laboratory, in the first year, we focus on theme setting for social issues, hypothesis setting, verification and planning for second year.

In the second year, we finalize to establish the theme and the solution. And then we develop actual products for verification. Finally based on these activities, we write the thesis.

Through these activities, our lab intend to foster not only technological ability, but also ability as a member of society.



**KOYABU, Yasushi** ASSOCIATE PROFESSOR

## Laboratory

Get problem-solving skills using ICT,  
and improve practical business skills.

**Outline of the lab**

Information systems utilizing ICT technologies are already being used in various areas of society and have become an essential part of social life.

However, in order to effectively utilize ICT to solve various problems occurring in society, it is required to "grasp the essence of the problem," "grasp the core of the issue to be solved," "select the most appropriate technological elements with optimum cost-effectiveness," and "select the most appropriate technological elements" in a sophisticated combination. We are engaged in research that enables students to understand the essentials of the elements listed here, and to master everything from the thinking style that captures the problem to the optimal use of technology.

**Main research topics**

The following two are the foundations of our research

- Creation of new problem solutions by combining cloud technologies.
- Establishing a software development methodology that achieves a balance between time, cost, and effectiveness by utilizing NO-CODE programming.

**Methods of instruction and research**

Based on the above basic policy, each student in our laboratory chooses a topic of his/her own interest, makes his/her own plan, and proceeds with his/her research.

Basically, we value the students' independence in proceeding with their research.

In particular, we value the aspect that allows students to gain insight into "how to approach problems," "narrowing down issues to be solved," "selecting technologies to be applied," etc., through exchange of opinions in the laboratory as a whole. We also provide opportunities for students to practice giving numerous presentations, and value the opportunity for students to acquire the "ability to explain = ability to make people understand," which is important for businesspeople.

**SUN, Yi** ASSISTANT PROFESSOR

## Laboratory

A really useful system will be invented  
by focusing the new technology from user's perspective

**Outline of the lab**

Recently, ICT has made a great progress in solving real life issues in different disciplines. Sun-Lab challenges talented students to use their creativity, critical thinking, innovative skills and abilities to tackle a broad range of social development issues in their developing countries.

**Main research topics**

Main research themes to this track include, but are not limited to the effective use of ICT in education, HCI (Human Computer Human-computer interaction), Web/Mobile Application Development and Data Analysis

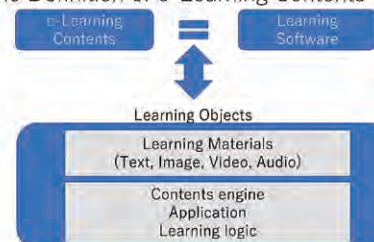
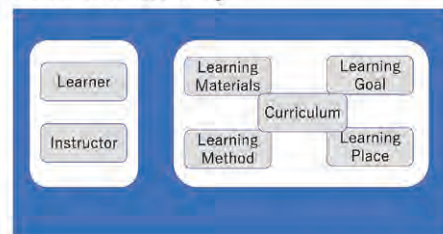
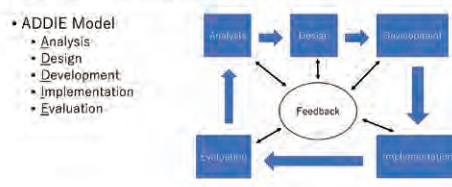
<Themes>

- Gamification in education Case study: history e-learning context frame work design.
- E-portfolio system to keep study activities for VETA's Students in Tanzania.
- Mobile E-learning support system for secondary school in Nigeria.
- A Tool for Collaborative Java Programming and Program Visualization for novices on Android smartphone.

**Methods of instruction and research**

The Lab provides the skills, knowledge and attitudes to effectively deploy ICT project for long-term sustainability. The lab sessions are comprised of lectures, discussions, and hands-on laboratory modules. Students work in multidisciplinary teams on their projects, closely collaborating with local community partners, field practitioners, and experts in relevant fields.

We have a Lab meeting every week, and if you have the needs of your research, you can request a personal meeting at any time. At the lab meeting, you need to present your study & research situation to the Lab members and get the advice from all of them. The technology skill study will base on self-study E-learning course. We focus on Cloud-Computing, Web Application, and Mobile Application. If you have some problem or some question of your study, please ask for help from your classmates and professor.

**The Definition of e-Learning Contents****Elements of Learning****Contents Development process**



## Charles Joseph Nyahucho

(From United Republic of Tanzania)

The lab is creating a convenient environment in raising leadership, Innovation and Business management skill. On weekly basis there are interactive discussions on world news on business trends or any news affecting business.

We attended several visitations to companies which connect us with them, gave us understanding of new technology and exposing us to advanced business practices. There are enough session of One to One meeting with the Prof. Yamanaka where we discuss our progress in thesis and theme studies.

I enjoyed to be part in this lab because of extensive knowledge the professor shared with us which stems from his international and local consulting experience.

KIC has brought breakthrough in my professional life. It has been a remarkable juncture of discovery. It is a center of influence and excellence.



## Musa Nanahawau Torera

(From Federal Republic of Nigeria)

I am a determined, and detail oriented lady, pioneer in social innovation and entrepreneurship, using available ICT solutions to foster Social Development.

Tsuji's Lab deals with actual Project Management where students are exposed to project planning, designing, implementing and managing using a real life project and scenario in Africa.

We collaborate with both private and public organizations to find a common issue. Students set a common goal through the supervision of the Professor and using the PCM (Project Cycle Management) and PDM (Project Design Matrix) which are the main tools in Project Development to achieve the set goal and objectives.

We welcome students who can "Try Together, Think Together, Work Together!!!"



## Clifford Otieno Ochieng

(From Republic of Kenya)

Participants of the lab come from diverse and culturally rich backgrounds i.e. Asian, Middle Eastern and African as well as academic and professional backgrounds including Architecture, Urban Planning, Civil Engineering and ICT. Consequently, interactions in the lab are rich in perspective of the developing world. nLab conducts discussions through triangular approach (Instructor to students, Student to student, Students to Instructor)

My research intends to examine Streetlights as a cyber-physical social system, a platform, an enabler of Smart Social cities. Through the research, I purpose to re-think the place of the streetlights as part of a continuously evolving and increasingly networked urban infrastructure that can enable cities to improve the quality of life of City-zens, address real needs with effective and long-term quality services.



## Hamayun Abdul Rahimzai

(From Islamic Republic of Afghanistan)

Our lab is collaborative project Management using ICT to support student's startups exploring innovation and creativity at any stage. It provides open co-working space and Self-motivated working style to find the solution for the social issues based on the "Tankyu practice".

Our lab aim is to combine a Development issue with specialist technical knowledge, enabling us to analyze, design, validate and implement ICT systems in its operational context since ICT has the potential to improve our learning outcomes and effectiveness.

ICT is considered as central to the overall learning process. ICT provide engaging experience to improve our skills in decision making and leadership.

Our University has very supportive environment and if we are passionate about something they will help us out.

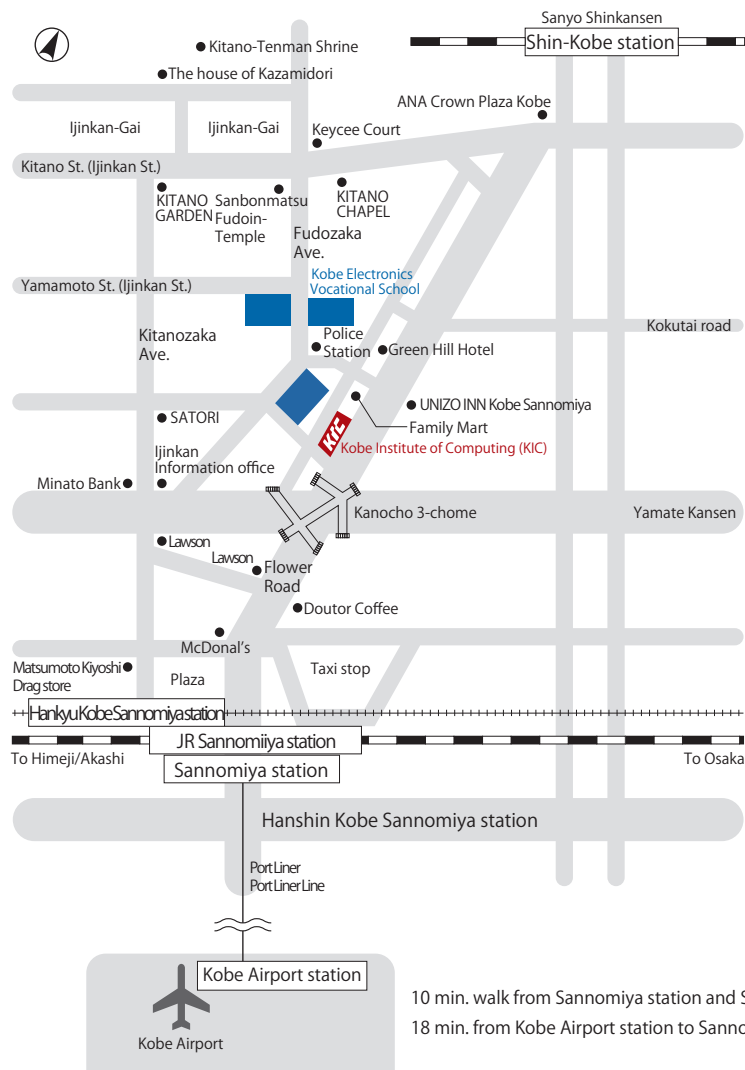


## Mohammad Nazim Kabiri

(From Islamic Republic of Afghanistan)

I have been working as an assistant lecturer at one of the public universities in Kabul, Afghanistan. It was my dream to do my master study in a well-developed country where I could learn not only at the university but also from the environment and society. Fortunately, my dream changed to reality when I came to Japan, the land of technology, through JICA's PEACE Program in 2015. I selected Kobe Institute of Computing (KIC) as my favorite university because it is focusing on Information and Communication Technology for Development (ICT4D) which I was looking for. Based on my research interest in the use of ICT in education, I conducted a research on the utilization and evaluation of cloud computing for e-learning in Afghan Higher Education under the supervision of Dr. Muhammad Wannous in Infinity (∞) Lab. The Lab is equipped with state of the art facilities and it provides a professional environment for its students to try new technologies, work together and learn from the experience of each other. It mainly focuses on the use of Cloud Computing, Web and Mobile Technologies in various fields, especially education.





10 min. walk from Sannomiya station and Shin-Kobe station  
18 min. from Kobe Airport station to Sannomiya station by Port Liner

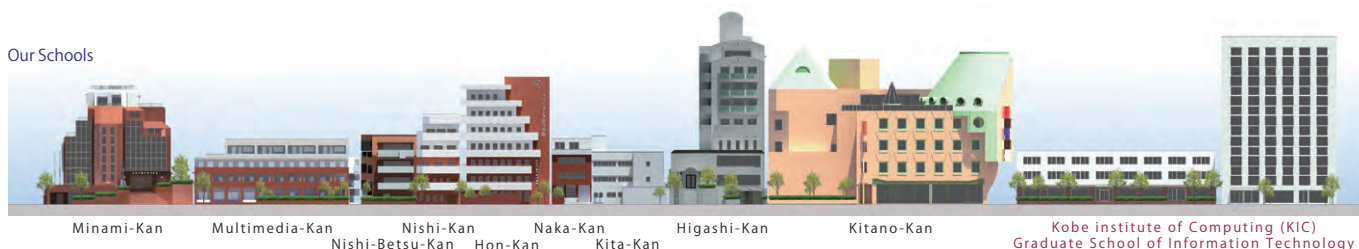


- Department : Department of Information Systems
- Established Type : Professional Graduate School
- Degree : Master of Science in Information Systems (professional)
- Term of Study : 2 years
- Admission Capacity : 55 students



QR Code for Smartphone

#### Our Schools



Minami-Kan

Multimedia-Kan

Nishi-Betsu-Kan

Nishi-Kan

Hon-Kan

Naka-Kan

Kita-Kan

Higashi-Kan

Kitano-Kan

Kobe Institute of Computing (KIC)  
Graduate School of Information Technology

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For more details, please go to our website

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