SDM

System Design and Management

Graduate School of System Design and Management, Keio University

MESSAGE

We want to attract talented people who aim to become the next generation of leaders, and as “cross-disciplinary experts,” realize a new society and integrate a diverse group of specialists.

Seiko Shirasaka

Dean
Graduate School of System Design
and Management

Establish feasible objectives with social value through the ability to ask the right questions

In today’s society, where diverse values exist side-by-side and different things are all interconnected and interact with each other, the whole can no longer be viewed as static. In fact, technology is evolving faster and faster, the intensity of various changes in the social environment is becoming more pronounced, and unexpected developments are happening one after another. In this kind of situation, it can be difficult to decide on what to aim for in the first place. If it were merely a matter of setting our objectives by looking at precedents and extrapolating from that alone, the task would be simple. However, technological advances have made it possible to do things that were previously impossible. Furthermore, changes in the social environment have made it necessary to set our aims differently from before. Thus, the next generation of leaders needs the ability to set the appropriate objectives to aim for. In other words, they need the ability to ask the right questions. However, without a bird’s eye view of the whole picture, the objectives we aim for will only be partially optimal. Likewise, setting unfeasible objectives is meaningless if they cannot be achieved. Even if such objectives are feasible, they will not be truly valuable to society from the standpoint of the provider. In other words, the ability to design by combining social value and realization mechanisms together is necessary for setting objectives with social value, taking into consideration the mechanisms for their realization.

Design and implement concepts to realize objectives

In order to realize the ideal society of the future, it is necessary to take a bird’s eye view of society, set our eyes on the vision of the future, and define the mechanisms needed to realize it. At this time, it is not possible to think of businesses and services, etc. — that are responsible for providing value — and the technology, systems, and organizations, etc. — that are the means to realize that value — as separate and independent things. We need to manage these in an integrated manner to ensure optimal design. It is precisely through the integration of multiple specialties that we will be able to realize a society that was previously unattainable. And in order to actualize this mechanism in society, it is necessary to build consensus with various stakeholders and to design and implement a path to the vision of the future. In doing so, it may be suitable for some to proceed by trying things they have not experienced before, while for others it may be appropriate to advance in a well-thought-out, steady manner. In other words, designing also involves combining the path to real-world implementation.

Responding to change

In today’s world, there are additional factors we have to take into account. COVID-19, conflicts in various parts of the world, as well as natural disasters. Unforeseen events continue to occur. The era of VUCA, it seems, has arrived in earnest. VUCA is an acronym that stands for Volatility, Uncertainty, Complexity, and Ambiguity. The era of VUCA refers to a time when the future is not an extrapolation of the present and predicting the future is difficult. Furthermore, the world is moving toward Society 5.0, a society which provides new value by linking previously isolated things to a network. By being connected in a network, changes in the external environment, which would not have affected what had previously been isolated, would now have an impact due to the network. In other words, we are now more susceptible to changes in the external environment than ever before. In this era, the ability to ask the right questions that are not an extrapolation of the present is undoubtedly necessary, but it is also important to design mechanisms for realizing objectives that can adapt to changes themselves. In order to respond to change, it is necessary to identify changes in the external environment that affect the mechanism and to modify the design of the mechanism when change occurs. In addition to that, it is also important that the design be easily adaptable to change. In other words, we will capitalize on change by being ready to respond to it.

Education and research leveraging diversity

Since its establishment in 2008, Keio’s SDM has been active in education and research to integrate “objective setting,” “mechanism design,” and “implementation management.” To flip the popular saying on its head, it is important to “envisage the forest by looking at the trees.” To this end, we aim to collaborate with a diverse group of people in order to understand matters from multiple perspectives and to utilize and integrate opinions from diverse viewpoints. This is the “cross-disciplinary expertise” that enables us to leverage our diversity.

In order to cross multiple academic fields utilizing this cross-disciplinary expertise, SDM provides a unique education consisting of knowledge in systems, design, and management, and actively conducts cross-disciplinary research. People from a broad range of ages come from all over the world to study together with a diverse group of students, researchers, and faculty members, all with different specialties, to discuss how to create a better society. In the process, students may be exposed to opinions that differ from their own previously held notions. Those who enjoy updating their knowledge from such experiences may be a good fit for SDM. We look forward to welcoming all who are interested in learning and researching together with a diverse group of people with the aim of realizing a better society and acquiring this cross-disciplinary expertise.

INTRODUCTION

Learn System Design and Management in English While Being in Japan

——A Gateway to New Perspectives and Distinct Careers

Broaden Your Horizons with World-Class, Cutting-Edge Knowledge

The Graduate School of System Design and Management at Keio University (Keio SDM) pursues problem solving with a "systems" approach by capitalizing on a broad range of perspectives from the natural sciences as well as from the humanities and social sciences. Mid way between downtown Tokyo and Yokohama close to both by train, Keio SDM enables students to learn the world's leading systems engineering and design thinking in both Japanese and English.
Keio SDM has a diverse student population made up of various backgrounds, age-groups, and nationalities. Not all students have a background in natural sciences and engineering; and many are professionals who are working in Japanese enterprises and government organizations. At Keio SDM students have ample opportunities to broaden their views by studying alongside these individuals as they encounter diverse values and ways of thinking.

About Keio University

Keio University is among the most prestigious private universities in Japan. It was founded in 1858 by Yukichi Fukuzawa, a leader of modern Japan who is also known as the man portrayed on Japan's 10,000-yen note. Many Keio alumni are successfully leading in a wide range of fields, including business, technologies, politics, and education. Being a Keio graduate is perceived as prestigious in Japan.

CONCEPT

Nurturing Individuals Capable of Handling Large and Complex Systems beyond Boundaries

Learn Systems Engineering and Design Thinking

Keio SDM deals with a multiplicity of large and complex systems. As we seek solutions, we make sure to consider social needs, such as environmental symbiosis, safety and security, cutting-edge technologies, international cooperation, and crisis management.
Two pillars of problem solving methods are employed at Keio SDM. One is systems engineering, which was developed initially for the purpose of desiging large systems, including aerospace and military systems. Now it has been extended to include the social sphere. Keio SDM is the only Japanese university participating in the Council of Engineering Systems Universities (CESUN). Students can learn all about systems engineering from the basics to the cutting-edge at Keio SDM.

The second pillar is known as design thinking. It is a development method which uses techniques, such as fieldwork, brainstorming, and workshops, to generate ideas. Its aim is innovation through drawing out the creativity of participants.
With systems engineering alone, it is difficult to accommodate different perspectives of multiple stakeholders for the purpose of innovation. Design thinking, on the other hand, tends to be weak at taking a systematic approach to the shaping of ideas. Keio SDM has successfully created a development method which combines the two in a complimentary way. At Keio SDM students learn how to create an optimal fusion of systems engineering and design thinking. This equips them with the capability of tackling large and complex systems.

Developing a Wealth of Skills

Keio SDM nurtures future systems designers and project managers who are capable of designing and managing multiple systems. One needs to have a diverse set of skills in order to coordinate with multiple stakeholders for the purpose of creating systems. Keio SDM offers a range of programs to produce individuals with a wide spectrum of skills and abilities.

POLICY

Student Admissions Policy

For the master's programs, we admit both persons aspiring to conduct research and put into practice the design and engineering of innovative technological systems that will contribute to resolving many of the large-scale and complex issues of the modern day, and those aspiring to research on and implement the leadership and management required to propose solutions to issues in the diverse social systems of today and guide these projects to success. In order to foster personnel befitting of these degrees, we admit people from many walks of life, including persons advancing to graduate school directly after completing their bachelor degrees and those with hands-on experience (early career/seasoned professionals) at organizations in the public, private, and other sectors. Screenings are conducted to comprehensively assess whether candidates have sufficient aptitude, skillsets, and desire to actively study alongside students from diverse backgrounds and put what they learn to practical use in the real world.

For the doctoral programs, we admit both persons aspiring to support various fields as researchers and social practitioners through advanced academic research on the design and engineering of innovative technological systems that will contribute to resolving many of the large-scale and complex issues of the modern day, and those aspiring to contribute to various fields as researchers and social practitioners through proposing solutions to issues in the diverse social systems of today and advanced academic research on the leadership and management to guide these projects to success. In order to foster personnel befitting of these degrees, we admit people from a wide range of spheres across generations, including persons with hands-on experience in the public and private sectors (early career/seasoned professionals) as well as students who have completed a master's degree program. Screenings are conducted to comprehensively assess whether candidates possess academic and research capabilities equivalent to those required for the master's program, the initiative to plan and conduct research, and sufficient aptitude, skillsets, and desire to put what they learn to practical use in society as specialists, in addition to whether they have made the preparations necessary to pursue their research after admission.

Curriculum Policy

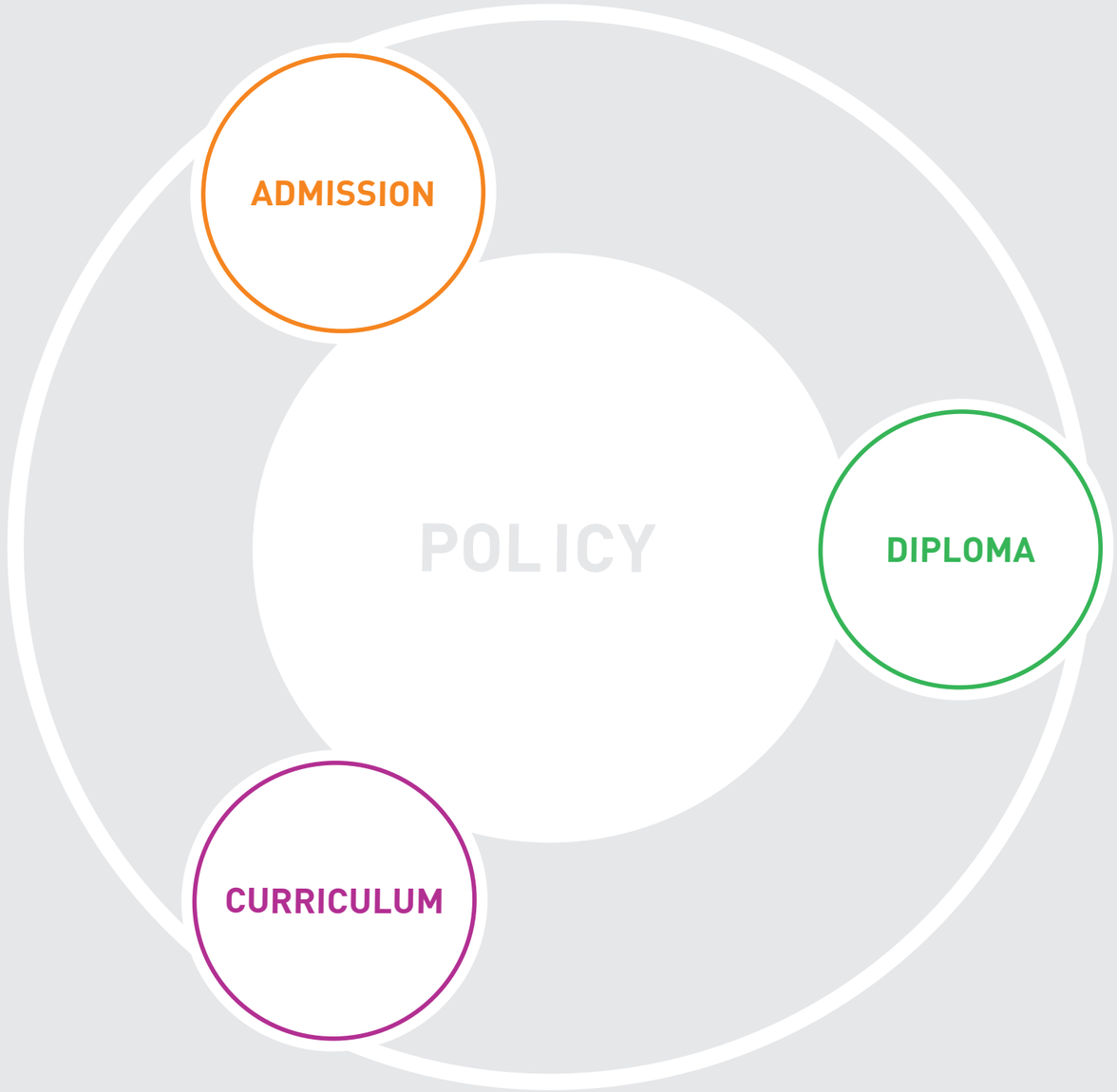
On the master's program, students will master comprehensive management skills including strategic system engineering methods and communication skills in core subjects, and work on a "design project" course embracing jitsugaku or practical learning. In addition, we offer a variety of courses for students to acquire a broader global perspective.

For the master's program in System Engineering, students primarily engage in research over a two-year period (standard) in fields related to the design of technological systems, presenting their findings, etc., in Japan and internationally and compiling these into a master's thesis.

For the master's program in System Design and Management, students primarily engage in research over a two-year period (standard) in fields related to addressing issues in social systems, which they then compile as a master's thesis.

On the doctoral programs, it is possible for students to take courses taught as part of the master's programs in order to study required subjects (especially core subjects, etc.). For the doctoral program in System Engineering, students primarily engage in research over a three-year period (standard) in fields related to the design of technological systems, on which they compile a doctoral dissertation while being positively evaluated by external specialists through presenting their findings in Japan and internationally. For the doctoral program in System Design and Management, students primarily engage in research over a three-year period (standard) in fields related to solving problems in social systems, on which they compile a doctoral dissertation while being positively evaluated by external specialists through presenting their findings in Japan and internationally.

In all of the degree programs, students can take lectures given by renowned professors from overseas while still in Japan through SDM's collaborations with MIT, Montclair State University, TU Delft, INSA, Politecnico di Milano, and others. In addition, we actively implement student exchange programs with all these universities. Due to the wide range of issues tackled by SDM, students conduct research while eliciting guidance from various related parties, which they compile into a thesis or dissertation.



Diploma Policy

Both the master's and doctorate programs have degrees in "System Engineering" and "System Design and Management."

Completion of studies for the Master of System Engineering means that students learn the core subjects and project subjects, and after studying other courses to acquire a broader global perspective, compile their research in fields primarily related to the design of technological systems into a master's thesis. Completion of studies for the Master of System Design and Management means that students learn the core subjects and project subjects, and after studying other courses to acquire a broader global perspective, compile their research in fields primarily related to solving problems in social systems into a master's thesis.

Completion of studies for the Doctor of System Engineering means that students have academic papers in fields primarily related to the design of technological systems positively evaluated by specialists, or have a system they created positively evaluated by specialists, compiling the outcomes of which into a doctoral dissertation. Completion of studies for the Doctor of System Design and Management means that students have academic papers in fields primarily related to solving problems in social systems positively evaluated by specialists, or have a system they created positively evaluated by specialists, compiling the outcomes of which into a doctoral dissertation.

CURRICULUM

Knowledge and Experience

—Both Essential for Developing Capability

Our curriculum aims to build collective strengths by combining knowledge with experience. Students first gain knowledge from lectures on systems engineering, design thinking, management capability, and specialized subjects. They are then invited to work on real-life projects and explore practical solutions. With our approach of combining knowledge with experience, students grow into integrated professionals who are capable of building and managing systems with precision.

Classes Offered in the Master's Course

Students in the master course learn the basics of systems engineering through the mandatory core subjects. Additionally they take specialized subjects covering specific fields and recommended advanced subjects covering multidisciplinary topics according to their interests. By creatively combining these subjects, students can broaden their knowledge towards a wide spectrum of subjects.

Classes are offered in Japanese and/or English. It is possible to complete the master course by selecting only classes in English. Core subjects are offered both in Japanese and English; Japanese classes normally begin in April while English classes begin in September.

It takes practical experience to effectively design and manage real-world systems. Students in the first year master course learn design thinking and work on real-life issues in the Design Project. They then proceed to practical research in special research subjects; and the results are compiled in their theses. At Keio SDM we set high standards for masters research.

The doctoral program offers more specialized research opportunities. Doctoral students can take masters classes according to their interests. Quite a few of those theses end up presenting at international conferences.

CURRICULUM

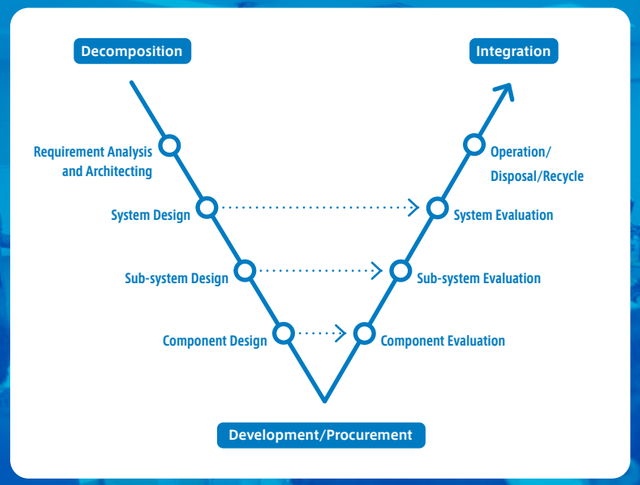
Students in the master course first learn the basics of systems engineering and other fundamental skills necessary to deal with systems. Building on this, they acquire knowledge about systems of various fields in specialized subjects. Additionally they learn design thinking in the Design Project.

Linking Knowledge

Students first learn the V-model, an important concept of systems engineering.
The V-model structures systems by decomposing requirements and integrating parts and their validation. This model can be used as a broad framework to capture how the entire process relates to each specific part. One can apply the model to system development of various fields, including those which are scientific and technical, social, and human.

Building on basic knowledge of the V-model, students take a variety of specialized subjects. Students can learn in a systematic and structured manner by using the model as a common framework, linking a broad spectrum of knowledge.

At Keio SDM we use the V-model to decompose, integrate, design, and evaluate by precisely defining the diverse requirements of the stakeholders, by sharing information, and by creating complete pictures of systems.



Intensive Lectures in English

Keio SDM's strength is not only that the curriculum can be completed solely in English. A series of intensive lectures are offered in English by the world's leading professionals and researchers from different fields.
This international learning environment as such makes Keio SDM an ideal environment for the growth of globally-minded professionals who are capable of accommodating different cultural perspectives.

List of Past Intensive Lectures (with titles as they were at the time)

"System Architecture and Integration"
Prof. Rashmi Jain (National University of Singapore)

"Supply Chain Management and Business Games"
Prof. Paul Schoensleben (ETH, Switzerland)

"Collective Dynamics of Firms"
Prof. Dr. Frank Schweitzer (ETH, Switzerland)

"Technical Entrepreneurship & Management"
Prof. Duncan Moore (University of Rochester, US)

"Risk Management"
Prof. Gilles Motet (INSA, France)

"Space Applications"
Prof. Dipl.-Ing. Heinz Stoewer (President Space Associates GmbH, Germany)

"Stanford Center for Design Research Workshops"
Dr. Larry Leifer (Stanford University, US)

"Object-Process Methodology (OPM) with Application to Systems Engineering"
Prof. Dov Dori (MIT, US)

From Basics to Application ——the Design Project

The Design Project aims to propose innovative systems by using the system design and management method developed collectively by Keio University, MIT, Stanford University, Delft University of Technology, and the University of Adelaide. In the Design Project students put systems engineering into practice while learning about design thinking.
In the Design Project students begin with the basics and then move on to practical learning. After taking a number of lectures taught by guest lecturers from partner universities overseas, students work in groups to work on themes proposed by various organizations. The proposers often include leading Japanese companies; and international students have a great opportunity to get acquainted with the unique characteristics, strengths, and cultures of Japanese enterprises.

Examples of Solutions Derived by Students with the Theme "Safety and Security"

"Building New Brand Image of Safety and Security Using Positive Cycle Business Model"
Proposer company: Adidas

"Portable Multi Energy Backpack System for Refrigerating Vaccines"
Proposer company: Kokusai Kogyo group Infrastructure Innovation Institute, Inc.

"Safe and Secure Solar Power Generation in Japan - Dual Mode Solar Panel System: Proof of Concept"
Proposer company: Delft University of Technology

"Safety Premium Point System"
Proposer company: Suzuki Motor Corporation

"Design of Bicycle Simulator to Reduce the Risks of Traffic Accidents"
Proposer company: Toshiba System Technology

CURRICULUM

Keio SDM emphasize the importance of hands-on experience.
Students are encouraged not only to gain textbook knowledge about systems
but also to experience real-life situations, to clearly articulate issues,
and to come up with innovative, feasible solutions.
It is when one is actually seeking solutions to complex systems that most discoveries and realizations come.
We believe in experiential learning, that one learns most by doing.

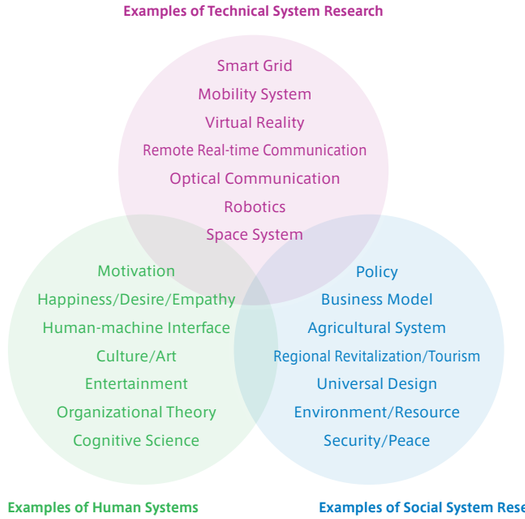
Learning by Doing
—Experiential Learning

Insight into the “On-Site” Realities of Japan

Keio SDM has strong ties with private companies. This means our students have the privilege to observe “on-site” scenes of Japanese companies through various opportunities.
For example, we arrange visits to distinctive factories as a part of the curriculum. In the Design Project students have the opportunity to visit the workplaces of proposing companies and work collaboratively with their staff members. Furthermore, Keio SDM has a great number of on-going joint research projects with private companies, facilitating students to have close and frequent communication with the companies. Many faculty members of Keio SDM come from private firms; and some internship opportunities can be facilitated for our students by virtue of their strong connections with the companies.
Keio SDM offers its students valuable opportunities to engage with Japanese companies, providing opportunities to gain insight into the secret of their strength and the “on-site” realities.

Laboratory Participation and Thesis Writing
The Special Research Subject

The master course centers around the Special Research Subject. Students select a specific system and take part in a relevant laboratory. Their research results are compiled into their masters theses. As in the case of the doctoral course, students establish their own themes and conduct extensive research. Research experience helps students deepen their knowledge, equipping them with skills that can be used immediately upon graduation in their work of research and/or development.

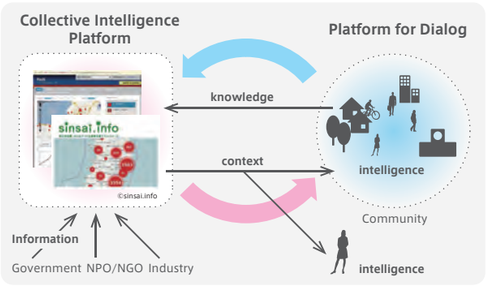


Study Case

Portfolio Optimization for Environmentally-Conscious Automobiles

Many environmentally-conscious automobiles are being developed and sold, such as the ones based on electric, fuel cell, natural gas, and gasoline-electric hybrid technologies. We use the system approach (simulation and system optimization) to study portfolio maximization—analyzing which type of automobile should be brought to the mainstream given the various constraints, such as those related to environment, energy, resources, aging population, and development in emerging nations.

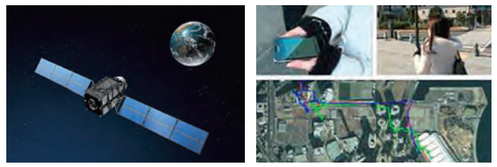
Resilient Community Design: Knowledge Creation for Safety and Security



Communication Design Process: Knowledge Creation for Safety and Security

Organizational Management Establishing Culture and Safety Consciousness within Companies

We conduct research into ways in which companies can develop a positive culture and work atmosphere in which staff members feel motivated and rewarded. Our research also asks questions concerning how to establish excellent companies with a high level of safety consciousness, risk management, and profitability. We study companies’ strategies that enable effective management—creative ways to motivate employees while nurturing teamwork and good communication within an organization.



Disaster-Prevention Message Delivery Service

At Keio SDM we use smart systems, such as IT systems and space systems, in order to create socio-technical services and their processes. In search for resilient community design process, we do research on a disaster-prevention message delivery service using a satellite and GPS receivers. We study a distributed autonomous cooperative community design process that is resilient and based on the fusion of two platforms: dialogue and IT.

FACULTY

The backgrounds of Keio SDM's faculty vary from industrial experience to active careers in the international arena. Their career paths and research areas are so diverse that new research ideas and activities are being generated every day at Keio SDM through borderless intellectual interactions.

Diverse Careers and Fields of Research Create New Challenges

Supervising Professors

Seiko Shirasaka
Dean, Professor

Worked: Mitsubishi Electric Corporation

Research and education interests: Space systems engineering, system development methodology, and system safety

Hiroko Inokuma
Professor

Worked: Ernst & Young ShinNihon LLC., Tohoku University - Graduate School of Economics and Management(Accounting School), Musashi University - School of Liberal Arts and Sciences, University of London (LSE) Parallel Degree Programme

Research and education interests: International Accounting, Financial and Business Accounting, Auditing, Tax Accounting, Economic System Design

Makoto Ioki
Associate Professor

Worked: Mitsubishi Electric Corporation, Japan Space Systems

Research and education interests: Systems engineering, Innovative Thinking Education, Satellite system and Fault-tolerant system design.

Naohiko Kohtake
Professor

Worked: Japan Aerospace Exploration Agency, European Space Agency

Research and education interests: Systems engineering and design research for socio-technical system such as space systems, sports systems, education systems, disaster management systems and urban systems.

Takashi Maeno
Professor

Worked: Canon Inc., the University of California, Berkeley, Harvard University, and the Faculty of Science and Technology of Keio University

Research and education interests: Human-machine system design, social system design, systems thinking, and systems philosophy

Masahiro Niitsuma
Associate Professor

Worked: Ritsumeikan University, Aomori University

Research and education interests: Artificial intelligence, Bodily tendency (cyclic aspects of human personalities based on habitual patterns of bodily movements), and Japanese contextualization of contemplative education.

Hidekazu Nishimura
Professor

Research and education interests: Model-Based Systems Engineering, System Safety, Control Systems Design, Universal Design, Business Process Modeling Notation and Business Process Management, Systems Modeling Language, Architecture-Based Socio-Technical Systems Management, Automated Driving Vehicle and Related Studies

Tetsuro Ogi
Professor

Worked: Mitsubishi Research Institute, Inc., The University of Tokyo, Tsukuba University

Research and education interests: Human interface, virtual reality, IoT, tele-immersive communication, and visual simulation

Tetsuya Toma
Professor

Former Advanced Product Development Specialist at 3M Company

Research and education interests: Program/project management and communication design for communities such as medical/health care, education or local resource utilization

Takahiro Yakoh
Professor

Worked: NKK Corp., Faculty of Science and Technology of Keio University, The University of Tokyo, Vienna University of Technology, Shinshu University

Research and education interests: Coding theory, Computer network, Human-computer interaction, Signal processing, Machine learning, and Digital transformation

Yoshiki Yamagata
Professor

Worked: National Institute for Environmental Studies. Currently affiliated at IPCC, IIASA, ISM and Univ. of Tokyo as visiting professor.

Research and education interests: Develop Urban System Design framework to co-create cities achieving "environment" and "health" sustainability for architecture, transportation and human behavior systems.

Guest Professors

Vittal Anantatmula
Guest Professor (Global), Keio University
Professor and Director of project management programs, Western Carolina University

Research Interests: project management teams, risk management, knowledge management effectiveness, project management maturity, and leadership.

Laurent Balmelli
Guest Professor (Global), Keio University

Since 2003 he has joined the SysML standard team and became one of the lead authors of the SysML language specification 1.0. He is currently working on Strong Network based in Switzerland, while maintaining teaching positions in Innovation, Design Thinking and Conceptual Product Modeling.

Peter Buist
Guest Professor (Global), Keio University
Manager of the European Union Agency for the Space Programme (EUSPA)

Areas of expertise: Global Navigation Satellite System (GNSS), Space Systems Engineering

Soowon Chang
Guest Lecturer (Global), Keio University
Assistant Professor, Purdue University

Her research revolves around paradigm shifts in human-urban-building interactions with intelligent application of disruptive technologies in the future smart cities for sustainability, economic growth, health, and overall quality of life.

Riaz Esmailzadeh
Guest Professor (Global), Keio University
CEO, IoT Consultants, Australia

Professor Riaz Esmailzadeh is an ICT professional for over 35 years, working with many companies including Apple, Ericsson, and Hitachi. A prolific innovator: he has more than 26 patents, and an author of three books and more than 50 peer reviewed articles on broadband telecommunications, and digital transformation.

Pieter J. Fourie
Guest Associate Professor (Global), Keio University
Future Cities Lab Global, Singapore ETH Centre

He specialises in population synthesis, simulation modelling of current and emerging modes of transportation, flood evacuation modelling, and big data-driven transportation planning.

Rashmi Jain
Guest Professor, Keio University
Professor, Montrclair State University

She is a prolific scholar and her research interests intersect systems architecture and design, systems integration, service operations management and business process analysis and management. She has worked on several research grants as Principal Investigator on the relevant topics.

Natt Leelawat
Guest Associate Professor (Global) ,Keio University
Associate Professor, Chulalongkorn University

He is a Head of the Disaster and Risk Management Information Systems Research Unit of Chulalongkorn University, a Senior Member of IEEE, and an MBCI of the Business Continuity Institute. His areas of expertise include risk and disaster management, management information systems, and business continuity management.

Executive Advisors

Yoshiaki Ohkami
Honorary Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: Design and management of large scale space system, strategic systems engineering

Taketoshi Hibiya
Honorary Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: Large scale systems engineering (basic science)

Shinichiro Haruyama
Executive Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: free-space optical communication, architectural ICT technology, and reconfigurable systems.CEO of Craft Brain LLC.

Mikako Hayashi
Executive Advisor of SDM Research Institute

Areas of expertise: Community building, Symbiosis of rural and urban, Food and agriculture, Sustainable agriculture, Green tourism

Masaru Nakano
Executive Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: sustainable city, sustainable manufacturing,and business games

Kenichi Takano
Executive Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: Risk management of large and complex system as in nuclear power plants and chemical production plants

Tomohiko Taniguchi
Executive Advisor of SDM Research Institute
Former Professor of SDM

Areas of expertise: International Political Economy, Japan's Strategic Diplomacy and Public Diplomacy. Formerly Prime Minister Shinzo Abe's speech writer

Atsuo Yoshida
Executive Advisor of SDM Research Institute

Areas of expertise: Structuring of programs for "management support, business startups, business rehabilitation and business succession" based on financial accounting strategy, etc.

VOICE

Message from Current and Former Students

I like the cross-cutting approach of Keio SDM

Kamila Romejko

Completed Doctoral Degree in September 2017
Completed Master's Degree in September 2014
Completed Master's Degree in International Economic Relations at Warsaw School of Economics

I chose Keio SDM because I was interested in the automobile industry and looking for a Japanese graduate school which offers a relevant course in English.
I am satisfied with the number of classes that Keio SDM offers in English. I also like its concept of learning more than engineering. At Keio SDM we cover a wide range of subjects, such as design, business, economics, and policies. The curriculum is designed in such a way that we get our hands on real projects after going through theories. I find this to be highly effective. I feel encouraged to be creative as students here are eager to work together and take pleasure in meeting new cultures and individuals of different backgrounds.
I spend weekends doing a variety of things, including going to parties, attending concerts, and visiting design exhibitions. Something exciting is always happening in Tokyo; it's never a bore. I feel that Tokyo has countless possibilities to offer.

Diverse Course Offerings and Student Backgrounds Help Advance My Career

Do Xuan Phong

Completed Master's Degree in September 2015
Graduated from the Department of Electronics and Telecommunications, Hanoi University of Science and Technology
Current Employment: Vietnam National Satellite Center

I am a researcher of ground-based satellite control operations at Vietnam National Satellite Center, currently on the Center's study abroad program to Japan funded by a Japan-Vietnam intergovernmental project. I chose Keio SDM over other programs because I wanted to learn how to manage large and complex systems. I am glad I did so; SDM's curriculum teaches me full-fledged knowledge of systems thinking and design thinking. I would like to mention three characteristics, among many others, that make SDM special. The first characteristic is its diversity. SDM offers a wide variety of courses ranging from technology, politics, and social sciences to many other subjects for its students to earn across disciplines. Students from such diverse backgrounds as music, architecture, and management study together and many of them are working students. I believe it is a plus for my career to learn from their experiences. The second is internationality. SDM students come from all walks of life and every corner of the world. The third is the depth and the breadth of knowledge that the faculty members possess.
Many teachers go out of their way to help students even after school.
SDM studies present a unique perspective through which to understand the complexity of the world.

SDM has radically changed the way my brain works to deal with daily challenges.

Hamad El Gibreen

Completed Master's Degree in September 2017
Current Employment: Engineering General Manager in Saudi Arabia Railway

I stumbled upon Keio SDM a year after completing my undergraduate degree. It offered the potential for unique, interconnected, holistic knowledge and real-world application. To get the most out of the program, I decided to gain more work experience in the transportation sector before enrolling.
To my amazement, SDM has not only exposed me to a wide range of knowledge (from political economy to entrepreneurship), but it has also fundamentally changed who I am as a person and how my brain works and processes daily challenges.
To embrace the SDM experience is to reset your brain to its original systemic ability to see the whole as well as the part. You will learn the art of moving through multiple levels of abstraction to see how everything is integrated from multiple perspectives. Best of all, SDM will bring back the childlike nature of those who embrace it, unleashing the human inner playfulness as an imperative action to enable innovation.
Nearly a decade later, I still hold the results of SDM close to my heart and use them every day. From developing strategy in my organization to addressing technical challenges and safety incidents through systems and design knowledge, the insights I gained from SDM professors, colleagues, and friends, as well as my experience in Japan, have proven invaluable in better understanding myself and others' perspectives.
Truly, investing in Keio SDM is investing in transforming yourself.

International Opportunities Just A Click Away

Naomi Simumba

Completed Doctoral Degree in March 2022
Completed Master's Degree in September 2018

I did my bachelor's degree in electrical engineering in my home country of Zambia and had heard about the System Design and Management program at MIT when I stumbled upon Keio SDM in an online search. After successfully applying for a Japanese government scholarship, I joined the master's program in September 2016. I am now a Ph.D. student, and both programs have exceeded all of my initial expectations.
At Keio SDM, you put problem-solving skills into practice through research, gaining plenty of hands-on experience along the way. During my master's program, I had to balance coursework with my research in Cambodia, where I had a real difference in people's lives. In the Ph.D. program, on the other hand, I have been identifying unique, unprecedented issues that add value to my field of study. And you can apply to Keio SDM with just the click of a button, no matter where you are in the world. If you're looking for a life-changing experience, I would say there's no better place than Keio SDM.

FAQ

Frequently Asked Questions

Q1 What kind of scholarships do you have?

There are a number of scholarships for international students, such as Keio "Design the Future" Award for International Students, as well as different scholarships provided by Keio University, Japan Student Services Organization (JASSO), the government of Japan, and other private foundations.
All scholarships aim to enable personally and academically outstanding students in need of financial assistance to continue and focus on their studies and research. Most of the scholarships are targeted towards regular students who are on a student visa and studying at their own expense. Please follow the link below for more information regarding scholarships.

http://www.ic.keio.ac.jp/en/life/scholarship/intl_student.html

Q2 I do not speak Japanese. Can I still be admitted?

The answer is yes, you can still be admitted to Keio SDM even if you do not speak Japanese. We give entrance examinations in English; and students can choose to complete the course using only English. Having recognized the importance of internationally competent staff from the very beginning of its establishment, Keio SDM has administrative staff members who can assist in multiple languages. As for the faculty, those who have been educated and/or trained overseas and have sufficient language abilities are assigned to assist international students.
If you wish, you can learn basic Japanese by taking Japanese classes. The university has well-established Japanese language education which began in the 1950s.

Q3 I cannot come to Japan for the entrance examination.

You can send your application documents by post regardless of whether you reside inside or outside of Japan. You will be called for an interview if you pass the document review. There is no need to come to Japan for an interview as we can conduct it online, using technologies such as zoom, for those who reside outside of Japan. Please refer to our examination literature for more details.

Please see below for more information.
www.global.keio.ac.jp/en/

Q4 Can I get help with accommodations?

Keio University has a number of reasonable accommodations for international students. In the vicinity of Hiyoshi Campus, where Keio SDM is located, there are a number of dormitories with easy access to the campus, such as Shimoda Student Village (designed for international students), dormitories for both Japanese and international students. Each dormitory has Japanese residence assistants who facilitate interactions among students and provide daily life support especially for international students.
For international students who wish to rent apartments privately, the university can introduce real-estate agents who can provide services in English. We also have an insurance scheme whereby the university acts as the guarantor.

www.ic.keio.ac.jp/en/life/housing/ryu_boshu.html

Q5 What kind of future careers do international students have after Keio SDM?

International students take on a variety of career paths after Keio SDM; some join Japanese companies; some return to their countries to work; and others go on to further education.
Almost half of our Japanese students are company employees, and many of the faculty members come from private firms. As a student you also have ample opportunities to connect with companies through the Design Project and other research work. Many international students have made use of these opportunities to get jobs with Japanese companies. Because Keio SDM graduates are internationally-minded and capable of navigating in different cultures, many also find opportunities within international enterprises.
Many alumni are now playing active roles in various fields and industries. The network you will encounter by studying at Keio SDM will be an asset to your future business and career. We have seen new business started up through participation in our network.

Q6 Do you have affiliated schools? What kind of arrangements do you have with these schools?

Keio SDM has collaborated with Massachusetts Institute of Technology (U.S.), Stanford University (U.S.), Delft University of Technology (the Netherlands), and the University of Adelaide (Australia) to develop an educational method for design projects. At Keio SDM we are putting this into practice in one of the subjects, the "Design Project", thereby continuing to improve upon the educational method.
We also have international exchange programs. The partner schools include: MIT, Stanford, Delft University of Technology, the University of Adelaide, National Institute of Applied Sciences Toulouse (France), the Politecnico di Milano (Italy), and Purdue University (U.S.). Every year a number of students come from these schools to study at Keio SDM.

ADMISSION

Major Discipline	Admission Quota	Degrees Awarded by SDM
System Design and Management	Master's Program 77 persons	Master's Degree (System Engineering) Master's Degree (System Design and Management)
System Design and Management	Doctoral Program 11 persons	Doctoral Degree (System Engineering) Doctoral Degree (System Design and Management)

(Unit: Japanese Yen)

Fees Payable upon Admission	Master's Program	Doctoral Program
Students admitted in April	1,982,600	1,202,600
Students admitted in September	991,350	601,350

* Academic fees are charged per academic year. The fees payable upon admission are as shown on the left.
* The fees can be paid in two installments in the Spring and Fall semesters.
* The fees of students admitted in September only show the fees for the Fall semester of the year of admission. The fees for the Spring semester are to be paid by the end of April.
* The fees are subject to change.

Scholarships

Various scholarships are offered to students who have excellent academic records and need financial aids. Detailed information on scholarships for international students are indicated below.

http://www.ic.keio.ac.jp/en/life/scholarship/intl_student.html

JST Doctoral Program Student Support Project	Assistance period	Assistance amount	Note
Keio University implements a program for the "Nurturing of doctoral students who will map the grand designs for future society," in doctoral programs using grants from the JST project "Support for Pioneering Research Initiated by the Next Generation." The purpose of this program is to nurture the outstanding and highly-driven doctoral students who will be responsible for the future course of science, technology, and innovation in Japan.	A maximum of three years with the upper limit set at the minimum number of years required for completion.	• Amount to cover living expenses: 2.2 million yen per academic year • Research funding: Base payment of 300,000 yen per academic year • Assistance subsidies for pioneering initiatives: An appropriate amount (up to 1 million yen)	Students with a stable income exceeds 2.4 million yen per year are not eligible.

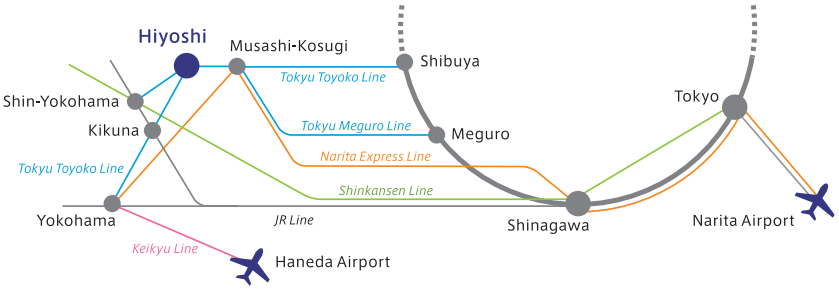
● Admission
http://www.sdm.keio.ac.jp/en/admission/

● Application Guidelines
http://www.sdm.keio.ac.jp/en/admission/guideline_en.pdf

NOTE

Access: A one-minute walk from Hiyoshi Station
(Tokyu Toyoko Line, Tokyu Meguro Line, Tokyu Shin-Yokohama Line, or Yokohama Municipal Subway Green Line)

- 18 minutes by express train from Shibuya Station to Hiyoshi Station. (16 minutes by commuter limited express)
- 12 minutes by express train from Yokohama Station to Hiyoshi Station. (10 minutes by commuter limited express)
- 6 minutes by express train from Shin-Yokohama Station to Hiyoshi Station.
- Limited express trains on the Tokyu Toyoko Line do not stop at Hiyoshi Station.



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www.sdm.keio.ac.jp/en

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