Welcome to the Graduate School of Media Design

— Toward a Creative Society Led by “Media Innovators”

The Graduate School of Media Design, Keio University (KMD) was established to train talented individuals to work on the global stage building and running new industries for the creative society.

A New Society Driven by Creativity

We are witnessing the emergence of a “creative society,” a world in which the driving force of the economy will be creativity rather than productivity or efficiency. “Creativity” is the ability to produce new ideas, processes, and ways to communicate from scratch. At the forefront of the creative society will be creative individuals, people who act creatively as part of their ordinary, day-to-day lives. It is their activities that will create new value for society. As they expand their networks, the cultural and social barriers to the allocation of resources break down, making the free sharing of resources possible.

Creative behavior in everyday life, therefore, becomes valuable activity that transforms societies and leads to new industries. Numerous events that hint at the new economic activities to come; in fact, the fostering of the creative industries and cultural industries that use creativity as a source of economic activity has, in many countries, become a matter of national strategy.

Training the Leaders of a New International Community

KMD believes that the new creative society will be led by “media innovators.” They will globally collaborate with a wide range of stakeholders to create a new social value in media, content, and services. The mission of KMD is to train these media innovators.

An important component of this mission is helping the students to develop a global perspective. Students learn from and collaborate with some of the world’s leading experts and benefit from KMD’s network of industry and university partnerships all over the world. Courses are taught in English as well as Japanese, attracting students from several different countries to KMD.
Curriculum Based on the KMD Method

Media innovators generate new social value by integrating the four domains of creativity; Design, Technology, Management, and Policy (DTMP). At KMD, students are encouraged to improve their abilities in their individual areas of expertise, but also to master the basic and practical skills to understand and make use of creativity in other areas; the curriculum is oriented to this purpose. One of the key components is a practical program that we call the “Real Project” in which students learn collective creativity by actively collaborating with people who have different skills and abilities as they tackle topics of deep interest to society.

This approach is known as the “KMD Method”. We want students to develop the creativity needed to generate new social value, to make something out of nothing. We also want students to have the practical skills to turn their creations into viable businesses and services; to transform the unknown into something exciting.

Achieving Social Value by Creating Media

KMD aims to create new media to achieve new social value. Media combines technology and services in ways that significantly change ordinary life. Media content transcends networks, augments objects and spaces and, through individuals, impacts social systems. We provide practical education in an agile development process based on the KMD Method and its insistence on fieldwork, strategic planning, creative thinking, prototyping, implementation, and verification. We support students to develop content that links together users, companies, and organizations in their efforts to develop innovative technologies, and also to verify, commercialize, and build businesses around their creations. We aim to have an impact on the international community in areas such as standardization and institutional reform.

We welcome students and partners who share our values and have the passion and vision to provide global leadership in the creative society.
Missions and Educational Model of KMD

As one of the world’s leading research and educational institutions, KMD is committed to executing its three missions.

1. Developing a Multi-location Global Network

In order to respond to the leading edge topics of the society and to develop a dynamic system in accordance with the needs of time, KMD, headquartered in the Hiyoshi Campus of Keio University, KMD’s global network comprises satellite locations in Japan and in other countries as well as collaborative relationships with other institutions.

2. Creating an Environment for Fostering Global Leaders

Leaders in the global community need to combine a global perspective with their own local background, education, and expertise. For this reason, KMD has adopted English as an official language in addition to Japanese, and has established an international platform to facilitate its participation in worldwide education and research.

3. Utilizing the KMD Method

“KMD Method,” an educational method used to foster creative leaders (media innovators), has three distinguishing features:

- The DTMP curriculum, which promotes the understanding and use of the four domains of creativity: Design, Technology, Management and Policy;
- Collaborative project-based education with an emphasis on real-world applications;
- Mastery of practical methodologies for articulating and implementing creative solutions to social challenges, including design thinking, storytelling, and strategic thinking.
Educational Model of Media Innovators

Harmonizing and integrating the four domains of creativity; Design, Technology, Management, and Policy to create a practical curriculum.
Faculty inspiring you to become a media innovator

Introducing KMD faculty members who foster “media innovators” and who are involved in a wide range of researches and activities
We Want People who are Curious about Everything and Able to Adapt to Anything

I think the 21st century is going to see a global-scale mashup of cultures and ideas, and global-scale collaboration as well. At KMD, we are exploring the design of experience in the form of social media. The goal is to use new storytelling methods and entertainment theories to create memorable “connectivity.” We also explore ways to link the social media we inhabit in virtual spaces to the real spaces in which we live.

In more specific terms, this means studying new content and services that utilize social media and storytelling in order to attract people. The “Social Museum Project” offers new value to conventional art and other museums. The “Navinko Project” uses social media to design city experiences with navigation based on music that changes as you move. We also released a Navinko application for iOS.

We are looking for students who are curious about everything and able to adapt to anything. They also need to understand social responsibilities and manners. And they need to be interested in working from a global perspective to create entertainment for specific communities and target segments.

Masa Inakage  Professor


Graduated from Oberlin College in 1982. Earned a Masters of Fine Arts in video art at California College of Arts and Crafts (now California College of the Arts) in 1983. CEO of Media Studio, Inc. since 1990. From 1999 to 2008, professor in the Faculty of Environment and Information Studies and a member of the Graduate School of Media and Governance Committee at Keio University. Since 2008, professor and dean of the Graduate School of Media Design, Keio University. Director of the Keio Media Design Research Institute. Co-director of the Keio–NUS CUTE Center. Serves as outside director and advisor to numerous Japanese and US companies. Director of Claritas Design in Singapore since 2011. Ph.D. (Media and Governance), Keio University

http://www.inakage.net

The “Social Museum Project” brings new value to conventional art and other museums.

The “Navinko Project” uses social media to design city experiences. Navigation is based on music that changes as you move.
Faculty inspiring you to become a media innovator

Sam Furukawa  Professor

Areas of expertise: Media Business, Product Deployment, Entrepreneurship, Business Negotiation and Collaboration

Involved with publishing and software development at Ascii Corporation before leaving to establish Microsoft Co., Ltd., Japan and serve as the company’s first president. Previously served as Director of Far East R&D, Senior Director, Vice President of Advanced Strategy & Policy, Japan and Chief Technical Officer of Microsoft Corporation.

http://twitter.com/samfurukawa
http://www.thinktheearth.net
http://www.ngpf.org

A Catalyst for Students as They Tackle the Themes They Find Most Compelling

My interest is in how traditional media formats and business models will change in response to digitalization and the spread of the Internet. I want to create, watch for, and promote new media that sits somewhere between personal media and mass media.

I teach “entrepreneurship” at KMD. In an ordinary MBA course, this would focus on how to draft a business plan. In our course, we also examine the methods used by recent startups, ways to develop business models, and recent technology trends. I do not ask students to become directly involved in my research and projects, nor do I guide them in those directions. Instead, I provide students with as much cooperation and help as possible as they tackle the themes that they personally find most compelling. The “Sanctity of Life” (SOL) project is an example of a real project that came out of this approach. One of our students who had created “ZOOTOPIA,” a system that uses a tangible interface to enable children subject to long-term hospitalization to remotely visit a zoo, also applied augmented reality (AR) technology to “Puchi Planet,” a system that allows users to experience world travel. Yet another student used advanced color theory and AR technology to create “Chromatic Glass,” a mobile app that assists people who find it difficult to distinguish between red and green. This student also created a “Chromatic Vision Simulator” tool that allows ordinarily-sighted individuals to experience other forms of color vision.

KMD students have a global perspective, understand diversity firsthand, and are passionate about what they do. They also gain the ability to realize their ideas and communicate to other people, and by the time they leave the School they are ready to hit the ground running as media innovators. I hope to be a “catalyst” that triggers these kinds of chemical reactions in students.
Busy Hands Create the Future

The laws of physics govern the design of machinery, architectural structures, and other artificial objects. If you violate these laws, you cannot build what you intend to build. Likewise, the laws of mathematical science govern the creation of the information world. But what are the basic principles in the design of devices that interact with human beings; mobile phones, game machines, or even automobiles? In addition to physics and math, you must also have a deep understanding of physiology. Human beings understand their world by taking in information from their five sensory organs and processing it in the cerebrum. They in turn use their muscles to move about. Our research interests are in these properties of human input-output functions (i.e. sensory perception, knowledge, and movement) and we are involved in joint research and development with governments and companies that require such expertise.

At KMD, I oversee a project called “Reality Media”, which attempts to design human “reality.” We have collaborated with an automaker to develop a “transparent cockpit” in which the backseat and other parts of a car’s interior appear to be transparent, and therefore enhance safety. “Pinoky” is another technology we have developed that turns stuffed toys into robots by attaching accessories onto them.

These projects attract students from diverse backgrounds, but all of them share the desire to work with their hands. If you keep your hands working, they will create the future. Technology is a lot like a language; the quickest way to master it is to jump right in and keep going, regardless of the challenges.

Masahiko Inami  Professor

Areas of expertise: Interactive Technique, Mixed and Augmented Reality, Robotics, Reality-based Design

Earned a Ph.D. in engineering from the University of Tokyo, School of Engineering in 1999. Research associate and assistant at the University of Tokyo, assistant and associate professor at the University of Electro-Communications, visiting scientist at the MIT Computer Science and Artificial Intelligence Laboratory, and professor in the Department of Mechanical Engineering and Intelligent Systems at the University of Electro-Communications, before being appointed to his current position.

http://inamilab.kmd.keio.ac.jp

In the “transparent cockpit” backseat and other car interiors appear transparent so the driver can view the area behind the car through the backseat to ensure safety.

“Pinoky” is a technology that transforms stuffed toys into robots by attaching accessories.
The keys are creativity and communication

What skills will be needed in the future? I think they will be creativity and communication.

For much of my career, I’ve been involved in a joint government-industry-academia project to provide children with opportunities for creative learning.

There are a number of different approaches: designing workshops, creating spaces such as museums and apartments, authoring digital picture books that can be used on tablets and smart phones, producing commercials, and building communities.

Our primary focus is on these three projects: “Digital Kids,” a project to develop, use, and spread new technology-based learning programs, “Digital Ehon (Picture Books),” a project to create digital teaching materials and picture books, and “Digital Textbooks,” a project of the Association of Digital Textbook & Teaching that involves 100 companies with the goal of creating an environment in which all children are able to learn digitally by 2015.

We have identified 10 core perspectives: “learning how to learn,” “learning with enjoyment,” “contact with real things,” “collaboration,” “learning together and teaching each other,” “creating,” “presenting,” “enjoying the process,” “there are no answers,” and “connecting with society.” With these perspectives, we work with several hundred companies to create advanced learning environments.

Each year we host the Workshop Collection,” which consists of clusters of workshops for children held in various locations throughout the country. The most recent Collection featured 100 workshops with 100,000 children participating over a 2-day period.

Nanako Ishido Associate Professor

Areas of expertise: Children and media

Graduated from Faculty of Engineering, University of Tokyo. Guest researcher at the Massachusetts Institute of Technology (MIT) Media Lab. Established CANVAS, an NPO to promote creativity and expression for children, and established Digital Ehon.

Current positions include President of CANVAS, CEO of Digital Ehon, member of the Information and Communications Council of the Ministry of Internal Affairs and Communications, and outside director at Film Art, Inc.
Akira Kato  Professor

Areas of expertise: Computer Networks, Internet infrastructure Technologies, Internet Operation, Measurement Technologies

Graduated from the Tokyo National College of Technology, Department of Electronic Engineering and transferred to the Tokyo Institute of Technology, Department of Electrical and Electronic Engineering. Involved in the design and implementation of the campus network at Keio University Shonan Fujisawa Campus, and worked as a Research Associate in the Faculty of Environmental Information. Subsequently worked as a Research Associate including a six-month appointment as a visiting researcher at USC/ISI and as an Associate Professor in the University of Tokyo Computer Centre (now “Information Technology Center”). He received his Ph.D. (Media and Governance) from Keio University in 2004.
http://www.kmd.keio.ac.jp/jp/people/kato.php
http://www.kmd.keio.ac.jp/jp/people/kato.php

Using Broad Insights to Think Logically and Comprehensively

Rather than emphasizing the theoretical aspects of computer networks and particularly the Internet, my research focuses on the practical aspects of how the Internet works; to analyzing protocols, protocol transitions, administration, traffic data collection and analysis, and security.

KMD does more than just teach design; it emphasizes the ability to use broad insights to consider questions in a comprehensive manner. There are very few cases today of new services emerging that are totally unrelated to our digital information infrastructure, the Internet. Merely knowing how to use the Internet does not sufficiently prepare one to propose these new kinds of services. Basic digital literacy requires going beyond merely being a user, and I consider it part of my job to help students achieve that. Obviously, we also welcome students who wish to take a more engineering-focused approach to the study of computer networks and applications, and have the ability to do research on par with ordinary information engineering departments.

The ability to think logically is essential for students at KMD. Students who do not have an engineering background are welcome and will be able to learn through their projects here.

The Internet is not a complete, perfected framework. It is very much a work in progress, and one that needs to change and improve over the time. We already use the Internet as our common digital information infrastructure, and it is important that it continue to function stably. I look forward to exploring these challenges with you at KMD.

We also operate ‘M’, one of the Root DNS servers at the heart of the Internet, which provides great insight into the architecture of the Internet.
Faculty inspiring you to become a media innovator

Hiro Kishi  Professor

Areas of expertise: Convergence of Telecommunication and Broadcasting, Content and Advertising Business Strategy

Graduated from the Department of Economics, Hitotsubashi University and Columbia Business School. Joined the Ministry of International Trade and Industry (now Ministry of Economy, Trade and Industry). Served as Secretary to the Minister of State for Economic and Fiscal Policy, Minister for Financial Services, Minister of State for Privatization of the Postal Services, and the Minister for Internal Affairs and Communications. Books and publications include "Net Imperialism and the Defeat of Japan" and "Apple and Amazon are Eating Japan Alive."

http://www.kmd.ko.ac.jp/jp/people/kishi.php

Balance of Addressing Social Issues and Taking Care of Business

My research focuses on how the spread of the Internet, and particularly social media, are changing democracy and capitalism. The “Arab Spring” provides a clear example of how social media is changing democracy, though the negatives may outweigh the positives when one considers the ongoing political strife in Egypt.

My research and projects attempt to establish new business models in the media and content business. I tell students that there are two components that they must always bear in mind: “addressing social issues” and “business” itself. Among mass media and content companies, the hardest hit by the deteriorating business environment are those located in rural communities. I emphasize the perspective of these communities, a rich source of content. Re-energizing its rural areas is one of the most important tasks facing Japan.

Because I spent 20 years as a bureaucrat in Kasumigaseki, I treat graduate students like regular members of society. I begin by ensuring that they understand appropriate business manners and conduct themselves accordingly. I do not try to spoon-feed them; I try to get them to see where the problems lie and to work on their own. Students in my laboratory are extremely well-versed in the Internet and the media and content businesses. They also function with the same coordination and solidarity that you’d find in a sports team.

We are currently working with a publisher named Magazine House to research optimum formats for electronic magazines, looking at both communication strategies and business questions. Another new project is to formulate and establish an optimized business model for Ishinomaki Hibi Shimbun, a local newspaper. The goal is to contribute to the recovery and restoration of the disaster area, and also to evolve the business model to ensure that it is viable—even in an environment in which a full recovery is still 10 years away.

"Colocal" web magazine, created in collaboration with Magazine House, focuses on “local” topics in Japanese communities.
Cutting-edge Media Technology Activates Your Creativity

When we touch “things,” they tell us various stories through our senses. A subproject of the KMD “Reality Media” project, “Enchanted Things” aims to transform these types of imagined experiences into embodied experiences that actually stimulate our body and senses so that we can take ownership of these experiences by physically perceiving them. We are particularly interested in “haptics,” which is closely related to our body-perception, and aim to develop novel interaction technologies based on the cross-modal effect between haptic and visual or auditory sensations.

“TECHTILE” is an activity that brings together people from diverse fields such as art, design, science, engineering, and education to create a new social/cultural value that promotes awareness of the sense of touch. We are exploring new ways to express and communicate through haptic sensation in a series of workshops, symposiums, and exhibitions. We have developed an easy-to-use rapid prototyping tool called “TECHTILE toolkit,” which enables the user to create high-quality haptic interaction content by combining any object and haptic stimulus. Plenty of haptic interaction content has been created with the help of this toolkit, by students and children as well as professional designers and engineers.

The challenges lying ahead in the development of cutting-edge media technologies are to not only create fundamental technologies, but also to build a community, deploy products and services, and educate the next generation. I am looking forward to addressing these challenges with the diverse creativity of KMD students.

Kouta Minamizawa  Associate Professor

Areas of expertise: Haptics, Virtual Reality, Information Physics

Graduated from the Department of Mathematical Engineering and Information Physics, School of Engineering, The University of Tokyo in 2005. Received Ph.D. from the Graduate School of Information Science and Technology, The University of Tokyo in 2010.
http://minamizawa.jp/
http://hapticmedia.org/

TECHTILE workshop: Participants use the TECHTILE toolkit to record and edit the haptic sensation from various objects, and create new haptic experiences.
Ichiya Nakamura  Professor

Areas of expertise: Media Policy, Children’s Creativity, Pop Culture

Worked as the director of the rock band “Shonen Knife” before joining the Ministry of Posts and Telecommunications in 1984. Was the first in the government to be responsible for policy over the fusion of communications and broadcasting and for Internet policy. Also involved with the reorganization of the ministry under the Hashimoto reforms before resigning to move to the United States. Appointed visiting professor at the MIT Media Lab in 1998. Appointed executive director of the Stanford Japan Center - Research in 2002. Appointed professor at Keio University in 2006. Books and publications include “The Digital Signage Revolution” (Asahi Shimbun Publications, co-author), “Where the Fusion of Communications and Broadcasting Goes from Here” (Shoeshia), and “Digital Toybox” (NTT Publishing).

http://www.ichiya.org/jpn/index.html
http://polipro.org/wordpress/

Alongside Leading Professionals, Just Create!

Our emphasis is on involving industry, government, and academia in “building” and “creating” new societies. The goal is to collaborate with leading professionals in venture companies, consortia, and research groups, to create everything from content and software to legislation. Above all else, students must act as professionals. There is no time to sit around campus, or participate in academic societies. We go out and create! Below are some of our main activities.

1. Digital signage: We make Japan to have more signage than any other country in the world. The market is currently worth 100 billion yen, but we operate a consortium of more than 150 companies whose goal is to expand it to 1 trillion yen over the next 5 years. This requires that we develop technologies, business strategies and content.

2. Workshop collection: Each year we hold one of the largest workshops in the world for children who wish to create anime, music, games and other content. In February 2012, we coordinated 90 workshops, with a total of 50,000 people participating in just one day.

3. Digital textbooks: Our goal is to create an environment in which all children will be able to learn digitally by 2015. We have built an association of 130 companies to move forward with empirical research.

4. Digital picture books: We create new digital content for sale to the smart phone and tablet markets. Many of our students have made their debuts as “digital picture book authors.”

We are confident that we are at the forefront of these endeavors.

"Emakimon" is a digital picture book that is like an ancient picture scroll without pages. We have developed a new style of interface that moves forwards or backwards depending upon the tilt of the screen. Users can enjoy stories without words.
Using the Power of Motion Pictures to Change Existing Media

At both NTT and Sony Research Laboratories, I worked on the research, development, and commercialization of leading-edge applications for digital media processing, very high-quality image and motion picture transmission over the Internet.

At KMD, I am currently responsible for the “Power of Motion Pictures” (PMP) project. Motion pictures are an essential component in any form of next-generation media that hopes to have an impact on society. PMP attracts students who like video and want to search for new possibilities that will change existing media while experiencing the state-of-the-art in video for themselves. We emphasize hands-on learning and practical experience, and we never lose sight of the ultimate question of how to connect our results to society at large.

One example comes from the “4K Narrative” sub-project in which we are researching “growing documentary” as a new storytelling platform. In this project, we make use of Crowd Sourcing mechanisms and a Computer Supported Collaborative Work to create a system in which large groups of people collaborate to tell a story. We actually design and implement a workflow and systems for actual video content creation with collaborators such as University of California, San Diego and NTT Laboratories.

Naohisa Ohta  Professor

Areas of expertise: Digital Media / Network Applications, Digital Cinema

Graduated with a degree in Electronics from the School of Engineering, Tohoku University. Earned M.A. and Ph.D. in Electronics from the Graduate School of Engineering, Tohoku University. Worked on the research, development, and commercialization of new applications of digital audiovisual processing and high-quality video transmission over IP networks at NTT and Sony Research Laboratories. At the Research Institute for Digital Media and Content (DMC) of Keio University, led a project to explore possibilities 4K networked video applications in a global industry-academia partnership (http://www.cinegrid.org). Established a digital cinema test center at Keio DMC to provide digital cinema equipment certifications under the license of a joint venture of major US motion picture studios (Digital Cinema Initiatives). Has been active in academic society activities and served many times as IEEE international conference general chairs or TPC chairs in the area of multimedia and communications. An author of two books and published over 90 technical papers. Dr. of Engineering and a Fellow, IEEE and SPIE.

http://www.cinegrid.org

“4K Narrative” conducts research on “Growing Documentary” as a new platform for storytelling.
What is education in the context of the global environment created by the Internet as a core component of social infrastructure? What kinds of people and skills are required? How do people learn in this new environment? What kinds of environments are conducive to learning?

My focus is on practical research in the areas of ICT and education. I am particularly interested in the roles of universities and in inter-university collaboration within Asia. As part of my research, I examine ways for universities in Asia to collaborate and build environments that will facilitate learning throughout Asia as well as the educational programs that such environments will require.

The members of KMD’s “Global Education” project come from many different countries. In the summer of 2010, our “Global Theater” explored new formats for the theater. A Japanese script was translated into Thai and then performed by a theater group from Thailand at the Tokyo Metropolitan Theatre. The performance was broadcast live in Thailand and Malaysia, followed by an interactive after-show discussion. In November 2011, we collaborated with UNESCO on “CONNECTivity,” an online seminar charting the course to a green society. The seminar enjoyed the online participation of guest speakers from six countries and attracted more than 2,500 students from Asia. It was certified by Guinness World Records as the “largest online seminar on ecology in the world.”

Our projects focus on both technology and education as we try to solve global-scale problems. Mutual reviews are a key component. Members pool their individual skills and expertise, and out of that collaboration come extraordinarily good results.

Keiko Okawa  Professor

Areas of expertise: Digital Communication and Educational Environment, Building Educational Infrastructure in Asia

B.S. and M.S. degree from Faculty of Engineering, Keio University.
Ph.D. in Media and Governance from the Graduate School of Media and Governance, Keio University.
http://g-edu.kmd.keio.ac.jp
http://www.so1.asia/
http://connectivity.connect-asia.org

Using Technology and Education to Solve Global-Scale Problems

The “Global Theater” in the summer 2010 explored new theater formats. A Japanese script was translated into Thai and then performed by a theater group from Thailand at the Tokyo Metropolitan Theatre. The performance was broadcast in Thailand and Malaysia.

“CONNECTivity” was an online seminar charting the course to a green society held in collaboration with UNESCO.
"Creating One from Zero."

My research focuses on "innovation", whether in manufacturing or services, creating something new out of nothing. Just as important as being able to competently complete the tasks you have been assigned, you must also be able to explore and identify key components for the future. "Design thinking" is a technique for prototyping ideal models, and at the core of this technique is kinesthetic training. You must listen to what people say, and then you must work with your hands to create rough designs. You train for this, just like you train to play a musical instrument or a sport.

I oversee a group called "OIKOS." The title comes from Greek for "home" and "living," and it stands out for its emphasis on day-to-day life themes. The "Medical Project" tries to find solutions to issues that cannot be addressed by conventional medical systems. Previously, we worked on at-home terminal care. This year, we are expanding to include pregnancy and childbirth. Our goal is to improve the quality-of-life (QOL) for mothers and children by, for example, computerizing the maternity health record books that are used to track the progress of the pregnancy and the child's health. Another project is called the "Redesign of Large Shopping Centers." Many people spend long hours in shopping centers, but some have areas that are difficult to access because of poor traffic flow. Rather than changing the structure itself, our research focuses on the use of ubiquitous computing to control the environment with sound and light. The first experiments will begin in a mall in Tsukuba in April.

Collaboration is essential if we are to meet the needs and demands of a changing society, but it must be managed. KMD offers the unique and valuable experience of working with members from different backgrounds and areas of expertise towards a common goal.
Faculty inspiring you to become a media innovator

Kazunori Sugiura  Associate Professor

Areas of expertise: Operating System, Internet Technology, Media Telescope

Graduated from the Faculty of Environment and Information Studies, Keio University. M.A. and Ph.D. from the Graduate School of Media and Governance, Keio University.
http://uhyo.org

Currently, we focus mostly on “Global Computing” and the “Media Telescope.” In “Global Computing”, we work on strategies for building and using networks that are more closely aligned to ordinary life; in other words, new forms of the Internet. The Media Telescope is a means of using the information obtained from these kinds of networks in our day-to-day lives. While they tend to be thought of purely in terms of technology, services that make use of new, life-oriented networks actually require a great deal of design as well. Management techniques and political strategies are needed, if they are to spread globally. We work in collaboration with institutions around the world on such joint research projects.

The UMECOE (Universal Media Collaboration and Organization Environment) project is developing a “services environment” with a simplified input system that is more suitable to everyday life. Today, the Internet is a “network” that is separate from the “real world.” If you want to access the real world through the network, then some “means of connecting to the network” is required. The essential thing, however, is that the “required service” must be able to recognize the user, regardless of whether it is connected to the network. We are developing new applications environments to create that interface.

Students have the ambitious, common goal of creating an environment for “Internet services that are more deeply intertwined and closely aligned with ordinary life.” Research is not limited to Japan. Our collaboration languages include English and Japanese and, for exchange students from Asia, Chinese and Korean too.

Internet Services Environments That Are More Deeply Intertwined and Aligned with Ordinary Life

Our “Global Computing” researchers study ways to use networks that are more deeply intertwined with ordinary life. “Media Telescope” studies how to make use of the information obtained from those networks in daily life.
Structuring Knowledge from Information Generated by Objects

My interest is in how to structure “knowledge” from the information that is generated by “things,” whether those things are decentralized human behavior on the Internet, or network sensors, or even automobiles. As one of the KMD real projects, we use multimodal sensor arrays to study the connections between the real world and the computer. At KMD, we refer to anything that mediates between human beings as “media.” We call our project “Network Media” because the media themselves interact over networks.

Our “live E!” project studies weather. We work together with local government bodies, private companies, and technical high schools that install “digital instrument shelters” in a project to access weather information from sensing devices at approximately 150 locations around Japan and identify how it can be used to respond to damage from downpours and to observe climate and atmospheric conditions. We also consider agriculture and similar areas to be “media.” “AROOTS” studies how to grow foliage plants by using SNSs to share know-how. The mechanism allows users who grow vegetables to share their enjoyment of vegetable gardening. This communication system not only encourages them to continue gardening but also increases their satisfaction.

KMD students should be the kinds of people who go out and get things, not the kinds who sit patiently waiting for things to come to them. I have been a researcher for 30 years, and it is what I learned early on that has continued to serve me the best. I hope that while here at KMD, students develop their own ways of doing things, their own techniques and their own policies—things that will enable them to adapt to any situation.

Hideki Sunahara  Professor
Areas of expertise: Mobile Communications Technologies, Sensor Networks, Knowledge and Information Structuring Technologies
Graduated from the Faculty of Science and Technology, Keio University. Earned a Master’s degree and completed the required doctoral course credits at the Graduate School of Science and Technology, Keio University. Also teaches in the Department of Computer Science, The University of Electro-Communications and at the Information Technology Center at Nara Institute of Science and Technology. http://live-e.org

“AROOTS” studies how to grow foliage plants by sharing know-how through SNS.
Guest Professor

Susumu Tachi
Guest Professor and Director of the International Virtual Reality Center. Areas of expertise: Virtual Reality, Robotics, Telexistence, Retro-reflective Projection Technology (RPT), 360-degree Autostereoscopic 3-D Displays, Haptic Primary Colors, and Telexistence Avatar Robots

Born in Tokyo. Received B.E., M.S., and Ph.D. degrees in mathematical engineering and information physics from the University of Tokyo in 1968, 1970, and 1973, respectively. Previous positions include Principal Researcher and Director of the Biobotics Division at the Mechanical Engineering Laboratory, Senior Visiting Scientist at MIT, Professor at The University of Tokyo Research Center for Advanced Science and Technology, Professor of mathematical engineering and information physics in the Faculty of Engineering at The University of Tokyo, and Professor at the Graduate School of Information Science and Technology of The University of Tokyo. Advocated the concepts of guide dog robots and telexistence and demonstrated their engineering feasibility. Founding President of the Virtual Reality Society of Japan. Professor Emeritus at the University of Tokyo.

http://tachilab.org
http://tachilab.org/modules/members/tachi.html

During the 1980s, the objective of robotics research was to achieve robotic autonomy and to develop artificial intelligence. At that time, I advocated the concept of “telexistence,” whereby human beings could use robots as agents or extensions of themselves. This was a novel idea, and it fostered the development of a new means of communication that could enable a person to transmit himself/herself to a remote location. I investigated the technological means for realizing it from an engineering standpoint, and I pioneered its realization. This marked the beginning of our present use of “telexistence communication” and “networked robots.”

One of my main current projects is “Construction and Utilization of Human-harmonized ‘Tangible’ Information Environment,” which is a Core Research for Evolutionary Science and Technology (CREST) project under the Japan Science and Technology Agency (JST). This project aims to construct an intelligent information environment that is both visible and tangible; in this intelligent information environment, real-space communication, human-machine interface, and media processing are integrated. One of our recent developments is “TELESAR V,” a platform that achieves haptic telexistence. We have also developed a telexistence wide-angle immersive stereoscope (TWISTER), which has a full-color autostereoscopic display with a 360-degree field of view. This technology will enable us to virtually interact with people from different locations.

By participating in our project, you would be a part of the most advanced research endeavors in the world, and you will learn to acquire the research skills for achieving your goals.

Mastering the Fundamental Research Ability, Conceptualizing a Novel Idea, and Conducting Creative Research to Realize the Concept

“TELESAR V” is a platform for haptic telexistence.

“TWISTER” is a system that provides a 360-degree three-dimensional display, which can be viewed without special glasses.
Megumi Fujikawa  Project Senior Assistant Professor


Graduated from Royal College of Art in 2003 with MA in Interaction Design. Had been a Research Associate at Helen Hamlyn Research Centre of RCA, focusing on Inclusive Design and Design Research methods for creativity. From 2005, worked for Philips Design in the Netherlands as Interaction Design Consultant for advanced designs and philanthropic projects for Healthcare and Well-being domains. In 2010, went to South India to study Sanskrit language, Yoga, and Vedanta, which teaches the true nature of self that is common to all beings beyond time and cultures, in a traditional setting for three and half years. Interests are in how design thinking can contribute to the global social developments and its methods.

Satoru Tokuhisa  Project Senior Assistant Professor

Areas of expertise: User Experience Design, Service Design, Design Research, Design Theory, Design Philosophy, ITC40, HCI40

Graduated from the Department of Political Science, Faculty of Law, Keio University in 2002. Earned a Ph.D. in Media and Governance at Graduate School of Media and Governance, Keio University in 2007. Expertise in interdisciplinary design, with a focus on integrated user experience design based on the spiral model of using fun to guide users towards a goal. While still at graduate school, was a partner in the establishment of UTUTU Co., Ltd. A partner in the establishment of Sake in 2009. Work focuses on the planning and development of communications media that bring greater enjoyment to ordinary life.

http://www.dangkang.com
http://designthinking.dangkang.com

Charith Fernando  Project Assistant Professor


Yuta Sugiura  Project Assistant Professor

Areas of expertise: Fleecy Computing, Entertainment Computing, Human-Robot Interaction

Chihiro Sato  Project Assistant Professor

Areas of expertise: Commercial Space Design, Behavioral Economics, Economic Geography, Bayesian Networks

Daisuke Uriu  Project Assistant Professor

Areas of expertise: Interaction Design, Experience Design, Designing Memorial Services with Digital Technologies

Masato Yamanouchi  Project Assistant Professor

Areas of expertise: Sensor networks, Digital communication, Collective intelligence
Cutting-edge environment for creativity and real projects

Facilities
Unique factors of KMD from double-degree program, world-class facilities, and to extensive global network.
Facilities

KMD’s facilities are designed to embolden students to be creative and to inspire them to instigate projects.

**Project Room**
Both Master’s and Doctoral students come together to collaborate in the large Project Room, which is designed to allow flexibility in use by a particular project or class. Smaller discussion rooms are also available for break-out sessions.

**Hacking Studio**
Students’ ideas take shape even faster as they brainstorm through everything from soldering to electronic circuit planning, lumber cutting, or metalworking in the Hacking Studio. The multiple 3D printers and laser cutters allow tinkering and rapid prototyping, further speeding the design process.

**Network Studio**
Broad experimentation and development using cutting edge technology, such as high-speed networks and server racks, and 3D and super-high definition video editing takes place in the Network Studio. The sensory feedback devices and large 4K interactive displays greatly enhance research in virtual reality.

**Media Studio**
In the professionally equipped multi-purpose Media Studio, students engage in a wide range of creative activities from producing musical performances to directing and filming videos. A mixing booth is available to students in certain courses that can be used for recording and mixing music, chroma key video editing, and motion data recording using motion capture, among other uses.
The Global Innovation Design (GID) program

The Global Innovation Design (GID) program—supported as a “Reinventing Japan Project” by a grant from the Ministry of Education, Culture, Sports, Science and Technology of Japan—is unparalleled in the world, offering a trans-national design education that bridges three major centers of design, culture and industry: Graduate School of Media Design, Keio University in Tokyo/Yokohama, Imperial College and Royal College of Art in London, and Pratt Institute in New York. These centers are international leaders in creativity and innovation, with complementary expertise in art, design, engineering, technology, and business. A select group of GID students will earn Master’s degrees while studying at and traveling between all three program centers. This is not just a study abroad experience, but a multi-institution model for higher education in the 21st century. Students gain a unique perspective by living and studying on three different continents, immersed in three different cultures, amidst three of the largest economies in the world. GID educates global design leaders—“creative catalysts” for positive change in a globalized society.

http://gid.kmd.keio.ac.jp
http://globalinnovationdesign.org

CEMS MIM Program (Double Degree Program)

CEMS, the Global Alliance in Management Education, is a strategic alliance of top global business schools and universities, and multinational corporate partners centered in Europe. Keio University became a CEMS partner school in December 2010.

Through study abroad at other CEMS partner schools and projects implemented in cooperation with CEMS Corporate Partners (CPs), the CEMS MIM (CEMS Master’s in International Management) program seeks to foster individuals capable of acting on the global stage.

KMD students who participate in this program and fulfill certain requirements can earn both a degree at Keio University (Master of Media Design) and a CEMS degree (Master of Science in International Management (MIM)).

Highly acclaimed internationally, CEMS graduates are greatly relied upon not only by CPs but also by other international corporations; numerous CEMS alumni are active in corporations outside their home countries. Through international internships and the Business Projects that form part of the curriculum, as well as the annual CEMS Career Forum, CEMS students have the opportunity to meet with a variety of corporations, and CPs in particular.

Multi-Satellite Using Global Network: From Hiyoshi to the World

The borderless international community is witnessing acceleration in the amount and quality of work taking place in “cloud environments” that connect participants regardless of location. Headquartered on Keio University Hiyoshi Campus, KMD conducts dynamic research and education in a collaborative, global network bringing together numerous satellite facilities and partner institutions across Japan and around the world.

The various locations communicate with each other daily using a high-definition online video collaboration system. Collaboration with people located in different parts of the world ensures that research and educational activities remain on the cutting edge, and that KMD communicates its ideas to the world as a member of the international community.

Hiyoshi Campus Collaboration Complex

The Keio University Hiyoshi Campus Collaboration Complex serves as the headquarters for the research and educational activities conducted by KMD. It contains the advanced technology and equipment required for students to complete their course work and participate in Real Projects.

Keio Osaka City Campus

Keio Osaka Riverside Campus is the KMD’s base of operations in the Kansai Area. KMD has its own laboratory for research on the City Campus.

Keio–NUS CUTE Center (Singapore)

Keio University established the Keio–NUS CUTE Center in Singapore in collaboration with KMD and the National University of Singapore (NUS). Formed at the invitation of the government of Singapore’s Interactive and Digital Media Research and Development Programme Office, the Center conducts advanced research in next-generation media and communications in a strategic partnership with NUS.

Other connections

KMD has partnerships and collaborative ties with a number of other domestic and international educational institutions, including Nara Institute of Science and Technology, University of Southern California (USA) and Korea Advanced Institute of Science and Technology (KAIST).
Students’ Backgrounds

Students from various backgrounds are conducting unique researches at KMD.

Q&A

Home country

Background / Field of undergraduate study

Field of study at KMD

Japan

Violin performance major in the Music Performance Department, management major in the Faculty of Policy Management

Approaching the relationship between humans and sound from multiple angles, creating new values in sound

China

Chinese language pedagogy

Digital signage business models

Singapore

Design industry studies

Improving individual lifestyles through interaction via media

Singapore

Computer science

Video production pedagogy using ICT tools

Australia

Creative communication studies

Strengthening communication between distant locations through media

Botswana

Media studies

Fostering creativity and sharing new media technologies with children in developing countries

Japan

Materials-focused design

Communication treating furniture as a design medium

Japan

Philosophy, cognitive science, social science

Applying design to cognitive science

Malta

Criminology

Sharing Japanese music with the world

USA

Brand Strategy

Social Entertainment
Students at KMD

Variety fo students

<table>
<thead>
<tr>
<th></th>
<th>Master’s</th>
<th>Doctoral</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of students</td>
<td>%</td>
<td>Number of students</td>
</tr>
<tr>
<td>Japanese fresh graduates</td>
<td>90</td>
<td>55%</td>
<td>16</td>
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<tr>
<td>Japanese students with working experience</td>
<td>21</td>
<td>13%</td>
<td>14</td>
</tr>
<tr>
<td>Foreign national students with fresh graduates</td>
<td>48</td>
<td>29%</td>
<td>14</td>
</tr>
<tr>
<td>Foreign national students with working experience</td>
<td>5</td>
<td>3%</td>
<td>3</td>
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<tr>
<td>Total</td>
<td>164</td>
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<td>47</td>
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* Foreign national students means students with foreign national.
* Working experience means someone who has more than 3 years of working experience prior to entering KMD.

Age Distribution

<table>
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<tr>
<th></th>
<th>Number of students</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Doctoral</td>
</tr>
</tbody>
</table>

Ratio of Male to Female

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Number of students</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Master’s</td>
<td>164</td>
<td>59%</td>
<td>41%</td>
</tr>
<tr>
<td>Doctoral</td>
<td>47</td>
<td>62%</td>
<td>38%</td>
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</table>

National Origins

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of students</th>
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</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>1</td>
</tr>
<tr>
<td>Italy</td>
<td>1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5</td>
</tr>
<tr>
<td>Australia</td>
<td>1</td>
</tr>
<tr>
<td>Canada</td>
<td>6</td>
</tr>
<tr>
<td>Syria</td>
<td>1</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
</tr>
<tr>
<td>Thailand</td>
<td>3</td>
</tr>
<tr>
<td>Germany</td>
<td>2</td>
</tr>
<tr>
<td>Finland</td>
<td>1</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>1</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1</td>
</tr>
<tr>
<td>Poland</td>
<td>1</td>
</tr>
<tr>
<td>Portugal</td>
<td>1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1</td>
</tr>
<tr>
<td>Mexico</td>
<td>2</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>12</td>
</tr>
<tr>
<td>China</td>
<td>18</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5</td>
</tr>
<tr>
<td>United States</td>
<td>6</td>
</tr>
<tr>
<td>Total of 20 countries</td>
<td>70</td>
</tr>
</tbody>
</table>
Access: A one-minute walk from Hiyoshi Station
(Tokyu Toyoko Line, Tokyu Meguro Line, or Yokohama Municipal Subway Green Line)

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