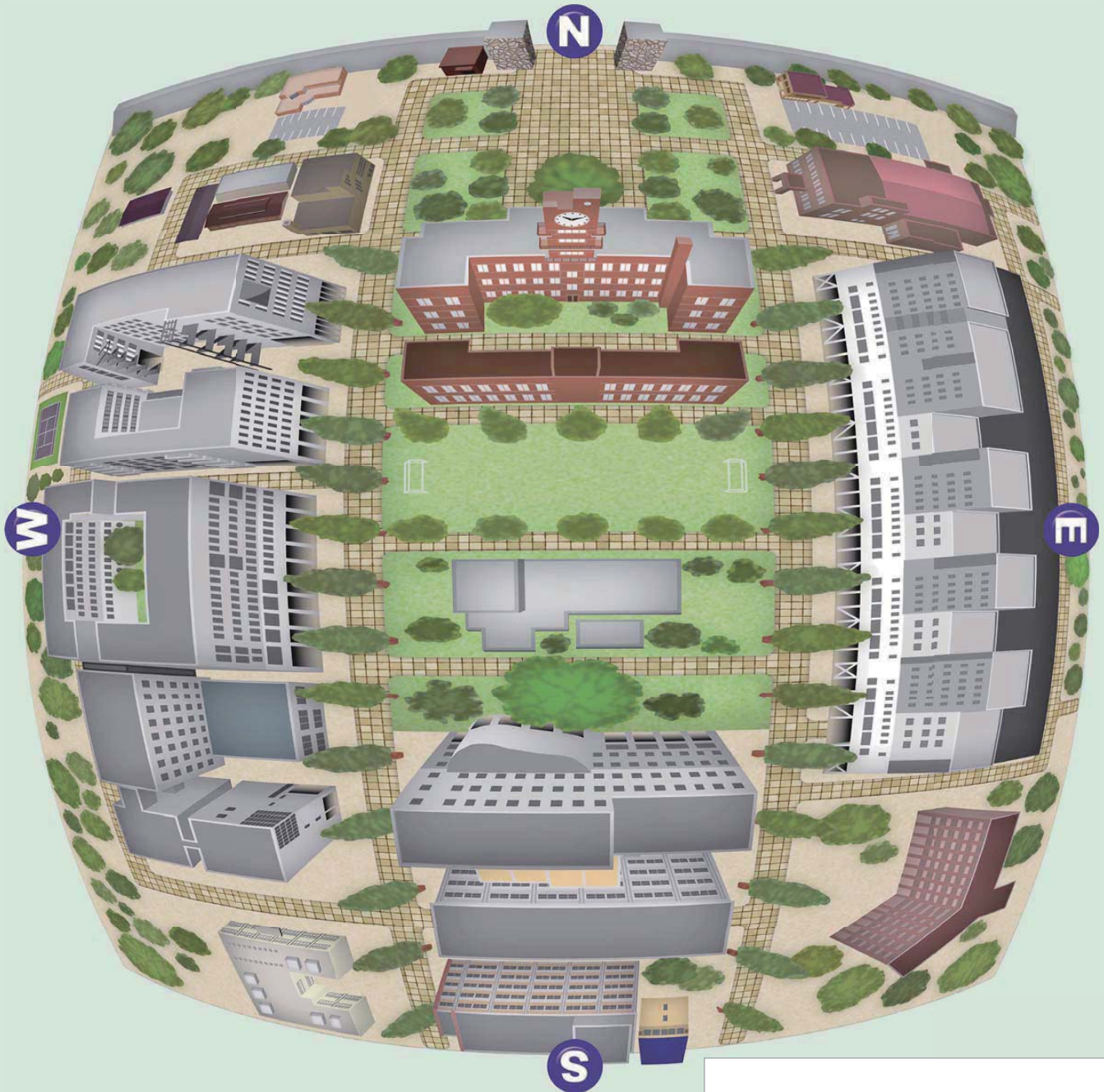


UTokyo KOMABA Research Campus

OPEN HOUSE 2018

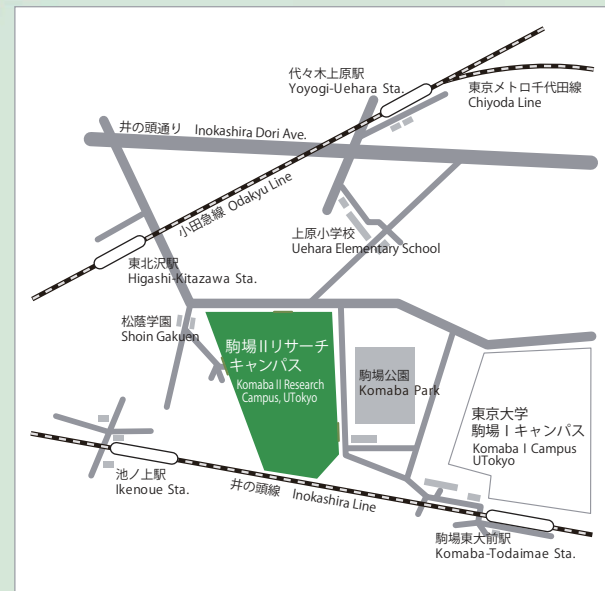
2018 6/8・6/9 10:00~17:00



**Institute of Industrial Science,
The University of Tokyo**



**Research Center for
Advanced Science and Technology
The University of Tokyo**



Komaba Research Campus Open House 2018

Research Center for Advanced Science and Technology (RCAST)

MATERIAL		
TITLE	Room	LABORATORY
Be a Master of Quantum!	Bldg3-105	Quantum Information Physics and Engineering - Nakamura - Usami Laboratory
Let's explore the world of molecules in life with computer graphics	Bldg4-EntranceHall	Theoretical chemistry - Ishikita Laboratory
Wavelength conversion devices and perovskite solar cells	Bldg3-M2	High Performance Materials - Kondo Laboratory
High performance materials viewed in micro scale	Bldg4-223	High performance Materials - Inoue-Watanabae Laboratory
ENVIRONMENT and ENERGY		
TITLE	Room	LABORATORY
High-efficiency and low-cost Next-generation solar cells	Bldg3-M2	New Energy - Okada Laboratory
Meteorological archives: How did the Earth look like that day?	Bldg3-M2	Climate Science Research - Nakamura-Kosaka Laboratory
Co-Creative Community Design, Planning, Management and Sustainable Water Use	Bldg4-2F-Lecturerroom	Co-Creative Community Planning, Design, and Management - Koizumi Oguma Laboratory
Ultra-high-efficiency solar cells and hydrogen-based energy storage system	Bldg3-M2	Energy System - Sugiyama Laboratory
Next-generation photovoltaics tapping the future of energy utilization	Bldg3S-6F-EVHall	Energy and Environment - Academic-Industrial Joint Laboratory for Renewable Energy - Segawa Laboratory
Sustainable renewable energy systems	Bldg3S-4F-EVHall	Academic-Industrial Joint Laboratory for Renewable Energy - Iida Laboratory
INFORMATION		
TITLE	Room	LABORATORY
Observing Earth from Space	Bldg3-M2	Artificial Intelligence - Iwasaki Laboratory
Telecommunications and Sensings based on Fiber Photonics	Bldg3-303	Information Devices - Yamashita - Set Laboratory
Reconstruction of insect microbrain by interdisciplinary approaches	Bldg3S-364 Bldg3F-EVHall	Intelligent Cooperative Systems - Kanzaki-Takahashi Laboratory
Let's enjoy Virtual Reality!	Bldg13-B1 VRTheater	Intelligent Cooperative Systems - Cyber Interface Laboratory
Jamology 2018	Bldg4-2F-Lecturerroom	Mathematical Physics of Emergent Systems - Nishinari-Yanagisawa Laboratory
State of the art manufacturing technology based on advanced photon energy	Bldg4-304	Photon based Advanced Manufacturing Science - Takahashi laboratory
Bio-signal interpretation for human support	Bldg4-301	Photon based Advanced Manufacturing Science - Kotani Laboratory
Welcome to Living Lab Komaba	Bldg3-512	Information Somatics - Inami-Hiyama Laboratory
The networks of communication	Bldg3-M2	Communication Science Laboratory - Tanaka Laboratory
Biological Big Data to Knowledge using Data Science	Bldg4-Lounge	Biological Data Science - Ueda Laboratory
Networked microfluidics and biophotonics for the future life science	Bldg4-Lounge	Networked Biophotonics and Microfluidics - Ota Laboratory
CHEMICAL BIOMEDICINE		
TITLE	Room	LABORATORY
Small snipers to hit aiming at the vital point of biomolecules: Synthetic chemistry for understanding our life	Bldg3-M2	Bioorganic Chemistry - Okamoto Laboratory
Genomic medicine	Bldg4-Lounge	Genome Science - Aburatani Laboratory
Metabolic syndrome -Scientific research on memory of lifestyle-	Bldg4-Lounge	Metabolic Medicine - Sakai Laboratory
Synthetic biology to explore biological events	Bldg4-EntranceHall	Synthetic Biology - Yachie Laboratory
Understanding Cancer through comprehensive nutri-omics approach	Bldg4-Lounge	Integrative Nutriomics and Oncology - Osawa Laboratory
BARRIER FREE		
TITLE	Room	LABORATORY
Welcoming children finding it hard to fit in to mainstream schools!	Bldg1-B1 002 Bldg1-205	Assistive Technology - Nakamura Laboratory
Opening ROCKET Project's classroom doors for all to see!	ROCKET HOUSE	
Assistive Technology Workshop ~Introducing the new way of learning using technology~	Bldg3-307	Assistive Technology - Kondo Laboratory
Industry-Academia Collaboration		
TITLE	Room	LABORATORY
The University of Tokyo MALCS (Multidisciplinary Alliance for Life and Computer Science)	Bldg4-Lounge	The University of Tokyo, Multidisciplinary Alliance for Life and Computer Science
For realization of "Super Smart Society", Society 5.0	Bldg4-EntranceHall	Hitachi UTokyo Laboratory

Komaba Research Campus Open House 2018

Institute of Industrial Science (IIS)

Department of Fundamental Engineering		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Innovative research and developments of multi-scale solid mechanics	Be-B03	Nobuhiro YOSHIKAWA
Safer buildings against earthquakes and tsunamis	Be-202	Yoshiaki NAKANO
Challenge to Geo-disaster Mitigation	Be-206	Takashi KIYOTA
Originally Constructed Technique for Liquid Properties Measurements	Be-305	Keiji Sakai
Surface and Interface Science	Be-310	Katsuyuki FUKUTANI
Nonlinear and nonequilibrium phenomena in various complex fluids	Bw-302	Akira Furukawa
Ultrafast and Nano Optical Science	Ce-302	Satoshi ASHIHARA
Quantum transport in van der Waals junctions of 2D materials	Ce-307	Tomoki MACHIDA
Physics of structural and dynamical hierarchies: from simple liquids to soft matter	Cw-305	Hajime TANAKA
Physics and Modeling of Turbulence	Bw-505	Fujihiro HAMBА
Department of Mechanical and Biofunctional Systems		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Research into Thermal Energy Conversion Systems	Be-B01	Chisachi KATO
Prediction and Control of Unsteady Turbulent Flow and Resulting Aerodynamic Noise	Bw-B01	Chisachi KATO
Enhancement of Core Production Technologies; Progress in Ultimate Injection Molding and Pulp Injection Molding	De-B01	Hidetosi YOKOI
Machining/Assembly technologies for high-efficiency manufacturing	De-B01	Kensuke TSUCHIYA
Functional Geometry Fabrication: 3D Printing and Molded Interconnect Divices	De-B01	Toshiki NIINO
Advanced Materials Forming and Processing: Micro Sheet Forming and Tube	De-B01	Tsuyoshi FURUSHIMA
Terahertz nanoscopy and metal-polymer direct joining	De-B01	Yusuke KAJIHARA
Connecting to Nano	De-B03	Hideki KAWAKATSU
Measurement and Control in Mobility	De-B04	Kimihiko NAKANO
Dynamics and Control of Vehicle	De-B04	Yoshihiro SUDA, Shintaro ONO
Measuring water retention for conservation engineering	Ee-103	Ryo SHIRAKASHI
Educational activities based on IIS cutting-edge research	Elevator Hall, Bldg. B	Shio KAWAGOE
Research on Solid Oxide Fuel Cells and Next Generation Thermal Cycles	Dw-206	Naoki Shikazono
Health Monitoring Systems for Composite Structures Based on Ultrasonics	Dw-401	Yoji OKABE
Hemodynamic Simulation and in vitro Experimental Measurement for Predictive	De-505	Marie OSHIMA
High-speed robot beyond human	Dw-505	Yuji YAMAKAWA
Department of Informatics and Electronics		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
3D e-Heritage: 3D Reconstruction, Analysis and Visuzalization of Cultural Heritage Assets	Piloti, Bldg.E	Takeshi OISHI
Silicon-Based Integrated Nano Devices	Ee-206	Toshiro HIRAMOTO, Masaharu KOBAYASHI
Quantum Materials and Nanostructure Science	Ee-207	Mark HOLMES
Cryptography and Information Security	Ew-401	Kanta MATSUURA
Mathematics and Informatics for Life Science	Ce-502, 503	Tetsuya KOBAYASHI, Takashi KOHNO, Kazuyuki AIHARA
Brain Inspired Optical and Electrical Computers	Ce-602, 604~606	Kazuyuki AIHARA, Takashi KOHNO, Tetsuya
Phenomena and Dynamics: Understanding Life, Nature and Society with Mathematics	Ce-602, 604~606	Kazuyuki AIHARA, Takashi KOHNO, Tetsuya
Urban Sensing Technology with Mobility	Ew-601	Kaoru SEZAKI
Department of Materials and Environmental Science		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Development of new analytical methods by using 3 dimensional atom probe microscope	Be-B05	Masanori OWARI
Concrete properties and durability of structure	Ee-B05	Toshiharu KISHI
Molecules, Nanospace, and the Zeolite Catalyst	Fe-206	Masaru OGURA
Fabrication of carbon allotropes films; diamond and amorphous carbon	Fe-302	Yoshitaka MITSUDA
structure and properties of crystal defects	Fe-305	Yuki TOKUMOTO
Understanding the role of atom and electron using microscopy, spectroscopy, theretical calculation, and Artificial Intelligence	Fe-311	Teruyasu MIZOGUCHI
Development of Functional Molecules	Fw-304	Kazuyuki ISHII
Development of new analytical methods by focused ion beam SIMS	Fe-408	Masanori OWARI
Understanding machanisms underlying development of neuron and brain	Fe-411	Yoshiho IKEUCHI
Operating Molecules with Light, Heat and Stress	Fe-507	Hirohiko HOUJOU
Development of Future Electronics by a Low Temperature Crystal Growth Technique	Fw-504	Hiroshi FUJIOKA
Sensing devices based on supramolecular analytical chemistry	Fe-602	Tsuyoshi MINAMI
Design and synthesis of metal clusters and their applications	Fe-604~605	Yusuke SUNADA
Bioinspired Synthetic Organic Chemistry - Learn from Metabolic Reactions, and then Surpass Them	Fe-608	Kazuaki KUDO
Cell Engineering with Carbohydrates and Fluorous Solvents	Fe-611	Kenichi HATANAKA

Department of Human and Social Systems		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Preparation for complexed hazard due to urbanization and large earthquake disasters	Be-B02	Yoshiaki NAKANO, Takashi KIYOTA, Kenichi KAWAGUCHI, Mikio KOSHIHARA, Kimiro MEGURO, Reiko KUWANO, Muneyoshi NUMADA
Strong Wind Demonstration in Wind Tunnel	Ce-B08	Hideki KIKUMOTO
Monitoring and Control Technology of Urban Environment	Ce-B08	Hideki KIKUMOTO
Energy System of the Future for Zero Energy Building	Ce-B08	Ryozo OOKA
Urban Design of the Future	Ce-B08	Ryozo OOKA
Towards the Establishment of a Sustainable Urban System -Longterm Behaviour of Earth and Buried Structures-	Ee-B01	Reiko KUWANO
Towards the Establishment of a Sustainable Urban System -Rational infrastructure management system for municipalities in Japan-	Ee-B02	Kohei NAGAI
Development of new techniques for longer service life and horizontal recycling of construction materials toward the realization of sustainable society	Ee-B06	Yuya SAKAI
Measurement and evaluation of sound environment in urban city	Ce-101	Shinichi SAKAMOTO
City and Human Society on the Move: Two Hundred Thousand Years of History and Future	Piloti, Bldg.B	Kengo HAYASHI, Shin MURAMATSU
Urban Related Spatial Information - Science for City and People -	Lounge, Bidg. C, 2nd	Yoshihide SEKIMOTO
Potential of architecture -transformation of publicness, potential of private companies as public spaces-	S-202	Yoshiyuki KAWAZOE
Symbiosis of forest and city -Timberize City as recycling resource	Ce-406	Mikio KOSHIHARA
Towards the Establishment of a Sustainable Urban System -Research for disaster training program-	Be-504	Muneyoshi NUMADA
Connected systems for sustainable building	Be-507	Tomonari YASHIRO
Spatial structures as architectures for human beings	Bw-502	Kenichi KAWAGUCHI
Towards the Establishment of a Sustainable Urban System -Establishment of urban planning and engineering for social safety system-	BB core, 6th Fl.	Takaaki KATO
Global Hydrological Cycle: Monitoring and Prediction	Be605~608	Taikan OKI, Kazuo OKI, Kei YOSHIMURA, Dai YAMAZAKI, Masashi KIGUCHI, Hyungjun KIM, Takao YOSHIKANE
Earth observation, disaster monitoring and risk assessment from space	Bw-602	Wataru TAKEUCHI
Visualizing the local characteristics of Cities	Cw-701	Kotaro IMAI
Endowed Research Unit for Non-ferrous Metal Resource Recovery Engineering		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Research on Recycling Process for Non-ferrous Metals	Fw-401	Toru H. OKADA, Takashi NAKAMURA, Chiharu TOKORO
Mathematical Engineering for Complex Social Systems in Future		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Mathematical Engineering for Complex Social Systems	Ce-602, 604~606	Kazuyuki AIHARA, Tomonari YASHIRO
Base Technologies for Future Robots		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Precision Forming, Multi-material Additive Manufacturing, Robotic System developing	De-B01	Mori MIKI, Niino TOSHIKI, Yanagimoto JUN, Oishi TAKESHI
Brain-Morphic AI to Resolve Social Issues		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Brain-Morphic AI	Ce-602, 604~606	Kazuyuki AIHARA, Takashi KOHNO, Timothée LEVI
Machine learning and AI control technology for energy conservation and creation in Construction Sector		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Utilizing building data,improve space and function.(Machine learning and AI application)	Be-507	Bumpei MAGORI
Energy System Integration, Social Cooperation Program		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Energy Integration and a Sustainable Society	COMMA House	Kazuhiko OGIMOTO
Sustainable Energy Demand and Supply System	As-3rd Fl.	Yumiko IWAFUNE

Nanoscience Center for Photonics, Electronics, and Materials Engineering		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Terahertz photodynamics and device applications of quantum nanostructures	Ee-202	Kazuhiko HIRAKAWA
Photonic Nanostructures and Quantum Materials: Physics and Applications	Ee-207, 208	Satoshi IWAMOTO, Mark HOLMES
Optical and Photonic Systems, Devices, and Materials : Holographic Data Storage Systems, Materials and Nanoplasmonics	Ce-305	Tsutomu SHIMURA
Photofunctional Nanomaterials	Fe-405	Tetsu TATSUMA
Center for Socio-Global Informatics		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Computer vision for understanding and assisting human activities	Ee-402	Yoichi SATO
Interactive Platform for Processing, Learning, and Visualizing Big Data	Ew-503	Masaru KITSUREGAWA, Masashi TOYODA, Toshihiro NEMOTO, Naoki YOSHINAGA, Eiji IKOMA, Kazuo GODA, Masahiko ITOH
Center for Research on Innovative Simulation Software		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Inverse Problems in Thermal Fluid Engineering	Dw-202	Yosuke HASEGAWA
Solid oxide fuel cells and heat transfer system	Dw-206, As 3rd Fl.	Naoki SHIKAZONO
High Efficiency Power Generation System -Innovative Drying System for Brown Coal and Solid Oxide Fuel Cell Power Generation System-	As-3rd Fl.	Yoshinori KOBAYASHI
Innovative Simulation of Bio and Nano Molecules	De-501	Fumitoshi SATO
Advanced Mobility Research Center (ITS Center)		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Sensing, Modeling, and Visualization for ITS	De-B04	Shintaro ONO
Designing the Next Generation Transport Systems	Piloti, Bldg.E	Yoshihiro SUDA, Takashi OGUCHI, Takeshi OISHI, Shinichi SAKAMOTO, Kimihiko NAKANO, Koichi SAKAI, Shintaro ONO
Technologies For Safe and Sustainable Road Traffic Society	Cw-504	Takashi OGUCHI
Center for International Research on Integrative Biomedical Systems		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Applied Microfluidic Systems - From Deep-sea Application to Cell Engineering -	Elevator Hall, Bldg. F	Teruo FUJII
Biohybrid Microsystems	Fw-205	Shoji TAKEUCHI
It's a small world — cells as tissue design tools —	An-512	Yukiko MATSUNAGA
Tissue engineering for regenerative medicine and cell-based assay	Fe-505	Yasuyuki SAKAI
Centre for Interdisciplinary Research on Micro-Nano Methods		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Micro Components & Systems for Realization of Trillion Sensors Network	De-B02	Beomjoon KIM
Thermoelectrics by nanotechnology -Nanoscale heat transfer and thermoelectrics-	Fe-207	Masahiro NOMURA
Nano-probing Technologies	Ee-305	Takuji TAKAHASHI
Integrated Research Center for Sustainable Energy and Materials		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Material design based on polymer dynamics control	Fe201	Naoko YOSHIE
Order of atomic arrangement and physical properties of solids	Ce-311	Keiichi EDAGAWA
Novel Functional Glasses Prepared by Aerodynamic Levitation Furnace	Fe-308	Hiroyuki INOUE
Future materials: Titanium, Rare Metals	Fw-302	Toru H. OKABE
Electrochemical Materials and Processes for the Environment	Fw-403	Shunsuke YAGI
Production of semiconductors from molten alloy - solution growth of next-generation semiconductor SiC and AlN	FW-704	Takeshi YOSHIKAWA
International Center for Urban Safety Engineering (ICUS)		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Towards the Establishment of a Sustainable Urban System —Longterm Behaviour of Earth and Buried Structures—	Ee-B01	Reiko KUWANO
Towards the Establishment of a Sustainable Urban System- Development of Earthquake Resilient Urban Environment -	Be-601~604	Kimiro MEGURO
Towards the Establishment of a Sustainable Urban System	Bw-603	Kimiro MEGURO, Reiko KUWANO, Takaaki KATO, Kohei NAGAI, Yudai HONMA, Muneyoshi NUMADA, Tetsuro ITO, Mikio KOSHIHARA, Yoshihide SEKIMOTO, Wataru TAKEUCHI

Center for Integrated Underwater Observation Technology		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
A light in the Ocean	De-B04, De-103	Blair THORNTON
Future of the Underwater Platform Systems	De-B04, De-103	Toshihiro MAKI
Evolution of Studies in Center for Integrated Underwater Observation Technology	Piloti, Bldg.D	Akira ASADA, Chang-Kyu RHEEM, Katsuyoshi KAWAGUCHI, Daisuke KITAZAWA, Toshihiro MAKI, Blair THORNTON, Shuhei NISHIDA, Yosuke HASEGAWA
Sea Surface Measurement by using Active Microwave Remote Sensing and Development of Ocean Renewable Energy	Dw-303	Chang-Kyu RHEEM
Marine Food / Energy Utilization and Ecosystem Preservation	An-514	Daisuke KITAZAWA
Development of exploration system for marine resource	Dw-501	Akira ASADA
Design—Led X PLATFORM		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Prototyping & Design Laboratory	S-110, S-109	Shunji YAMANAKA
RCA-IIS Tokyo Design Lab	S-110, S-206	Pennington MILES, Marisa OZAKI, Shunji YAMANAKA, Tsutomu SHIMURA, Toshiki NIINO, Satoshi ASHIHARA, Kazuyuki ISHII, Kotaro IMAI, Masaru OGURA, Yoichi SATO, Yosuke HASEGAWA, Teruo FUJII
Collaborative Research Center for Innovative Mathematical Modelling		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Innovative Mathematical Modelling to Solve Complex Systems Problems in the Real World	Ce-602, 604~606	Kazuyuki AIHARA, Tomonari YASHIRO, Takahiro OMI
LIMMS/CNRS-IIS(UMI2820) International Collaborative Research Center		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
LIMMS/CNRS-IIS(UMI2820)(Laboratory for Integrated Micro-Mechatronic Systems) -- Japan-France International Research Collaboration on Micro Mechatronics--	Elevator Hall, Bldg. C	Eric LECLERC, Beomjoon KIM
Institute for Nano Quantum Information Electronics		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Innovation center for fusion of advanced nano quantum information electronics technologies	As-107	Yasuhiko ARAKAWA, Members
Chiba Experiment Station		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Research Activities at Chiba Experiment Station	Lounge, Bidg. E, 2nd Fl.	Chiba Experiment Station
Common Facilities / Other Organizations		
RESEARCH SUBJECT of LABORATORIES	Room	Professor (s)
Exhibition of central workshop	Bldg. 17	Central Workshop
The Activity Report of Technical Assistant Educational Opportunities Committee	As-305	Technical Assistant Educational Opportunities Committee
Research collaboration with Tokyo City University (poster exhibition)	CD Core, 2nd Fl. ElevatorHall, Bldg.B	Research Management Office
Activities of Office for the Next Generation (ONG)	Elevator Hall, Bldg. B	Office for the Next Generation