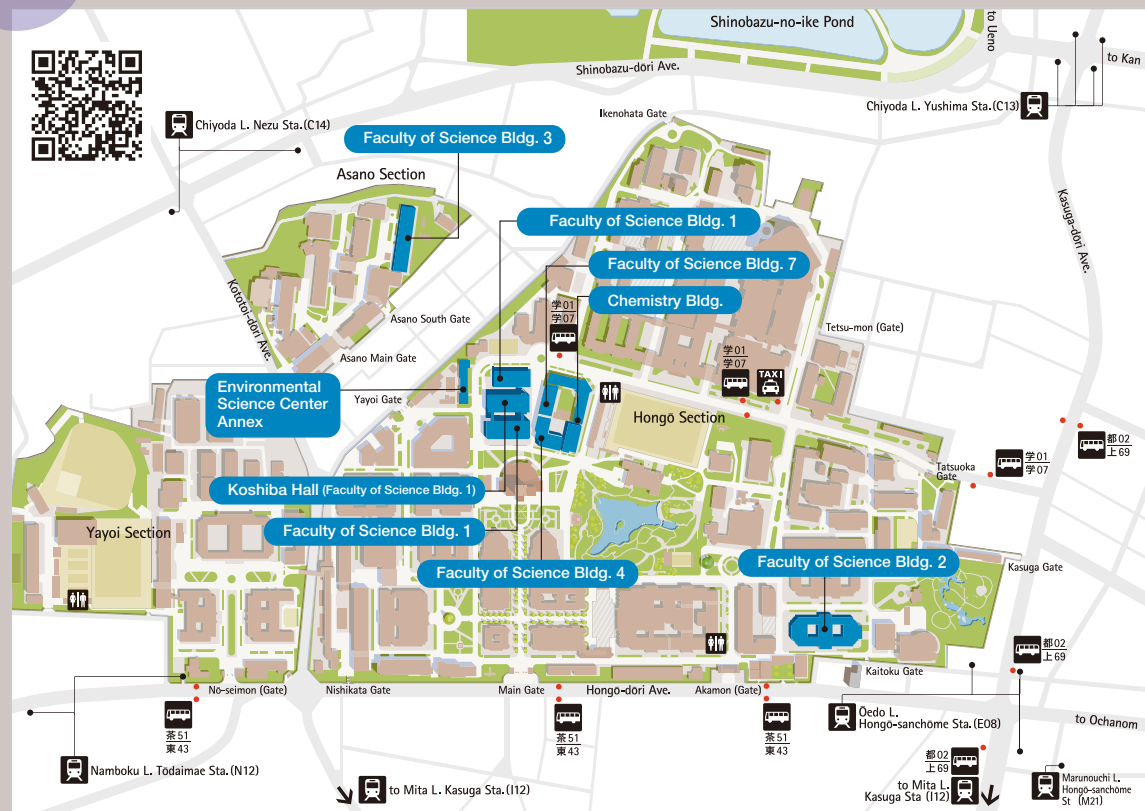


A map of Japan with the Kinki region highlighted in yellow. The Kinki region is located in the central-western part of the main island of Honshu. The surrounding areas are colored green, and the surrounding water is light blue.

The map illustrates the geographical distribution of research centers and universities in Japan. Key locations and their associated institutions are as follows:

- Wako:**
 - Riken
 - High Energy Accelerator Research Organization
- Hida:**
 - Kamioka Observatory, ICRR
- Sagami-hara:**
 - Institute of Space and Astronautical Science (ISAS), Japan Aerospace Exploration Agency (JAXA)
- Komaba:**
 - Graduate School of Arts and Sciences
 - Institute of Industrial Science (IIS)
- Kashiwa:**
 - Institute for Solid State Physics
 - Graduate School of Frontier
 - Institute for Cosmic Ray Res
 - Kavli Institute for Physics and of the Universe (Kavli IPMU)
- Hongo:**
 - Department of Physics
 - Research Center for the Early Universe (RESCEU)
 - Center for Nuclear Study (CNS)
 - International Center for Elementary Particle Physics (ICEPP)
 - Institute of Molecular and Cellular Biosciences (IMCB)
 - Cryogenic Research Center
 - Department of Nuclear Engineering and Management (NEM)



Tea time at Kavli IPMU



Photomultiplier tube used in the Nobel



Active discussions

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Nobel Prize was awarded to Prof. Takaaki Kajita.

Nobel Prize was awarded to Prof. Masatoshi Koshiha (Professor Emeritus).

Reorganization of Departments.
Graduate School of Science was
formed by current 12 Departments.

Department of Physics, Department of Astronomy, and Department of Geo-Physics were separated again.

The College of Science became the Faculty of Science. The Departments of Theoretical Physics and Experimental Physics were merged to form the Department of Physics.

Foundation of the University of Tokyo.
Department of Physics was included in the
College of Science.



Graduate School of Science:
<http://www.phys.s.u-tokyo.ac.jp/en/>
Secretary office for support of international students.
<http://www.s.u-tokyo.ac.jp/ilo/en/>

Department of Physics, Faculty of Science & Graduate School of Science, The University of Tokyo
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Nobel Prize was awarded to Prof. Yoichiro Nambu, who graduated from the Department of Physics in 1943.

First part of the Faculty of Science Building 1 (West Wing) was completed.

Nobel Prize was awarded to Dr. Leo Esaki, who graduated from the Department of Physics in 1947.

Department of Physics, Department of Astronomy, and Department of Geo-Physics were combined together to Department of Physics.

ent of Physics was divided into
ent of Theoretical Physics and
ent of Experimental Physics.

of Physics was formed in Tokyo-Kaisei
erunner of the University of Tokyo.



UNIVERSITY OF TOKYO
Graduate School of Science and Technology

**GLOBAL SCIENCE
GRADUATE COURSE**



Program Overview

The Global Science Graduate Course is a two-year program designed to provide students with a strong foundation in science and technology, as well as the opportunity to engage in research and international collaboration. The program is open to students from around the world who are interested in pursuing a career in science and technology.

Program Structure

The program consists of a core curriculum of science and technology courses, as well as a research component. Students are required to complete a thesis and defend it before a committee. The program also offers opportunities for students to participate in international exchange programs and to work on joint research projects with faculty members.

Admission Requirements

Students must have a bachelor's degree in a science or technology field from a recognized university. They must also have a strong academic record and be fluent in English. The program is open to students from all countries, and there are no restrictions on the number of students from any one country.

Application Process

Students should apply to the program by submitting an application form, a letter of recommendation, and a transcript of their undergraduate record. The application deadline is typically in the fall of the year preceding the start of the program. Students who are accepted to the program will be required to attend an orientation program and a language course before beginning their studies.

Financial Support

The University of Tokyo provides financial support for students in the Global Science Graduate Course. This includes tuition fees, living expenses, and travel costs. Students who are accepted to the program will be required to complete a financial statement and provide evidence of their financial resources.

Contact Information

For more information about the Global Science Graduate Course, please contact the Graduate School of Science and Technology at the University of Tokyo. The contact information is provided on the back of this brochure.

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The Global Science Graduate Course (GSGC)
<http://www.phys.s.u-tokyo.ac.jp/en/admission/462/>
 Admissions to Graduate Courses
http://www.phys.s.u-tokyo.ac.jp/en/lp/admission_gc/

Physics

Department of Physics,
Graduate School of Science,
The University of Tokyo



Watch the Universe with Physics

Explore Materials and Life with Physics

Physics

Examples of collaborating
institutes and organizations



Graduate School of Science
<http://www.phys.s.u-tokyo.ac.jp/en>



Institute for Solid State Physics
http://www.issp.u-tokyo.ac.jp/index_en.html



Institute of Space and Astronautical Science (ISAS),
Japan Aerospace Exploration Agency (JAXA)
<http://www.isas.jaxa.jp/e/>



Institute for Cosmic Ray Research (ICRR)
http://www.icrr.u-tokyo.ac.jp/index_eng.html



Kavli Institute for the Physics and
Mathematics of the Universe (Kavli IPMU)
<http://www.ipmu.jp/en>



High Energy Accelerator
Research Organization (KEK)
<http://www.kek.jp/en/>



Graduate School of Arts and Sciences

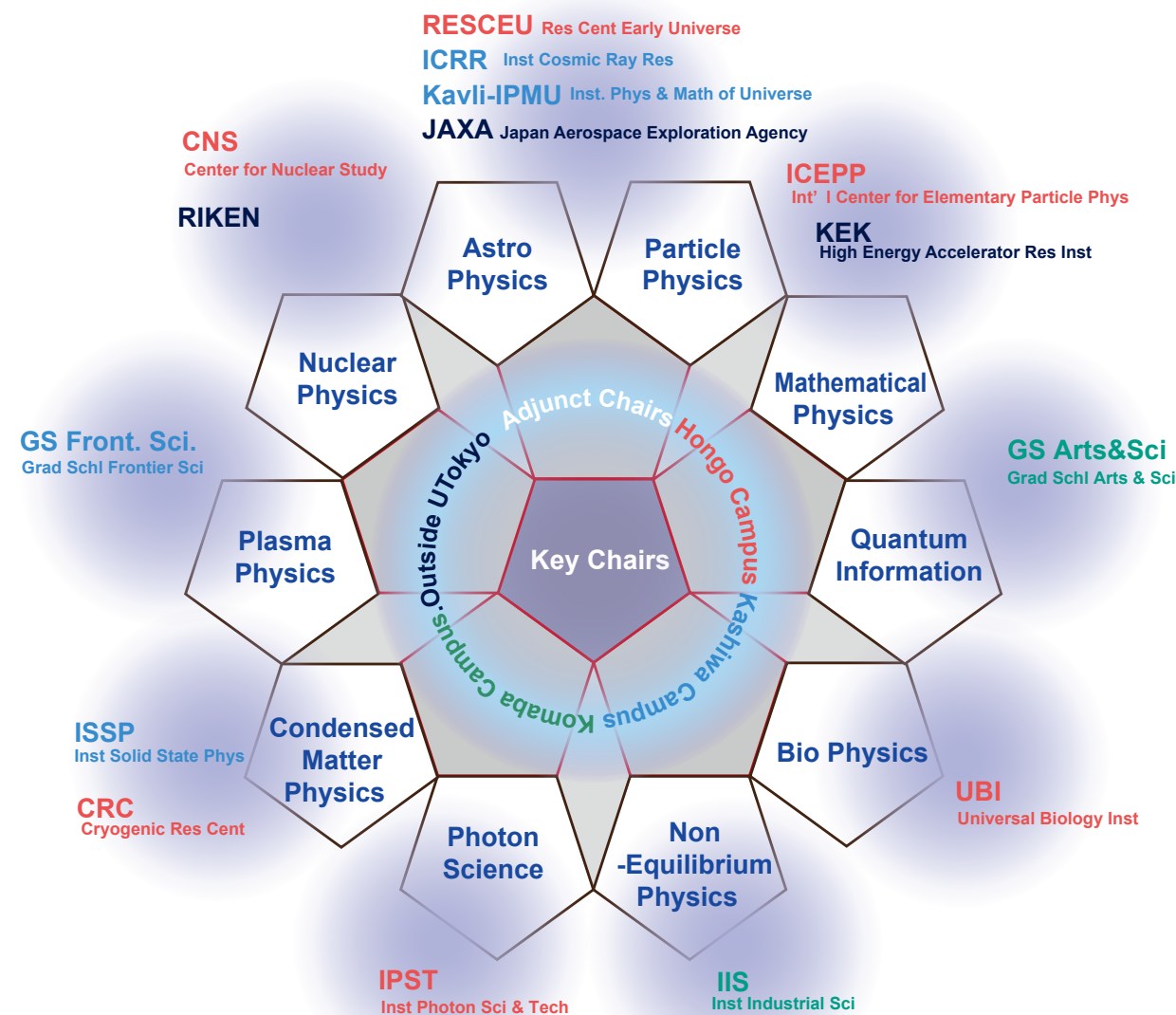
About Us

The Department of Physics has more than 130 faculty members. They are all internationally recognized researchers who cover almost all of the frontier fields of Physics, such as Condensed-Matter Physics, Cosmology, Particle Physics, Nuclear Physics and General Physics. We have the longest history among Japanese universities concerning education and research in Physics, while turning out many outstanding physicists, including Leo Esaki (1973 Nobel laureate), Ryogo Kubo (1977 Boltzmann Medal), Yoichiro Nambu (2008 Nobel laureate), Masatoshi Koshihara (2002 Nobel laureate), and Takaaki Kajita (2015 Nobel laureate) over the past century. Our Department is one of the world's largest and top-ranked graduate schools in Physics.

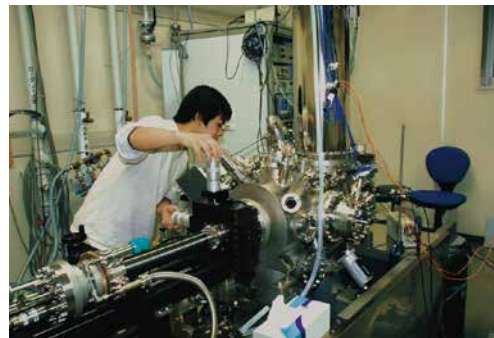
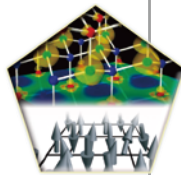
Structure

The frontier fields of modern physics span a considerably wide range. Thus, our faculty members are working not only for the Department of Physics at Hongo Campus, but also for related graduate schools, research institutes and centers, and outside research organizations. Thereby diverse research fields in physics are covered.

Structure of Department of Physics, The University of Tokyo



Condensed-Matter Physics



In the experimental condensed-matter group, we aim to explore novel quantum phases formed by ensembles of electrons, atoms and molecules in materials, and to understand their properties microscopically. Our playgrounds include, for example, superconductivity, topological quantum phases, correlated electron systems, quantum magnetism and superfluid He. The development of new experimental probes, such as advanced spectroscopy using photons from synchrotron radiation and free-electron lasers, as well as characterization under extreme conditions (ultra-low temperature, ultrahigh magnetic field, vacuum, and pressure) are also our important experimental research areas.

Magnetism and superconductivity are typical co-operative phenomena caused by the interaction of electrons and nuclei in crystals. Theoretical condensed-matter physics aims to understand such interesting phenomena in condensed-matter from the basic principles of physics and interactions between constituent particles. We also pursue methodological development for that purpose. The research field of theoretical condensed-matter physics is further expanding due to recent developments of new experimental techniques, like highly accurate electron spectroscopy or laser cooling, as well as large-scale computer simulations.

Astrophysics and Cosmology



Astrophysics aims to (1) understand the origin and evolution of the universe, and (2) explore physics under extreme conditions, such as high temperature, high density, and strong magnetic fields. We conduct experimental and observational studies using ground-based, underground, and space-borne facilities. Multi-messenger observations through electromagnetic waves, cosmic rays, neutrinos and gravitational waves allow us to reveal the exciting nature of the Universe.

Topics of theoretical research include the evolution of the universe, the formation of stars and black holes, and the nature of dark matter and dark energy. To this end, we utilize observational data and computer simulations as well as a broad range of theoretical physics, such as particle physics, general relativity, plasma physics, atomic and molecular physics, fluid mechanics, and celestial dynamics. We also explore novel methods for data analysis of gravitational-wave detection, for exascale computing, and for developing turbulence theory.



Particle and Nuclear Physics

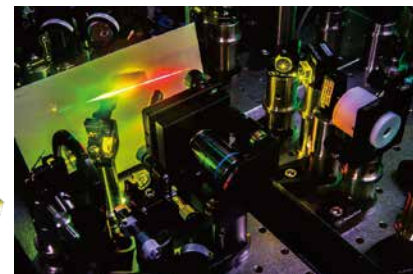
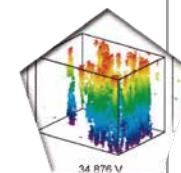


We are studying atomic nuclei and elementary particles, the fundamental constituents of the observable matter in the universe, using cutting-edge experimental technologies and accelerators. To explore phenomena at both large and small scales, our research necessarily considers various topics. In particular, basic questions are being addressed: Why does matter have mass? How was the universe created? How can we understand strong interactions, and what are the mechanisms responsible for synthesizing the variety of elements on Earth? What are the limits where beautiful symmetries arise or break down?



In theoretical particle physics, we conduct research to address fundamental questions concerning the origin of space-time and matter. Some concrete examples of our focus are: Physics beyond the standard model; Particle cosmology, such as dark matter and inflation; Superstring, M-theory, quantum gravity, supersymmetric gauge theory; Mathematical physics related to quantum field theory, such as duality and integrability; Quantum foundation -- the conceptual and mathematical underpinnings of quantum theory. Research on theoretical nuclear physics includes exotic nuclei, novel shell structures, quark-gluon matter in and out of equilibrium, and astrophysical applications.

General Physics / Biophysics



The research fields of Experimental General Physics cover laser physics and spectroscopy, plasma physics, and the physics of non-equilibrium systems. In laser physics and spectroscopy, we study novel quantum states of matter, light-matter interactions in strong optical fields, and the spectroscopy of various systems, including atoms, molecules, nanoparticles, semiconductor nanostructures, and biological molecules. In plasma physics, nonlinear dynamics and collective phenomena in non-equilibrium plasmas are studied in order to realize nuclear fusion. The physics of living matter and out-of-equilibrium systems are studied, which are relevant to biophysics and soft matter.

A living organism is a complex system consisting of many layers, but it is composed of both physical and fundamental constituents. Therefore, it should be possible to understand the principles governing life in term of physics. From this viewpoint, biophysics aims for a general integrated understanding of biological phenomena through the methodologies of physics, by resolving a living organism into its elements, such as molecules and cells, and by considering it as a system in which the elements interact with each other. We are conducting theoretical and experimental research on the physics at many layers, such as molecules, supermolecules, cells, nerves, and the brain.