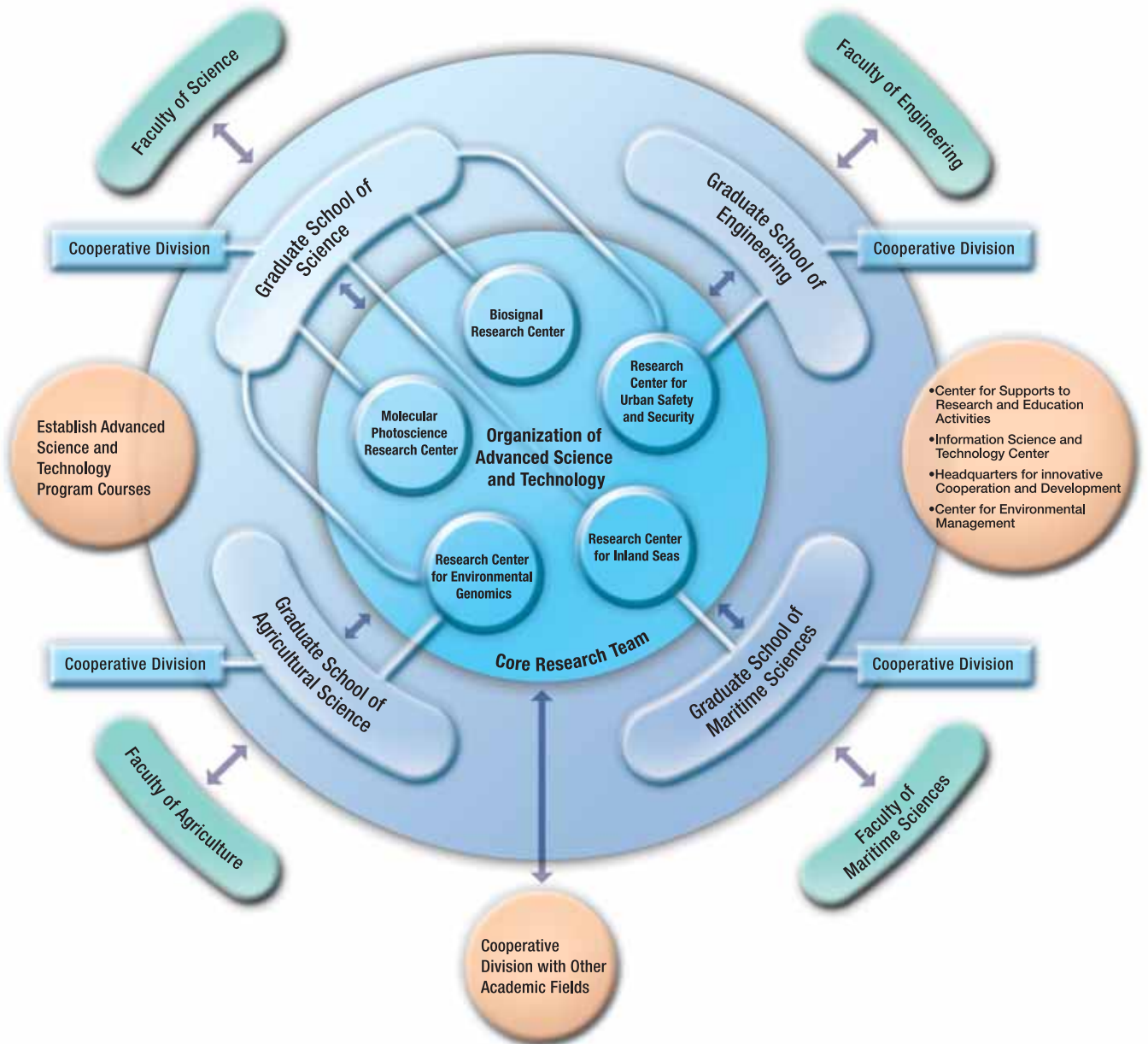


Organization of Advanced Science and Technology

The Organization was established in 2007 as part of the reorganization of the Graduate School of Science and Technology. It is made up of four Kobe University graduate schools: Science, Engineering, Agriculture, and Maritime Sciences. The Organization is an interdisciplinary entity consisting of a Core Research Division made up of 21 core research teams, and five associated Research Centers. Serving as a base for cooperation among the four natural science graduate schools, the Organization aims to promote frontier research in natural science at the University.



21 core research teams

No.	Research Theme	Leader
1	Computational Approach to Mathematical Sciences	TAKAYAMA Nobuki
2	Physics Study of Particles and Space-Time with Frontier Accelerators	KAWAGOE Kiyotomo
3	Advanced Molecular Photoscience	TOMINAGA Keisuke
4	Improvement of Coastal Ecosystems in Enclosed Seas	KAWAI Hiroshi
5	Signaling Mechanisms by Protein Modification Reactions	SAITO Naoaki
6	Origin and Evolution of Planetary Systems	NAKAGAWA Yoshitsugu
7	Nanoengineering	HAYASHI Shinji
8	Integration of IT and Robotics Technologies	YOSHIMOTO Masahiko
9	Energy & Environment	OHMURA Naoto
10	Built Environment for Regional Regeneration	ADACHI Hiroshi
11	Intelligent Manufacturing System and Precision Engineering	SHIRASE Keiichi

No.	Research Theme	Leader
12	Disaster Mitigation Strategy	IIZUKA Atsushi
13	Safety and Symbiosis of Urban Space	MICHIOKU Kohji
14	Consolidated Biorefinery	KONDO Akihiko
15	Health Bioscience	MIZUNO Masashi
16	Recycling Strategy of Resources for Sustainable Rural Environment	TANAKAMARU Haruya
17	Breeding and Genetics of Bioresources	ISHII Takashige
18	Integrated Management of Pests and Weeds	TOSA Yukio
19	Gene Regulation to Environmental Molecules	NANMORI Takashi
20	Maritime Environmental Conservation	SHIOTANI Shigeaki
21	International Maritime Society	ISHIDA Kenji

Research Center for Environmental Genomics

The Center mainly carries out basic and applied research projects on environmental genomics related to interactions between organisms and their environmental factors.

The Present Research Projects

- Mechanism of intracellular signal transduction induced by extracellular stimuli
- Molecular evolution of angiosperms
- Study on biocombinatorial chemistry of pharmaceutical science
- Monitoring and remediation of environmental contaminants with genetic engineering
- Cell signaling via protein kinase in photosynthetic organisms

<http://www.research.kobe-u.ac.jp/rceg/indexe.html>



Biosignal Research Center

The Biosignal Research Center was founded in 1990 as project-oriented research laboratories focusing on the mechanisms of intracellular signal transduction. The Center was reorganized after the initial activities for ten years and then participated in the Organization in 2007. It conducts research on the signaling network for the control of cellular functions (proliferation, differentiation, motility, death, etc.) through the protein phosphorylation reaction especially by the PKC family and related enzymes as well as other post-translational modifications such as ubiquitination and degradation of proteins.

<http://www.biosig.kobe-u.ac.jp/english/index.html>

Research Center for Inland Seas

The Center, founded in 1963 and reorganized in 1995 and 2003, is located at the eastern end of the Seto Inland Sea, facing Osaka Bay. Our mission is to understand the origin of the characteristic environment found in inland seas, to elucidate the mechanisms of their functions, to investigate the diversity and behavior of all marine organisms living there, and to contribute to the preservation of these environments for them. The Center has "Marine Site" at Iwaya in north Awaji Island, provided with dormitory for about 30 students, and the research boat "Onokoro". Kobe University Macroalgal Culture Collection (KU-MACC) belonging to the Center, holds about 600 seaweed strains, and distributes them for research and educational purposes.

<http://www.research.kobe-u.ac.jp/rcis-kurcis/e.html>



Research Center for Urban Safety and Security

The Research Center for Urban Safety and Security (RCUSS) was established on May 11, 1996, about one year after the Great Hanshin-Awaji Earthquake. The mission of RCUSS is to make contributions in building safe and secure urban society by developing the visions towards such society and by conducting researches and educations on suitable methodologies and frameworks in realizing such society. The RCUSS which consisted of 7 small research groups was re-organized on April 1, 2006, consisting of three larger study divisions; Risk Assessment, Risk Management and Risk Communication to carry out the mission effectively.

<http://www.rcuss.kobe-u.ac.jp/English/index-e.html>

Molecular Photoscience Research Center

The Center aims at developing state-of-the-art laser spectroscopy and its application to molecular science. Three major projects are currently in progress. (1) Optical control and time-resolved study of molecular excited state and chemical reaction dynamics by coherence of laser light. Doppler-free high-resolution laser spectroscopy to investigate structures and dynamics of excited molecules. (2) Ultrashort-pulsed laser spectroscopy to investigate molecular dynamics of chemical reactions and relaxation phenomena in condensed phases. (3) Coherent laser spectroscopy to investigate spin dynamics, atomic and molecular interactions, and magnetic properties of solid states.

http://www.research.kobe-u.ac.jp/mprc/laser/index_e.html

