

Introduction of UEC

National University

The University of Electro-Communications

(<http://www.uec.ac.jp/eng/>)

Specialized in

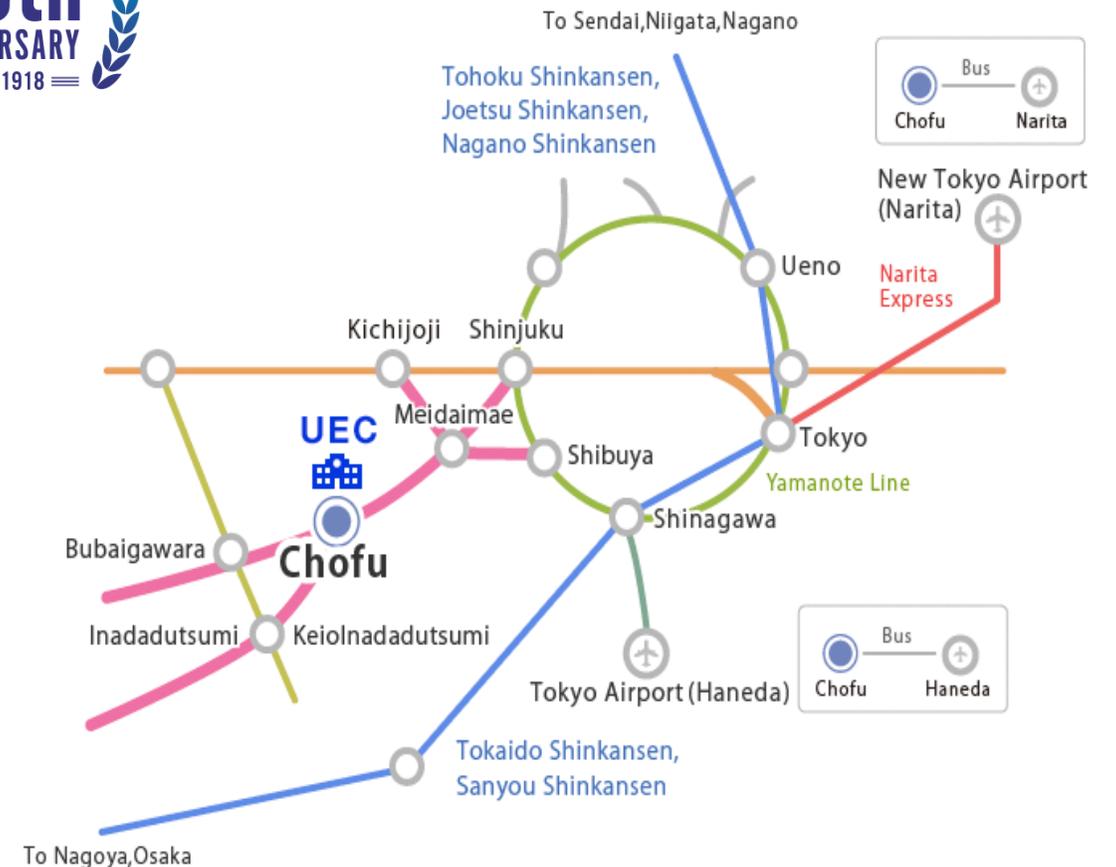
Informatics, Sciences and Engineering



The University of Electro-Communications

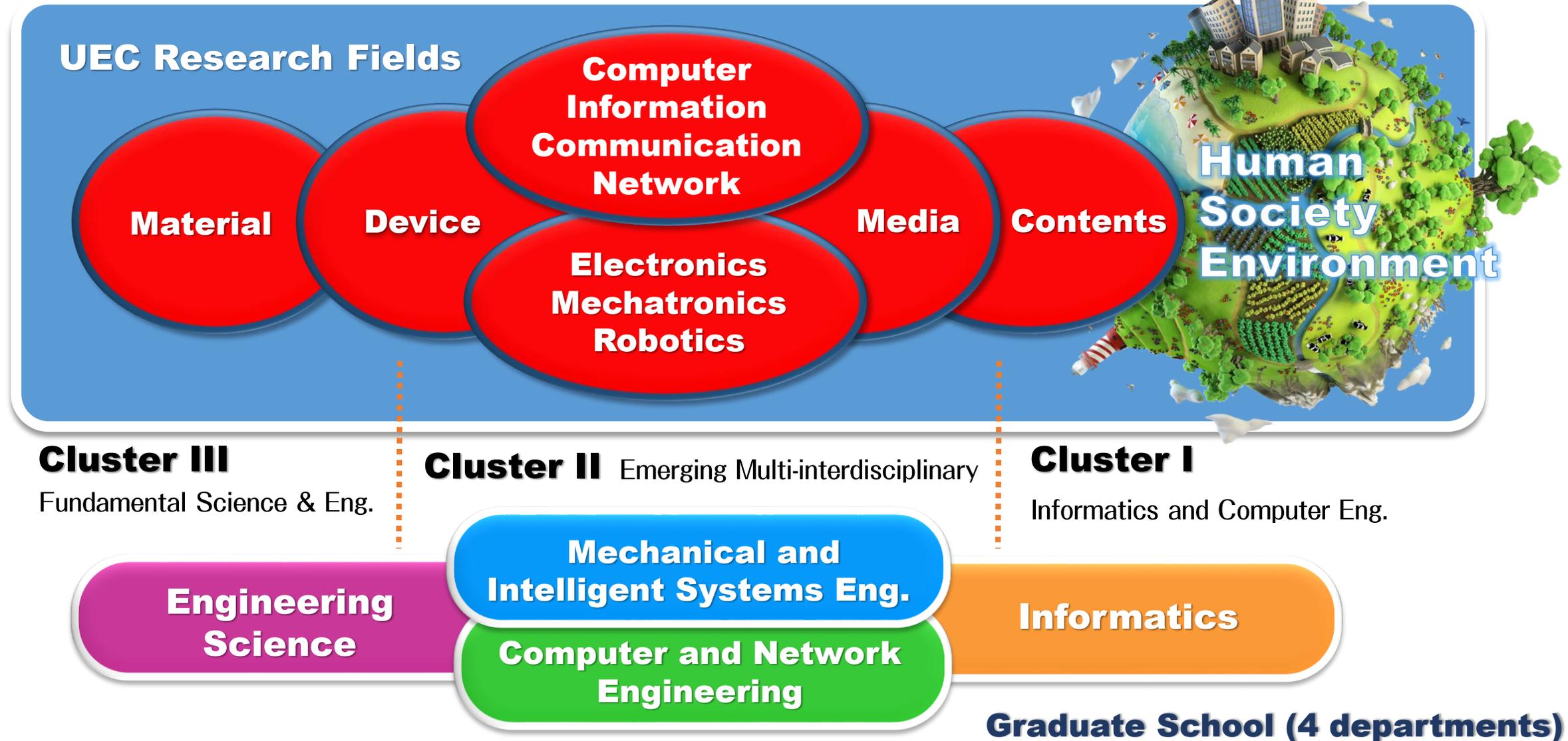
電気通信大学

- ◆ National University, Founded in 1918
- ◆ Location (Chofu, Tokyo)
 - ✓ 15 min from Tokyo city center
 - ✓ 1.5 hours from Narita
- ◆ Number of Faculty Members (363)
- ◆ Number of Students (4941)
 - ✓ Under graduates 3701
 - ✓ Graduates 1240
- ◆ International student (275)
- ◆ Faculties and Graduate School
 - ✓ School of **Informatics and Engineering**
 - ✓ Graduate School of **Informatics and Engineering**



UEC Departments

Informatics and Engineering



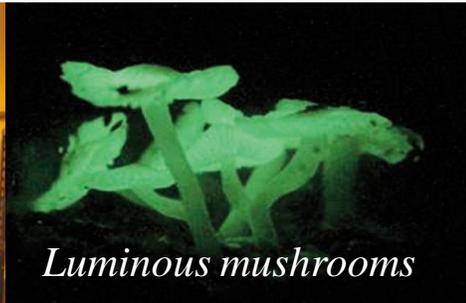
Department of Engineering Science

- *Electronic Engineering Program*
- *Optical Science and Engineering Program*
- *Applied Physics Program*
- *Chemistry and Biotechnology Program*

➤ *Education and research for advanced science and technology, basing on the electronics, optical technology, physics, chemistry, biology, etc.*



Production of dense and highly uniform quantum dots

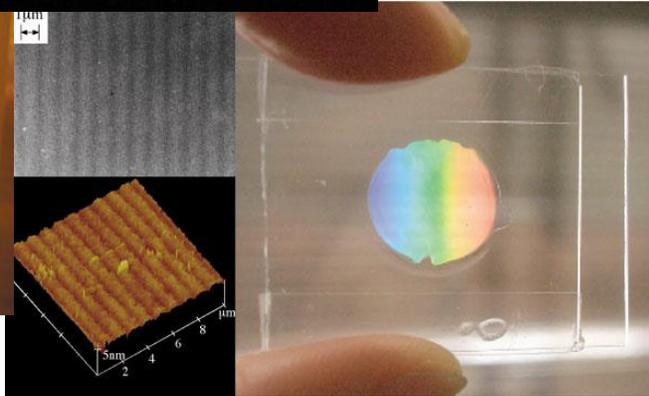


Luminous mushrooms

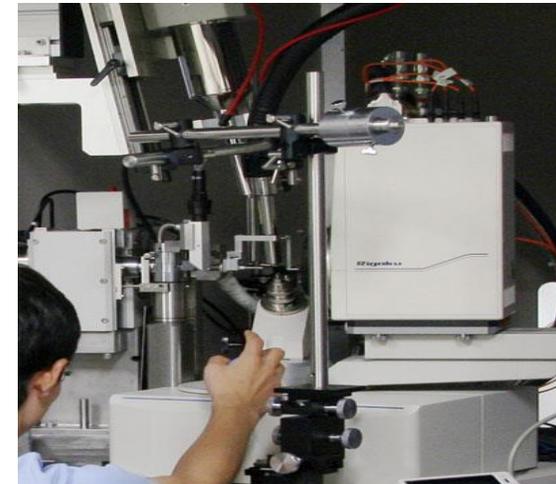


Firefly

High efficiency energy conversion mechanism learned from luminescent creatures



Holographic optical memory material

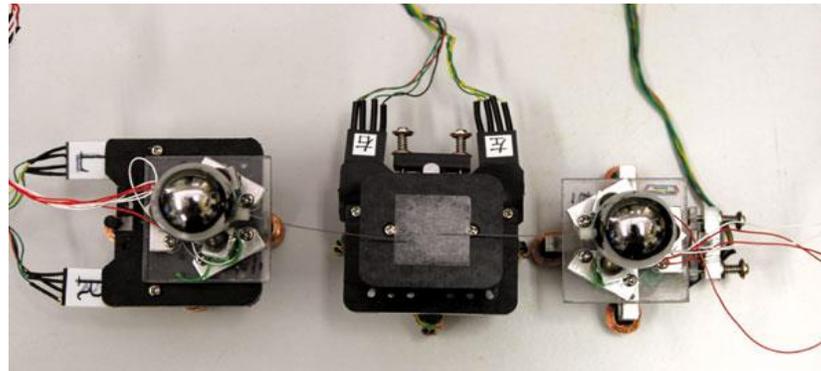


Research on the manifestation mechanism of various material properties

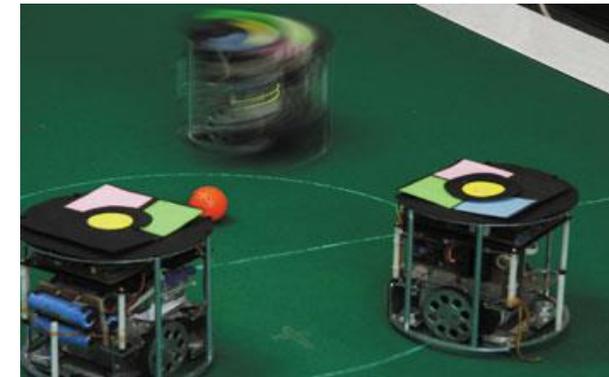
Department of Mechanical and Intelligent Systems Engineering

- *Measurement and Control Systems Program*
- *Advanced Robotics Program*
- *Mechanical Systems Program*

- *Fusion of machinery, computers, and electronics*
- *Development and intelligent control of the “Intellectual Mechanisms”*



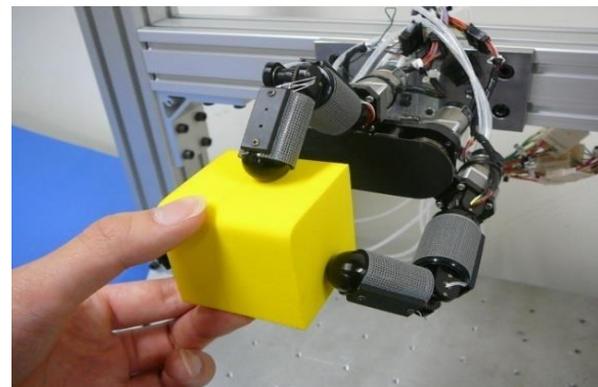
Micro robot



Intelligent control of robot cluster



Intelligent control of machine tool and industrial robot



Tactile feedback type high speed robot hand (tactile=touch)

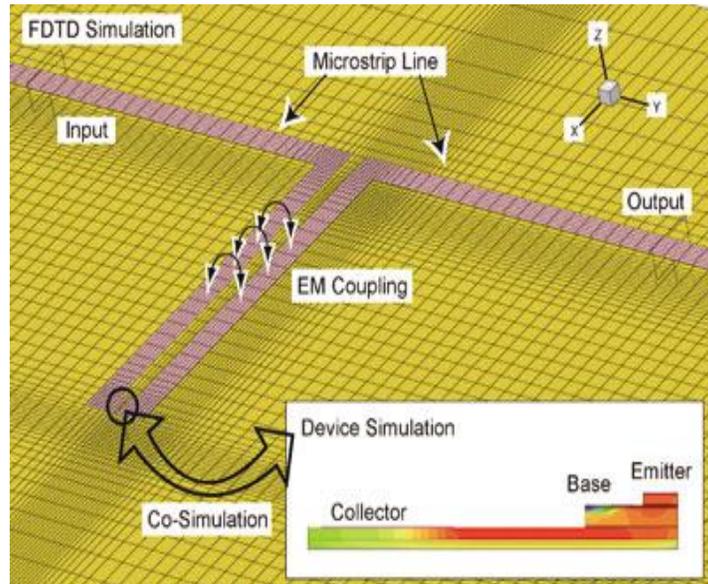


AI Prosthetic robotic hand

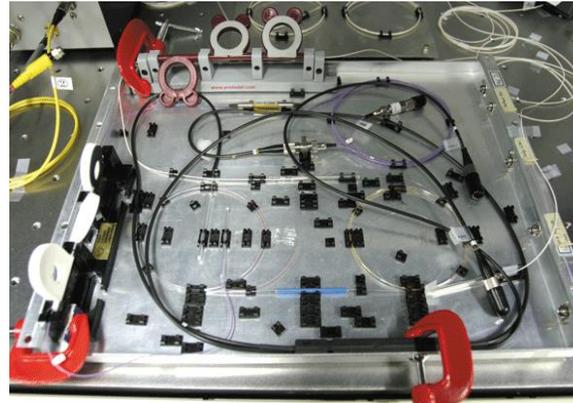
Department of Computer and Network Engineering

- *Mathematical Information Science Program*
- *Computer Science Program*
- *Information and Communication Engineering Program*
- *Electronics and Information Engineering Program*

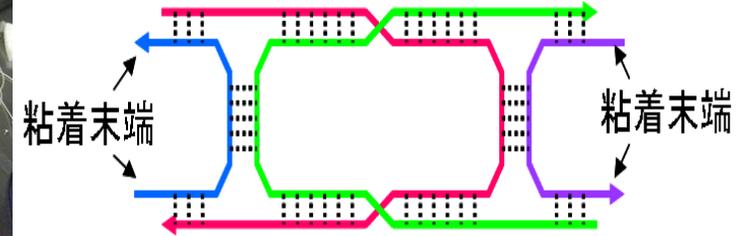
➤ *Creation of information and communication technology to support the safe and comfortable social infrastructure by the fusion of computer and communication*



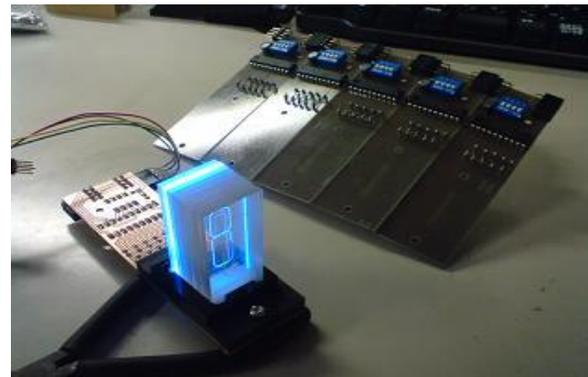
Integrated analysis technology for 3 dimensional electro magnetic /solid state device



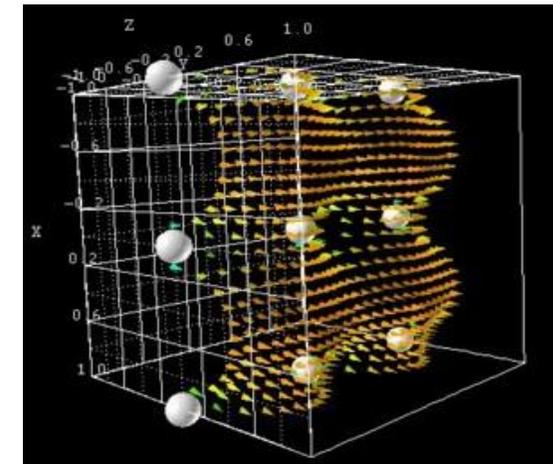
Ultra-large capacity photonic network



Molecular information processing



Electronic device



Storks flow simulation

Department of Informatics

- *Media Science and Engineering Program*
- *Management Science and Social Informatics Program*
- *Mathematical Information Science Program*
- *Computer Science Program*

- *Development and application of a rich and comfortable information media*
- *Methods and techniques for creative and efficient corporate practice utilizing the management information*
- *Safety technology, design technology and operational technology in order to solve the “Threat to Information”*

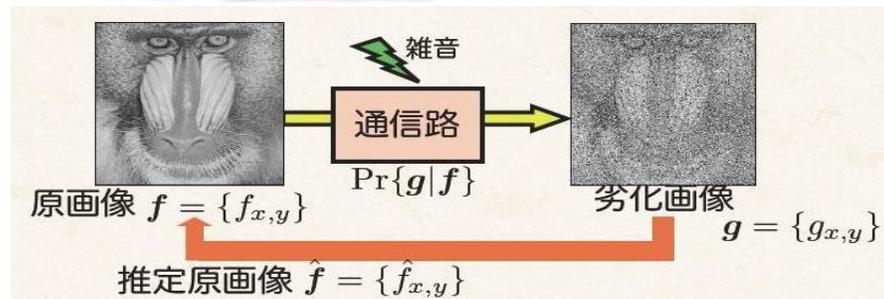
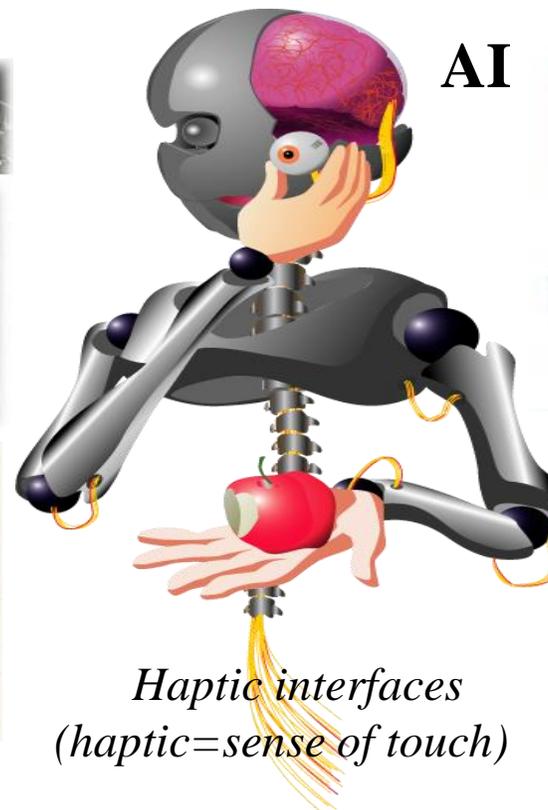


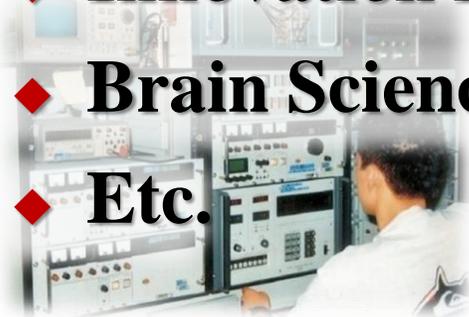
Image processing



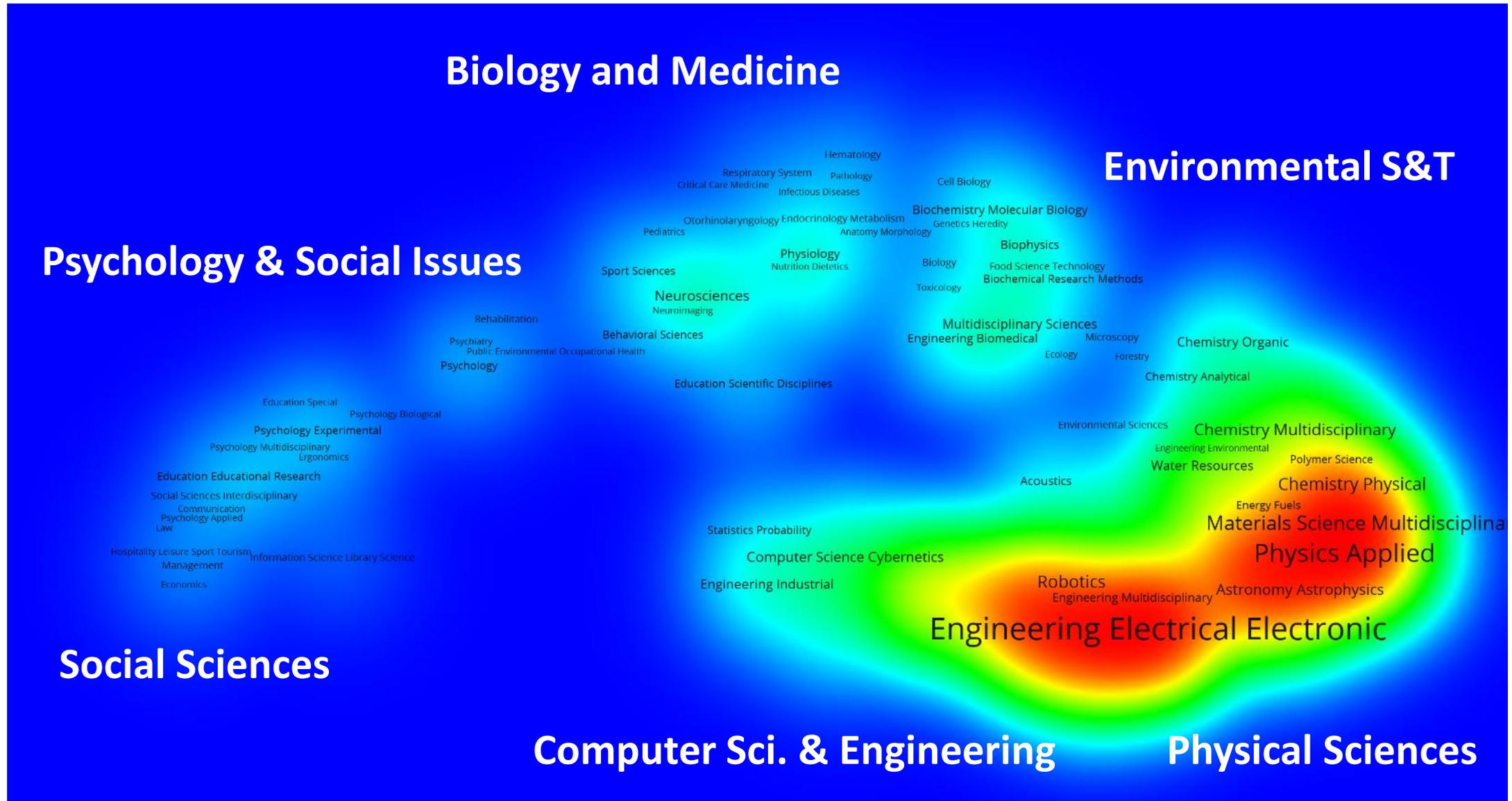
Financial engineering

Research Centers

- ◆ **Institute for Laser Science**
- ◆ **Center for Photonic Innovation**
- ◆ **Advanced Wireless Communication Research Center**
- ◆ **Center for Space Science and Radio Engineering**
- ◆ **Research Center for Ubiquitous Networking and Computing**
- ◆ **Advanced Ultrafast Laser Research Center**
- ◆ **Innovation Research Center for Fuel Cells**
- ◆ **Brain Science Inspired Life Support Research Center**
- ◆ **Etc.**



UEC Research Fields (based on Web of Science data)



UEC Short-term Exchange Program

Japanese University Studies in Science & Technology (JUSST)



JUSST Program Description

Japanese University Studies in Science & Technology

- JUSST program is **established in 1996**
 - A **short-term student exchange program** that UEC has been operating for last 20 years with our partner institutions.
- JUSST program is designed to **cultivate researchers and professionals to possess the research ability in the fields of science and engineering** and also to develop strong technical skills of science communication.
- All **participants will be assigned to a research lab/faculty member**, in the field related to their research or the field you are interested in, to undertake an original individual research study under the supervision of the faculty member at UEC.
 - Beside of earning the academic credits, the students will have the chance to experience the Japan university research lab's life and work with the local students in addition to gain essential research skills and knowledge.



JUSST Program Overview

Lab Work

(assigned to a supervisor at UEC)

Individual Study Project - for undergraduate student (UG)

Independent Research Project - for graduate student (GS)

Japanese Language

Elementary/Intermediate/Advanced - 8 to 14 hours/week

Scientific & Engineering Subjects

3 subjects at minimum per semester - UG student

3 subjects at minimum per academic year - GS student

UEC Academic Skills Courses

Computer Literacy - 1st semester

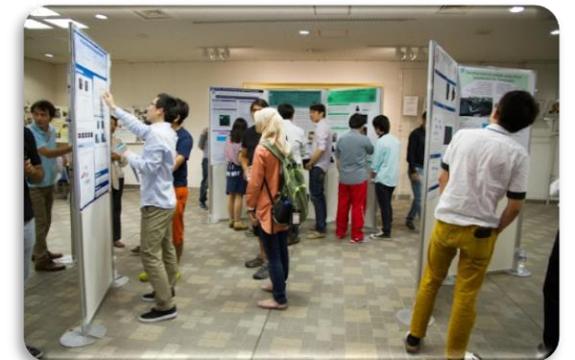
Information Literacy and Research - 1st semester

Publishing Literacy and Research- 2nd semester

Lab Work presentation

Poster presentation + Abstract - end of 1st semester

Oral presentation + full Paper - end of 2nd semester



Offered Science & Engineering Courses

Spring Semester	Fall Semester
1. Introduction to Computational Methods in Science and Engineering	1. Experimental Electronics Laboratory
2. Advanced Communication Engineering and Informatics I (Information and Communication Networks) *	2. Topics in Informatics I (Quality and Reliability Engineering)
3. Advanced Communication Engineering and Informatics II (Optical Communication Engineering)	3. Advanced Communication Engineering and Informatics III (Computational Complexity)
4. Topics in Informatics II (To be assigned)	4. Advanced Communication Engineering and Informatics IV (Computer Algorithms)
5. Topics in Informatics III (Advanced Theory of Systems Reliability) *	5. Topics in Mechanical and Intelligent Systems Engineering I (Advanced Robotics and Mechatronics Engineering) *
6. Advanced Engineering Science I (Advanced Quantum Mechanics) *	6. Topics in Mechanical and Intelligent Systems Engineering II (Visual Communications)
7. Advanced Engineering Science II (Modern Optics and Photonics)	
8. Advanced Engineering Science III (Photonics and Opto-Electronics)	

* Joint classes with regular graduate students



- i. All the subjects provided are conducted in English (listed above).
- ii. Exchange students are allowed to take the regular courses that touch in Japanese if have the Japanese proficiency.

JUSST program's privileges

- **Tuition fees will be WAIVED**, for a full-time student at a UEC partner university.
- An **on-campus accommodation** will be provided (with an affordable rate).
- **Semi-intensive Japanese language course** is offered free for JUSST program students in every semester.
- The **JASSO Scholarship*** is available for a limited number of full-year enrolled students who demonstrated financial aid.



Admission

- Admission twice a year
 - 1st October (fall) 15 students in total
 - 1st April (spring) 15 students in total
- Student intake
 - Undergraduate student (3rd or 4th year during enrollment)
 - Graduate student (Master or Doctor)
- Good track of Academic Records GPA:
 - 2.3+(3.0), 3.0(4.0), or 5.5+(7.0).
- English language



Thank You

Seeing you in UEC