

Presented at SSP lecture
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Education in Quantum and Radiation Engineering Department of OPU

Osaka Prefecture University
Radiation Research Center/
Graduate School Eng.

H.Matsuura

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Egret(heron)

Graduate School of Engineering

Mechanical Engineering

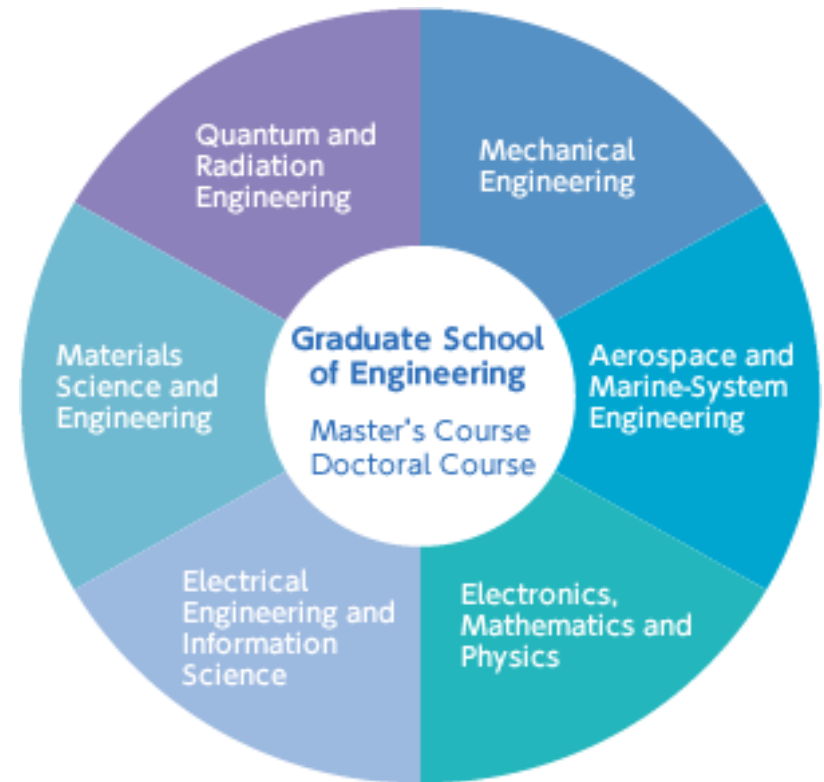
Aerospace and Marine-System Engineering

Electronics, Mathematics and Physics

Electrical Engineering and Information Science

Materials Science and Engineering

Quantum and Radiation Engineering



we at the Graduate School of Engineering of Osaka Prefecture University have coined a new term as our slogan, TECHNOVATION, combining “technology” and “innovation.”

Division of Quantum and Radiation Engineering

- Established at 2013 and will be celebrated 5th anniversary in this year.
- Contains only one small department (about 10 person/year), and have no undergraduate course.
- Educate people who can manage safely radiation, radio isotope, radiation generator.
- Educate people who can judge risk and benefit of radiation with correct knowledge, and communicate with a wide generation.

Recruit of students

Quantum and Radiation does not have undergraduate school course. So we invite students from

Other devision

Other undergraduate school

Collage of technology

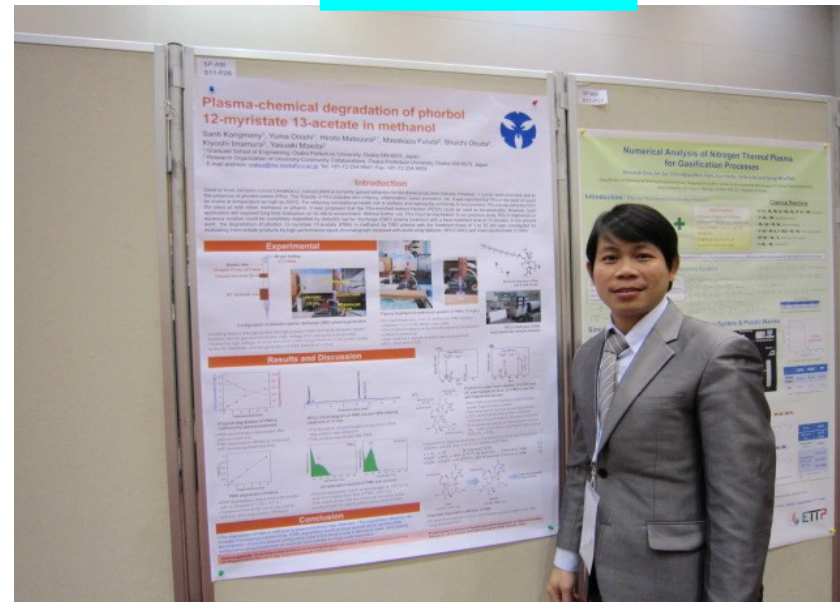
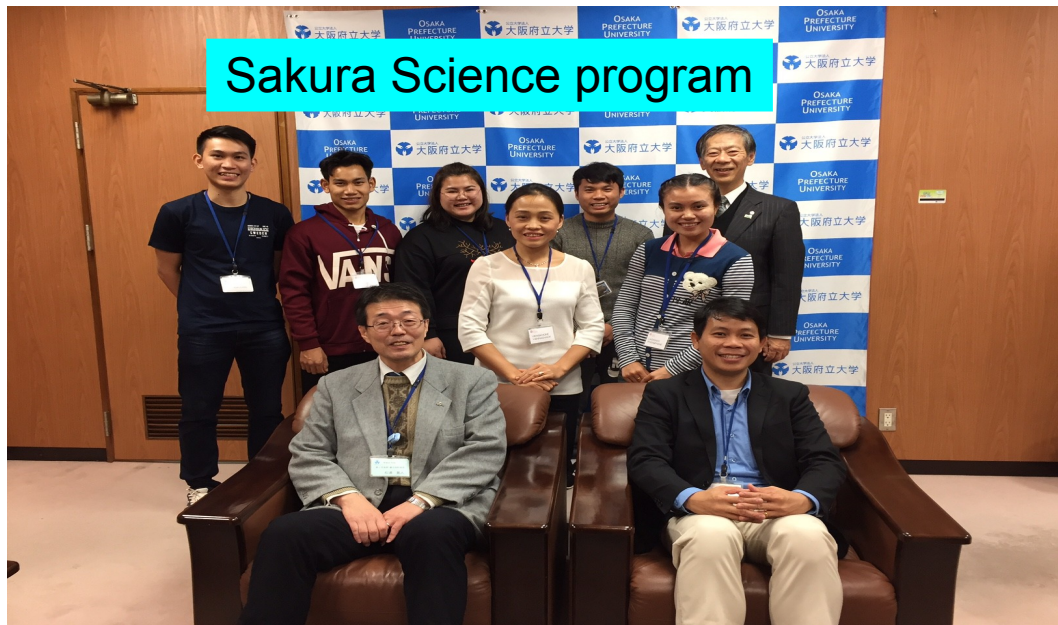
Other University

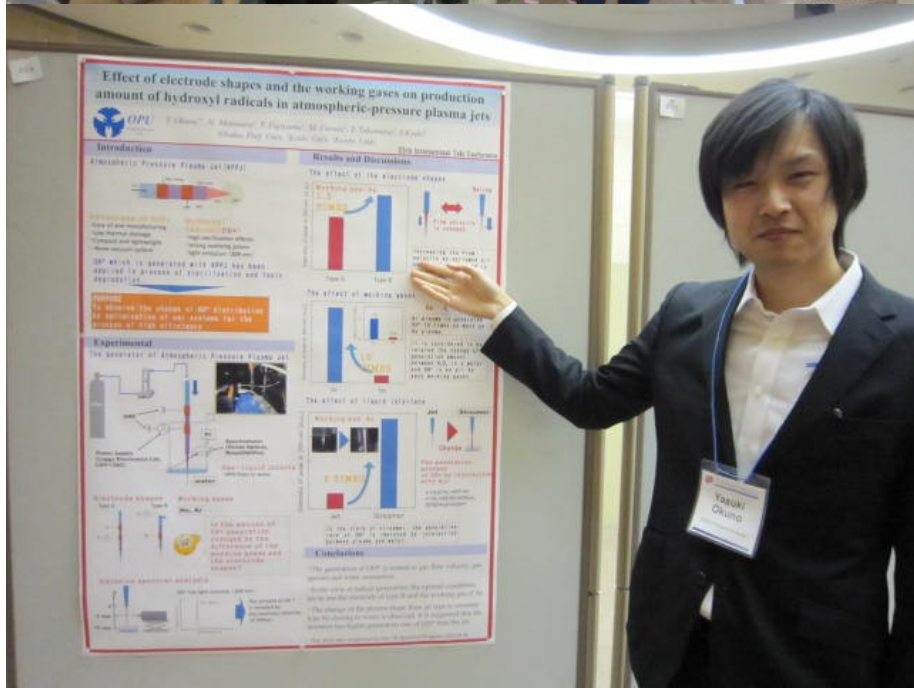
Other country (Vietnam, China, Laos, ...)

Even from wide area, we accept new student.

New research will start in our graduate school course.

Foreign students and exchange events





Education priority

- a unique curriculum to give sufficient knowledge to pass national examination for radiation protection supervisor.
- ability of risk-benefit communication based on correct radiation knowledge.
- Practical training with large scale radiation facility.
- Daily communication with wide background friends.

放射性同位元素等による放射線障害の防止に関する法律（暫定版）
Act on Prevention of Radiation Hazards due to Radioisotopes, etc.
(Tentative translation)

- Article 34 (1) A permission or notification user, a notification dealer, a notification lessor and a permission waste management operator shall appoint a **Radiation Protection Supervisor** among the persons specified in following items (i) through (iii) in accordance with the categories provided for in these items, and have this person supervise activities to prevent radiation hazards. In this case, a physician or dentist may be appointed as a Radiation Protection Supervisor if radioisotopes or radiation generating apparatuses are used for medical handling; a pharmacist may be appointed if radioisotopes or radiation generating apparatuses are used at a factory producing pharmaceuticals, quasi-drugs, cosmetics, medical devices, or products of regenerative medicine, etc. specified in Article 2 of the Act on Ensuring Quality, Effectiveness and Safety of Pharmaceuticals and Medical Devices, etc. (Act No. 145 of 1960):

National examination for radiation protection supervisor

- Applicant must have the following examination
 - Physics Quantum Science of Nanoscale Materials and Devices
 - Chemistry Quantum-Beam Materials Science
 - Biology Quantum-Beam Chemistry and Biology
 - Measurement Radiation Metrological Science
 - Safety Radiation Safety Management
 - Laws
- Many company or hospital need people with this status.
- We provide many lecture classes for this exam..

risk-benefit communication

- It is not difficult both to fear or not to fear radiation risk. But it is difficult to fear reasonably the risk.
- Most public people have not learned
 - How much natural radiation exists in daily life
 - How living cells repair low dose radiation damage
 - How widely radiation is used and how much benefits are brought with it
- Our students are requested to bring such knowledge to a wide generation.

Open school activity

Our department staff have planned and joined many open school activities before FY2013. The largest one is the radiation fair, which has hold in summer vacation for 34 years.

Our students also join such events.



alumnus



They are working at

Company, institute, local
government,

Among them, JAEA and
atomic regulation Committee
are included.

Conclusion

- Our department welcomes domestic and foreign students in wide research area, whether or not they have received lecture on radiation.
- We will educate them not to be merely a radiation user, but to be a reliable provider, manager, controller, developer of radiation.
- We hope our students will promote radiation usage to enhance future life.

What is necessary to study in OPU?

Your hope and dream

Early and close contact with expected (future) supervisor

English (Japanese) score sheet

Recommendation letter from current university to OPU president

Direct interview by OPU staff