

Newsletter

Vol.10
2017.12

What is U-ATOM?

The Academy for Global Nuclear Safety and Security Agent is running a "residential school with a new and unique nuclear education (DOJO for Global Nuclear Safety and Security)". The name U-ATOM is a combination of the words 'Unique' and 'ATOM'.

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The 7th International Symposium and Seminar



From August 28 to September 1, 2017 at Ookayama Campus, the Academy held the 7th International Symposium and Seminar on nuclear security and safeguards. The event was open to the public. In the first two and half days, speeches were presented on the atoms for peace, nuclear energy in future and nuclear human resource development. In the latter three days, lectures were given on nuclear security and safeguards. In the afternoon on the last day, as a student session, students made group discussions independently. In all the sessions they had really active discussions.



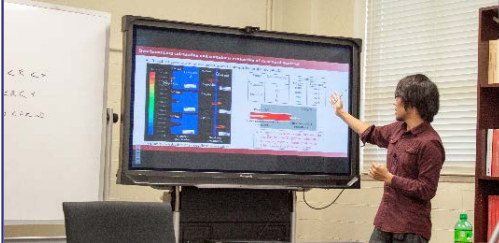
Voice
M2
Husna
Hanipah



There were differences and interesting topics in the symposium this time, where the speakers and participants had more interaction during the sessions. All of the groups had great experiences and shared valuable information together.

Reports on International & Domestic Internships

KIKUHARA, Tetsu
(2nd Class Student, D3)
Texas A&M University
January - July 2017



I learnt and experienced a lot through research at University and a private life on holidays. I noticed the

differences and something in common between US and Japan, by touching upon different cultures, values, nationalities and religions. Thanks to the character of the Texas's locality I was able to spend a quality time with all gentle and friendly people, by going for fun or attending parties.

KAWACHI, Takuya
(3rd Class Student, D2)
University of Bristol
July 2016- March 2017



I stayed at University of Bristol in UK in order to learn the advanced ultrasonic non-destructive testing as a research for doctoral

thesis. The stay could improve not only my expertise but also internationality by struggling for my research work under the environment of the unique British English in daily life. I think that a bond and a network established during the stay are valuable and encouraging for the personal and professional activities in future. This is a really meaningful experience for me.

ZHOU, Jiaju
(3rd Class Student, D3)
CUNY Energy Institute,
the City College of New York
October 2016 - September 2017



In order to clarify the diffusion in molten glass for high-level radioactive waste, which is one of hydraulic behaviors in liquid fed joule- heated ceramic melter process, the diffusion phenomena

in fluid with high viscosity were experimentally studied. In addition to research I could obtain wide social knowledges by attending symposiums and lectures. Especially in the lectures on controversial topics for spreading among people like nuclear, such as gene-spliced foods, I obtained useful information on methodology for mutual communication.

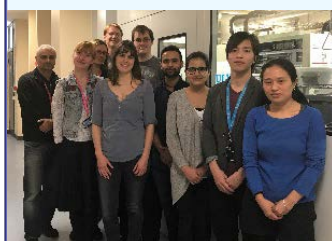
YONEOKA, Shuichiro
(3rd Class Student, D2)
Royal Institute of Technology
(KTH)
March - September 2017



I stayed in Stockholm, Sweden. Through intercommunication with local people, I was able to deepen my understanding of other cultures. I had so many thoughts about Japan after leaving Japan by observing their ways of thinking, working and personal association, and hence their ways of

being. I would like to take advantage of the experiences obtained in my study abroad for the life in Japan and to think about what are the issues of Japan compared with those of global world.

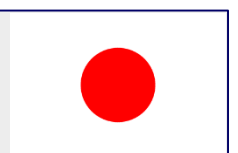
SAGA, Kaname
(3rd Class Student, D2)
University of South Australia
October 2016 - September 2017



I had research on development of new ion analysis using semiconductor processing technology. Many researchers with abundant internationality were harmonized with the diversity of cultures. In order to

resolve the problems in research I could cooperate with people beyond my assigned group and consult directly with whomever either students or staff. It was a good opportunity to know the differences of cultures in research and the way of work, and also a valuable experience to imagine a specific feature to "work abroad".

SUN, Rongwei
(3rd Class Student, D2)
Japan Atomic Energy Agency
May - September 2017



I tried to clarify the molecular structure of extraction agent (TPB) on a water surface by using heterodyne-detected vibrational sum frequency generation spectroscopy. Although it was only 5 months, I would like to apply the obtained skills toward a doctorate. I enjoyed my experiments in a favorable and positive environment of JAEA.

Especially I learnt several points to remember on safe treatment of radioactive materials. I would like to deeply thank all the persons involved for their warm guidance.

Academic Exchange Meeting between Tokyo Tech and Texas A&M



Seventeen students and faculty members from 8 universities of US, mostly Texas A&M University led by Prof. Craig Marianno, visited Tokyo Tech and we had an academic exchange meeting between Tokyo Tech and Texas A&M. After introducing activity of each side, we exchanged our opinions with each other through the presentations from two students. We had a joyful reunion with students who attended our International Symposium & Seminar last year, or with friends during the internships in US. Although the event lasted not so long, we had a happy and quality time, thus extending our new human network.

Voice
D3
AOKI,
Takeshi



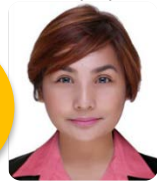
At the academic exchange meeting, I could well understand the issues of 3S (safety, security and safeguards) through the presentations on education and research activities at Texas A&M University and the University of Tennessee. After the meeting we were able to establish a close relationship by decreasing a sense of distance among the students through lunch and finding souvenirs, which were aimed at promoting to understand Japanese culture and intercommunion.

Academic Exchange Meeting between Tokyo Tech and KAIST



Under the Program of Korea Advanced Institute of Science and Technology (KAIST) organized by Prof. Man Sung Yim, sixteen students and faculty members from 8 countries worldwide visited Tokyo Tech to have an academic exchange meeting on August 17. After introducing activity of each side, we had a group discussion entitled "Post-Fukushima Energy Policy in Japan". They then had a facility tour of Tokyo Tech. Although it was a hot day in the midsummer, the students were able to expand their new human network by spending a short, but happy and quality time.

Voice
D1
Anie Day
DC. Asa



At the academic exchange meeting with the members from KAIST's Program, we were able to meet students from different backgrounds and universities around the world, who aspire to know more about the nuclear programs and policies especially in Japan. We learnt with them about various nuclear issues especially in the implementation of nuclear 3S and gained an international network for future nuclear leaders.

Domestic Study Tour (Kobe)



Voice
M2
MURAMOTO,
Takeshi

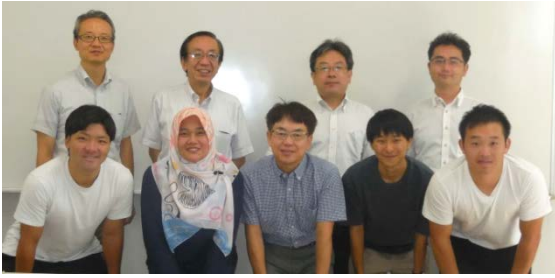


At the opinion exchange with alumni staff at the end of the program, I was able to directly hear their challenging and difficult work during everyday life, and the ways they spend their holidays as well. It was a precious opportunity to know the best part of the work and lifestyle, which cannot be known from the brochures of the company.

DOJO students visited Mitsubishi Heavy Industries Co., Ltd., which is a representative leading manufacturer of Japan, as one of the career path educational program. At the study tour to two factories (Futami and Kobe) which make nuclear related products, the students were so surprised by the sophistication of each component and product, and by the high level of technology. They also learnt the importance of making efforts and inheriting the improvement of technology. After the plant visit they talked and exchanged opinions with staff, who are alumni, about getting employment and their works. It was thus a great and valuable opportunity for the students to visualize their future careers.

Practical Exercises

Environmental Dynamics of Radioactive Nuclides



From August 21 through 25 an exercise on environmental dynamics of radioactive nuclides was conducted in collaboration with Japan Atomic Energy Agency. The purpose of the exercise is to cultivate capabilities to rapidly predict the spreading of radioactive materials released into the environment and also the public exposures in a nuclear accident.

Voice
M2
FUKUDA,
Kodai



I was able to learn behaviors in a reactor and responses of various components during severe accident with the use of the simulator. Since we learnt by lectures on physical principles and objectives of various components installed at the plant before the exercise in advance, I could understand them more deeply. Also the learning environment was very nice and the exercise was productive. I would like to thank all the staff involved.

Simulation of Severe Nuclear Accidents

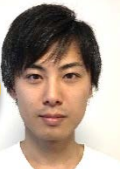


From September 19 through 22 an exercise on reactor severe accident simulation was conducted at Tsuruga Training Center of Japan Atomic Power Company for the simulations of transient event, design basis accident and severe accident using the plant simulator. The students could visit to both PWR and BWR plants.

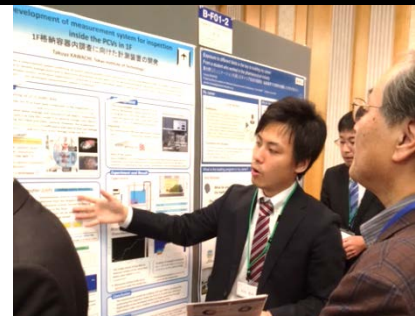
Forum

From October 19 through 21 a DOJO student participated in "Program for Leading Graduate Schools Forum 2017" held in Nagoya. It was a valuable opportunity for the student to attend "Pre-forum discussion", "Short presentation" and "Poster presentation by students", and also to listen to the keynote speeches and panel discussion.

Voice
D2
KAWACHI,
Takuya



Pre-forum discussion on Day 0 was impressive to me. At this session I was able to learn the diversification through the discussion on an exit strategy with students from other leading programs under a nice stimulating environment.



DOJO Lectures (FY 2017)

DOJO students learn and think about nuclear and energy with a different angle from the daily research, by the invited lecturers from various industry sectors including nuclear.

HURT, Davis (Head of the Tokyo Regional Office of the International Atomic Energy Agency)

"IAEA Safeguards Case Studies and Technologies" May 8

SENZAKI, Masao (President of Institute of Nuclear Materials Management Japan)

"Promotion of Peaceful Uses of Nuclear Energy in Japan and Nuclear Materials Management" June 23

MASUDA, Naohiro (Chief Decommissioning Officer, President of Fukushima Daiichi Decontamination and Decommissioning Engineering Company, Tokyo Electric Power Company Holdings, Inc.)

"Current Status and Challenges at Fukushima Daiichi Decontamination and Decommissioning" July 7

VAN DEN EYNDE, Gert (Professor, Institute for Advanced Nuclear Systems, Belgian Nuclear Research Centre SCK-CEN)

"MYRRHA, an innovative fast spectrum irradiation facility for partitioning and transmutation" October 3

TANIGUCHI, Tomihiro (Professor, U-ATOM, Tokyo Institute of Technology)

"Global Big Pictures for Global Leadership" November 29

OMOTO, Akira (Professor, U-ATOM, Tokyo Institute of Technology)

"What the future holds for nuclear power?" December 12



Upcoming Events (2018)

- February 11-23 U.S.A study tour
- March 19 DOJO Lecture (SAITO, Masaki; Program Coordinator)
- March 27 Graduation Ceremony of Dojo (The 2nd year class)



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for the latest
information!

