

# THE BULLETIN OF JSA

## THE JAPAN SCIENTISTS' ASSOCIATION

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### ***2010 SUMMER SCHOOL IN FUKUI HELD***

2010 Summer School, an annual event of the JSA, was held in Fukui Prefecture on September 8-10. 32 participants including nonmembers attended from around the country. The organizing committee arranged events such as lecture presentation, fieldwork, and exchange meeting under two themes "the nuclear power plant questions" and "Japanese scientists". On the first day three graduate students presented their studies and on the third day symposium to think of the youth problem in JSA was held.

On the second day the participants made a field trip to the fast breeder Monju and Mihama Plant, before the trip they had learned basic knowledge about nuclear power generation and movement against nuclear power plant under the direction of Prof. Yamamoto and Prof. Kodama. They observed that the PR halls of plants they visited showed articles from the standpoint of nuclear power advocate, which never meet residents' require. Most impressive was that parties concerned consider movement against nuclear power plant becomes aging along with nuclear power plant. As a factor of this we can cite weakened local economy, in fact we observed lots of shattered shops at a shopping area near Tsuruga Station. It will be a challenge in movement to establish industry independent of nuclear power plant. To do that, economists also should contribute to the nuclear power plant question.

On the last day the participants discussed the future movement of JSA as the place enables the young scientists to grow up, and a fundamental problem how to build a new generation that plays an active role, e.g. in the movement against nuclear power plant. This will be done by establishing at fast a network of young scientists and developing JSA to be a necessary organization for young researchers.

### ***THE COMMITTEE FOR SCIENCE AND TECHNOLOGICAL POLICY***

The committee held a small symposium on September 25 at Komazawa University, Tokyo for setting up the 18<sup>th</sup> Comprehensive Scientific Study Convention (CSSC) under the title "Science and technology policy and academic policy, and industrial policy of Japan, the 4<sup>th</sup> Science and Technology Basic Plan". The Basic Law on Science and Technology was established in 1995, due to which science and technology basic plans have been lay down every five years. It should be remarked that the said science and technology excludes human science. The committee has appealed the basic law needs to stress science. Such an attitude can be seen in recent discussion of Science Council of Japan.

The 1<sup>st</sup> basic plan was criticized as money politics, the second one made to narrow down and stress important areas. The second plan was established when Ministry of Education underwent reorganization to run into Ministry of Education, Culture, Sports, Science and Technology and Committee on Science and Technology was built up to Council for Science and Technology. The reorganization was done to strengthen the power of the Premier, and Council for Science and Technology started to promote strategic

fields of the basic plan (information, biotechnology, environment, and nanotechnology). The fiscal scale was enlarged. The grants were crowned adjective "competitive", never flow into fields the government and economic society do not give weight to, even the fields important to solve problems for Japanese people and human beings. Since the first plan was executed, introduction of the term limit system in university and private institutionalization of national and public university and institute have been put forward. We meet several issues in relation to high-tech products on the basis of starvation, bloodshed, and environmental disruption in developing countries.

The symposium had two speakers: Prof. Akashi (Komazawa Univ.) "Industry policy and science-technology policy", and Dr. Saito (Gumma Univ., ret.) "Progress of the Science and Technology Plan (4)". Prof. Akashi insisted that business enterprises must and can take altruistic behavior for developing countries without chasing only profits.

### **ACTIVITIES OF RESEARCH COMMITTEES AND GROUPS**

***The JSA headquarters organizes a number of research committees and groups undertaken on a nationwide scale, which are encouraging the members across the country***

#### **1) THE COMMITTEE OF UNIVERSITY PROBLEMS ALERTS A CRISIS OF FACULTY AUTONOMY**

Since revision of Fundamental Law of Education the Japanese government attempted to control universities cutting by 10% of higher education budget (operation subsidy, national grant for private universities etc.), and interfere with educational content (academic degree, curriculum).

In 2008 recommendation "Towards undergraduate education", the Central Education Council of Japan proposed introduction of PDCA (plan-do-check-act) cycle into undergraduate program, and has made by now four reports concerning how the mid-to long-term university education should be in the future. Those reports examine introduction of quality assurance system, allocation of expense grants in specific fields, revision of academic degree program, that is, the government offers educational goals that should be acquired as knowledge and technology, imposing quality assurance to universities, and allocates expense grants due to their achievement. In addition to conventional evaluation of each university and faculty, it attempts to bring in evaluation of each academic field and annul university autonomy and faculty autonomy transforming university institution from the conventional one centered at faculty and graduate course to the one centered at academic degree program.

The committee investigates policy and administration of higher education conducted in higher education institutions and recognizes the significance of university problems in a whole academic system.

#### **2) THE RESEARCH COMMITTEE OF COMPLEX SYSTEM SCIENCE**

The workshop on the complex system science was held on 22 August 2010 at Osaka. Twenty-four persons attended at the meeting. Prof. Sugano explained that the stratum structure is formed by the interaction and bounding of the strata each other and the diversity is produced by the breaking of symmetry. Prof. Shimada proposed KHH model that explains the power law of eating pattern of drosophila. Prof. Shirai pointed out that the most basic driving force of the evolution is excess energy stored in an individual. Prof. Ngano explained the violence induced in the stratum structure of human society and the human characteristics that cause to strengthen the social structure. Various discussions were performed in the meeting. Since the complex system science relates to wide fields of the natural and social sciences, the same technical term (for example: development) has different meaning in the different fields. Although the research of a general model depending on no individual objects is attractive, we have to make an effort to research the individual mechanism that controls the development of each object. For the complex system science it is very important that many researchers who belong to different fields gather and get the hint and criticism on the research in the meeting. JSA may be suitable organization to perform

those subjects.

### 3) RISK OF CHEMICAL SUBSTANCES INCLUDED IN FOODSTUFF – CONTAMINATION OF FISH AND SHELLFISH BY HAZARDOUS METALS SUCH AS MERCURY AND SELENIUM

The research committee of food stuff problems held a regular civic symposium on September 18 in Tokyo, where Prof. Watanabe (Tokyo Univ. of Agriculture and Technology) investigating road environment, heavy metal contamination and toxicity gave a lecture entitled above.

First of all the lecturer introduced the present state. Sixty seven million of chemical substances, thirty thousands newly a day, have been registered until now. On the other hand, many anti-environment books that make light of the global warming and effect of environmental hormones have been published. The lecturer pointed out the necessity to take independent measure to meet the important and also difficult situation of chemical substances control and talked on the history of the use, toxicity and effect upon the life of heavy metals such as mercury, cadmium and selenium.

Concerning mercury contamination, it depends on the difference in ocean areas and species. The lecturer showed the facts that highly predatory marine animals and ones having a long life (big size in general) were as much as highly contaminated and such fishes as black marine, tuna, sea bream, eel and demersal fish and also whale and dolphin were contaminated more than ten times, and pointed out the current status in Japan that the contamination control was not introduced on highly contaminated fishes and whales and fishes widely consumed were also contaminated without controls.

The lecturer further pointed out that there was some tendency to make light of mercury contamination from the animal experimentation that the toxicity of inorganic mercury was reduced by selenium salt. The lecturer argued precisely that further experiments were needed to judge the effectiveness of selenium to detoxify methylmercury. Concerning cadmium contamination the fact that the internal organs of shellfish, crab and shrimp, were specifically contaminated by it was introduced.

Finally the lecturer concluded that in order to solve drastically the fish and shellfish contamination the measure against the source of heavy metal contamination was needed and that the limitation of intake was needed to reduce the effect to the people.

After the lecture, there was an enthusiastic discussion on various topics such as damage from bad reputation, consideration to producers and responsibility of researchers.

### ***DISTRICTS' AND BRANCHES' ACTIVITIES***

***The JSA consists of 47 branches which are grouped into 9 districts, and they are independently and/or cooperatively carrying out their activities in addition to the headquarters' ones***

#### 1) CITIZEN STUDY MEETING IN HYOGO

On 19 August 2010 the Hyogo association for non-nuclear government and the Hyogo branch held a citizen study meeting with about 40 participants at Kobe. Prof. Tanaka presented a lecture titled “The nuclear in the basis of livelihood “. The abstract of the lecture was as follows.

The electric companies assert that the atomic energy is ecological energy. The German radiological defense agency, however, reported that the occurrence rate of child cancer during 1980 to 2003 within 5km around the nuclear plant is highly significant. The harm of radioactivity can't be neglected, so nuclear power generation should be stopped. It is expected that petroleum from around 2010 becomes short supply. The struggle of the petroleum and the like has caused war. Breaking away from the petroleum dependence, we should shift to renewable energy use. The emission of carbon dioxide by household is 20% and approximately 150 offices of the power plant and the large factory emit the half of the whole emission. In particular it is important to reduce the emission of carbon dioxide of the power plant.

The peak hour of the electricity consumption is no more than 10 hours per year and the 90% of the electricity consumption is industrial demand. As for electricity charges for home, the unit charge

becomes high with large consumption, but one for industry the unit charge conversely becomes low. If we reduce the peak consumption with changing this mechanism, 25% of the power plants are of no necessity. It is necessary to amend the Electricity Enterprises Act and also it is necessary for household to provide electricity for oneself. As various renewable energies are developed, we should change the social energy system by use of them.

## 2) SCIENCE AND TECHNOLOGY FORUM IN KYOTO HELD

Kyoto branch held the first Science and Technology Forum on August 28, 2010, at Kyoto Institute of Technology. The forum was inaugurated with the purpose of revitalizing JSA activities, this time Kyoto Institute of Technology Chapter organized. The following lectures were delivered: A) Prof. Okura "Stochastic process and math education", B) Prof. Masamune "The research in the physics of fusion plasma in Kyoto Institute of Technology", C) Prof. Maeda "Follower of electrochemistry". Participants asked some questions, such as "What social responsibility do mathematicians take in finance engineering?" and "Does nuclear fusion generation have a commercial potential?" After the discussion participants looked on the art and craft reference library belonging to the institute, and appreciated exhibitions of posters during Taisho and Showa periods. To exhibit a poster whipping up war sentiment was criticized. In the banquet they exchanged their opinions, especially concerning the social responsibility and useful studies.

### *JSA<sup>NOW</sup>* *Briefings from organizers*

#### HEADQUARTERS

The research committee of foodstuff problems organized a civic lecture "Relocation of Tsukiji Market Place to Toyosu, a polluted area" on December 11 at Koto-Ku, Tokyo, which was accompanied with inspections of the market place and the preset area. Two reports were offered: A) Dr. Sakamaki "Distortion of science seen in the transfer planning of Tsukiji Market Place", B) Prof. Sato "Risk management in the land pollution problem at Toyosu and the task".

#### KINKI DISTRICT

Kansai peace study meeting held 21<sup>st</sup> regular meeting on January 22 in Kyoto, where two lectures "Peaceful constitution, its now – viewing from 1960 revision of the US-Japan Security Treaty" by Prof. Mori (Ryukoku Univ.) and "Present NATO and the abolishment of conscription in Germany" by Prof. Kido (Osaka Univ.) were delivered.

#### MIYAGI BRANCH

The branch held a spring meeting on January 29, where Prof. Tanaka gave a lecture on the principle of education, and participants exchanged their research experiences.

#### KANAGAWA BRANCH

On December 11 at Tsurumi Hall of Tsurumi University the branch and Article 9 Scientists Society in Kanagawa held a civic lecture "Article 9 of the Japanese Constitution from the viewpoint of Korean Peninsula" where Dr. Kan (Waseda Univ.) gave a lecture.

#### SHIGA BRANCH

On December 11 the branch held a civic lecture "World food crisis and Japanese food problem" inviting Prof. Abe (Gifu Univ.) as a lecturer.

## OSAKA BRANCH

- 1) On December 11 at Nakazakicho mall, Osaka, the branch held the 22<sup>nd</sup> Kitatenma Science Café, where Ms. Fukushima (craft center, Alte) delivered a lecture "Creating artificial body – toward barrier-free of mind".
- 2) On December 25 at Nakazakicho mall, Osaka, the branch held the 23<sup>rd</sup> Kitatenma Science Café. Some science teachers and school children enjoyed themselves scientific experiments.
- 3) On January 22 at Nakazakicho mall, Osaka, the branch held the 24<sup>th</sup> Kitatenma Science Café, where Prof. Kasuga (Osaka Univ.) explained his proposal for world 7 billion people to be well off.

## Hyogo branch

- 1) The Hanshin-Awaji great earthquake symposium was held marking 16-year anniversary since the calamity on January 17, 1995. The participants discussed why victims are driven from leased public housing and asked recovery housing they dwell in at ease.
- 2) The branch held a regular meeting on January 29 in Kobe City, where Prof. Otsuka (Emeritus Prof., Kobe City University of Foreign Studies) gave a lecture entitled "America of Obama – the present state of America".

## FUKUOKA BRANCH

- 1) On January 29 the environment research group held a study meeting where Prof. Sasaki (Kurume Univ.) delivered a lecture "Indonesia Islam and democracy".
- 2) On February 5 the energy research group held a study meeting, which was to discuss features "Dangerous dream named atomic energy instauration" appeared in journal *Sekai* vol. 1, Iwanami.

### **ARTICLES OF "JOURNAL OF JAPANESE SCIENTISTS"**

***The Journal of Japanese Scientists (JJS) or NIHON NO KAGAKUSHA (in Japanese) covering all the scientific fields is monthly published and distributed to all the members and other readers***

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