

## Joint Symposium between Indonesia and Japan on Nuclear Applications

December 18, 2020

We held a symposium aimed at Promoting exchanges among institutes of research and higher education in the study fields of nuclear technology and radiation utilization in both countries, and contributing to progress of R&D and international HRD in those fields.

### Summary

1. Date:  
November 11, 11:00 - 18:00 (JST)  
November 12, 15:00 - 18:10 (JST)
2. Place:  
Online (Cisco Webex)
3. Organizer:  
Japan Atomic Energy Commission
4. Co-organizer:  
Badan Tenaga Nuklir Nasional (BATAN)

### Program

#### 1. Keynote Speeches

Prof. Dr. Yoshiaki Oka, Chairman of Atomic Energy Commission of Japan

Prof. Dr. Ambariyanto, Vice- Rector of Diponegoro University

Prof. Dr. Anhar Riza Antariksawan, Chairman of National Nuclear Energy Agency of Indonesia

Moderator: Mr. Taro Hokugo,  
Director for Atomic Energy, Cabinet Office  
Vice-Chair of Nuclear Low Committee, OECD/NEA  
Member of International Expert Group on Nuclear  
Liability (INLEX), IAEA

#### 2. Sectorial Presentations

Experts from each university will introduce their research contents and their universities.

## <Nuclear Engineering>

### 1. Japanese Presenters

Dr. Shuichiro Miwa, Associate Professor, Laboratory of Nuclear System Safety, Division of Applied Quantum Science and Engineering, Graduate School of Engineering, Hokkaido University

[Title of Presentation] Introducing Hokkaido University

Dr. Mikio Sakai, Associate Professor, Resilience Engineering Research Center, School of Engineering, The University of Tokyo

[Title of Presentation] Advanced Multi-Physics Simulation for Nuclear Engineering

Prof. Dr. Toru Obara, Laboratory for Advanced Nuclear Energy, Institute of Innovative Research, Tokyo Institute of Technology

[Title of Presentation] Nuclear Engineering Education in Tokyo Institute of Technology and Research for Innovative Nuclear Systems

Prof. Dr. Tomio Okawa, Professor, Department of Mechanical & Intelligent Systems Engineering, The University of Electro-Communications

[Title of Presentation] Studies on thermal-hydraulics of molten salt in UEC

Prof. Dr. Akifumi Yamaji, Cooperative Major in Nuclear Energy, Graduate School of Advanced Science and Engineering, Waseda University

[Title of Presentation] Reactor Physics and Thermal-Hydraulics for Advanced Reactor Design and Safety of Nuclear Reactors at Waseda University

Dr. Kenta Murakami, Department of Nuclear System Safety Engineering, Nagaoka University of Technology

[Title of Presentation] Modeling of Material Systems for Nuclear Safety: How to build a knowledge basis for predicting complex phenomena in extreme environments

Prof. Dr. Masayoshi Uno, Research Institute of Nuclear Engineering, University of Fukui

[Title of Presentation] Introduction of Education and Research for Nuclear Engineering at Research Institute of Nuclear Engineering University of Fukui

Prof. Dr. Ken Nakajima, Institute for Integrated Radiation and Nuclear Science, Kyoto University

[Title of Presentation] Research Activities at Institute for Integrated Radiation and Nuclear Science, Kyoto University

Prof. Dr. Takanori Kitada, Division of Sustainable Energy and Environmental Engineering, Graduate School of Engineering

[Title of Presentation] Outline of education and research in nuclear engineering in Osaka University and research topics in nuclear reactor physics and probabilistic safety assessment.

Prof. Dr. Nozomu Fujimoto, Professor, Department of Applied Quantum Physics and Nuclear Engineering, Kyushu University

[Title of Presentation] General outline of Kyushu University and brief summary of research and education of Department of Applied Quantum Physics and Nuclear Engineering

Dr. Toru Nakatsuka, group leader, The graded approach analysis group at the Office for Analysis of Regulatory and International Information, Sector of Nuclear Safety Research and Emergency Preparedness, Japan Atomic Energy Agency (JAEA)

[Title of Presentation] -- For Continuous Enhancement of Nuclear Safety -- Personal Research History and Overview of Nuclear Safety Research Center of JAEA

## **2. Indonesian Presenters**

Dr. Mohammad Dhandhang Purwadi, Center for Nuclear Reactor Technology and Safety, National Nuclear Energy Agency of Indonesia (BATAN)

[Title of Presentation] The strategy of the application of ageing management for operation life extension of the research reactors

Dr. Suparman, Head of Centre for Nuclear Energy Assessment, BATAN Headquarter

[Title of Presentation] The current status of Indonesia nuclear power program

Dr. Andang Widi Harto, Educational Staff of Nuclear Engineering Study Program Engineering Physics Department, Faculty of Engineering, Gadjah Mada University

[Title of Presentation] R&D in Nuclear Engineering Department at Gadjah Mada University

Prof. Dr. Zaki Su'ud, Nuclear and Biophysics Research Division, Bandung Institute of Technology

[Title of Presentation] Advanced Modular long life fast reactors Design and Analysis

Prof. Dr. Muhammad Nur, Center for Plasma Research, Diponegoro University

[Title of Presentation] Research on the Application of Cold Plasma in Indonesia and Theoretical study on Tokamak for Nuclear Fusion

Prof. Dr. Wahyu Setia Budi, MS., Physic Department, Faculty of Sciences and Mathematic, Diponegoro University

[Title of Presentation] Development of Silicone Rubber Base Material for Medical Physics Application and Radiation Protection

## **<Radiation Applications>**

### **1. Japanese Presenters**

Prof. Dr. Tatsuya Ohno, Professor and Chairperson, Department of Radiation Oncology, Director, Gunma University Heavy Ion Medical Center, Gunma University

[Title of Presentation] Advanced cancer therapy with carbon ion beams at Gunma University

Prof. Dr. Hiroyuki Matsuzaki, Micro Analysis Laboratory, Tandem accelerator, The University Museum, The University of Tokyo

[Title of Presentation] Accelerator Mass Spectrometry and Geochemistry of Anthropocene

Prof. Dr. Hisayuki Suematsu, Extreme Energy-Density Research Institute, Nagaoka University of Technology

[Title of Presentation] Pulsed large current electron beam accelerator in Nagaoka University of Technology, - research for remote sensing on Europa ?

Prof. Dr. Yoshinobu Izumi, Professor Research Institute of Nuclear Engineering, University of Fukui

[Title of Presentation] Irradiation Effects onto Living Cells and DNAs

Prof. Dr. Nomachi Masaharu, Professor, Institute for Radiation Science, Osaka University

[Title of Presentation] International School on Radiation measurements

Prof. Dr. Atsushi Toyoshima, Institute for Radiation Sciences, Osaka University

[Title of Presentation] Introduction of Targeted Alpha Therapy Developments in Osaka Univ.

Prof. Dr. Isao Murata, Division of Sustainable Energy and Environmental Engineering, Graduate School of Engineering, Osaka University

[Title of Presentation] Outline of education and research in radiation in Osaka University and brief summary of BNCT and its related research

Dr. Naruhito Matsufuji, Quantum Medical Science Directorate, National Institutes for Quantum and Radiological Science and Technology

[Title of Presentation] General outline of NIRS-QST and brief summary of cancer therapy with ion beams

## **2. Indonesian Presenters**

Dr. Edy Giri Rachman PUTRA, Polytechnic Institute of Nuclear Technology National Nuclear Energy Agency of Indonesia (BATAN)

[Title of Presentation] Nuclear Teaching Industrial Polytechnic: A New Concept for Higher Vocational Education Program in Nuclear Technology in Indonesia

Dr. Totti Tjiptosumirat, Head of Center for Isotopes and Radiation Application (CIRA), National Nuclear Energy Agency (BATAN)

[Title of Presentation] Nuclear Technology: Its benefits and development opportunity

Dr. Christina Hari Nawangsih Prihharsanti, Department of Radiology, Faculty of Medicine, Diponegoro University, Department of Radiology, Kariadi General Hospital

[Title of Presentation] Radiation for Medic: From Diagnostic to Treatment

Prof. Dr. Tri Retnaningsih Soeprbowati, School of Postgraduate Studies, Department Biology, Faculty of Science and Mathematics, Diponegoro University

[Title of Presentation] Nuclear application for chronostratigraphy as a basis for lake management

Dr. Muslim, Department of Oceanography, Fisheries and Marine Science Faculty, Diponegoro University

[Title of Presentation] Activity and distribution of anthropogenic radionuclide in the sea

Dr. Hadiyanto, School of Postgraduate Studies, Diponegoro University

[Title of Presentation] Phytoremediation Modelling of Radioactive From Contaminated Soil.

Dr. Sutarno, MSc, Molecular Biology laboratory, Postgraduate School, Sebelas Maret University,

[Title of Presentation] Application of nuclear radiation in agriculture: Irradiation of black rice to reduce stem's height and shorten the period to harvesting.

Dr. Suryasatriya Trihandaru, Kristen Satya Wacana University

[Title of Presentation] Indonesia's Experience in Building BNCT 2015-2020