



Research Conference on Radiation Measurements for Decommissioning of the Fukushima Daiichi NPP

August 4-6, 2016

Naraha Cycling Terminal Viewing Hotel "TENJIN"

(Naraha-machi, Fukushima Prefecture)

Organized by

**Collaborative Laboratories for Advanced
Decommissioning Science (CLADS)**

Japan Atomic Energy Agency (JAEA)



Welcome from Conference Chair

It is my great pleasure to welcome you to the Research Conference on Radiation Measurements for Decommissioning of the Fukushima Daiichi NPP, held in Naraha-machi, Fukushima, Japan. Goal of this three-days conference is to discuss various issues about the radiation detection technologies — including 3D radiation imaging in the high-dose-rate environments and measurements of neutrons and photons emitted from fuel debris — which are applicable to decommissioning works at nuclear facilities including Fukushima reactors.

More than 50 scientists and engineers from all over the world will participate to this conference. Fourteen invited/oral lectures and ten posters with short talks will be presented at the conference. In the schedule, I included two special tours. One is the Fukushima Daiichi NPP of the Tokyo Electric Power Co., Inc (TEPCO) and the other is to the Naraha Remote Technology Development Center (NRTDC) of the Japan Atomic Energy Agency (JAEA) which was newly established last year.

I would like to thank all of the conference attendees, municipality staff of Naraha-town, TEPCO, the 186 committee of JSPS, NRTDC/JAEA staff and each of organizing members. I wish you a pleasant journey to/from Fukushima and an enjoyable time before and after the conference.



鳥居建男

Tatsuo Torii, PhD

Conference Chair

Division Head

Remote System and Sensing Technology Division

Collaborative Laboratories for Advanced Decommissioning
Science (CLADS)

Sector of Fukushima Research and Development

Japan Atomic Energy Agency

Program

<1st DAY: Thursday 4 August>

12:20 JR Iwaki Station

12:30-14:00 Transfer (JR Iwaki Station→TEPCO Fukushima Daiichi (1F) via J-Village)

14:00-16:00 1F tour

16:00-17:00 Transfer (1F→TENJIN via J-Village)

17:00-17:30 Registration

17:30-19:00 Dinner

19:25 Opening remarks

T. Ogawa (JAEA)

19:30-21:00 Session 1 : Decommissioning and radiation measurements

-Topic presentation

Chair : H. Takahashi (Univ. Tokyo)

Introduction : H. Takahashi (Univ. Tokyo)

(1) Remote radiation monitoring after the Fukushima Daiichi Nuclear Power Plant accident and challenges of new radiation measurement research to the decommissioning in JAEA

19:40-20:00

T. Torii (JAEA)

(2) Present status and challenges on 1F

20:00-20:20

W. Sato (TEPCO)

(3) Development of technologies for investigation of the inside of the PCV

20:20-20:40

Y. Masahira (MHI-IRID)

(4) UK nuclear decommissioning and the approach to measurement technology

20:40-21:00

K. Lennox (NNL)

<2nd DAY: Friday 5 August>

8:20-11:30 Session 2 : How to visualize radiation distributions in 1F buildings under high-dose rate.

Chair : T. Iguchi (Nagoya Univ.)

Introduction : T. Iguchi (Nagoya Univ.)

(1) Combined neutron / γ -ray measurements and challenges in high dose rate decommissioning applications

8:30-9:15

M.J. Joyce (Lancaster Univ.)

(2) Advanced Concepts in Gamma-ray Imaging and Data Fusion in 3-D

9:15-10:00

A. Haefner (LBNL)

(3) Polaris/Orion 3-D CdZnTe Gamma-Ray Imaging Spectrometers and Their Applications

10:00-10:45

Z. He (Univ. Michigan)

(4) Gamma-ray spectrometry by CdTe detector

10:45-11:30

T. Aoki (Shizuoka Univ.)

12:00-13:00 Lunch

13:30-14:00 Travelling (TENJIN → Naraha Remote Technology Development Center (NRTDC) of JAEA)

14:30-15:30 NRTDC tour

16:00-16:30 Travelling (NRTDC → TENJIN)

16:30-17:30 Short oral presentation for poster session (5 minutes each)

Chair : H. Takahashi (Univ. Tokyo)

(1) Research and Development of AR in Decommissioning

Y. Koda (JAEA)

(2) Development of portable gamma-ray spectroscopy system for analysis of radioactive contamination in the environment

W. Lee (KAERI)

(3) Development of drone system for environmental radiation measurement

M. Sasaki (JAEA)

(4) R&Ds on Remote Technology and Radiation Measurements in JAEA towards the Decommissioning of FDNPP

Y. Sato (JAEA)

(5) Development of non-destructive measurement technology for depth profile of subsurface contamination in radioactively contaminated site

B. Seo (KAERI)

(6) Evaluation of Eu-doped SrI₂ single crystal for scintillation γ -ray detector

M. Sugiyama (Chiyoda Technol Corp.)

(7) 4π Field of View gamma imaging using stacked scintillator array

T. Takahashi (Nagoya Univ.)

(8) Study on silicon semiconductor detector for visualizing the pollution distribution in the Fukushima Daiichi Nuclear Power Plant

Y. Yoshihara (Univ. Tokyo)

(9) Gamma-ray spectrometry of concrete and soil of decommissioning wastes

C-J. Kim (KAERI)

(10) Development of novel scintillators under the high-rate dose

S. Kurosawa (Tohoku Univ.)

18:00-20:00 Conference Party

<3rd DAY: Saturday 6 August>

8:30-10:55 Session 3 : How to detect the distributions of fuel debris.

Chair : I. Kanno (Kyoto Univ.)

Introduction : I. Kanno (Kyoto Univ.)

(1) Development of diamond radiation detector and diamond FET

8:40-9:25 **J.H. Kaneko (Hokkaido Univ.)**

(2) Savannah River National Laboratory Capabilities for Radiation Measurements in High-Dose Environments

9:25-10:10 **M. Brisson (SRNL)**

(3) ³He MSGC Neutron Detector development at the ILL

10:10-10:55 **B. Guerard (ILL)**

11:00-11:30 Discussion

11:30-12:30 Lunch

12:45-15:00 Poster Session

15:00 Closing

15:00-16:00 Travelling (TENJIN → JR Iwaki Station)