Changes

ISORD-9 Program (Final Version)

11th July (Tue.)

Opening Session 8:50-9:20

Opening Remarks:

Tetsuo IGUCHI (Symposium Chair of ISORD-9)

Welcome / Congratulatory Address:

Takashi NAKAMURA (Shimizu Corporation / Tohoku University, Japan)

Jong Kyung KIM (Hanyang University, Korea)

Liu QUN (China Institute for Radiation Protection, China)

Plenary talk 9:20-10:20

Chair: Tetsuo IGUCHI (Nagoya University)

PL-01 Temporal Change in Radiological Environments for Five Years after the Fukushima Accident (60 min.)

Kimiaki Saitoh, Japan Atomic Energy Agency

Coffee Break 10:20-10:40

Session 1 10:40-12:10

Analysis for Radiation Protection, Dose Assessment and Radiation Transport

Chairs : Hee-Seock LEE (POSTECH), Hiroshi IWASE (KEK)

(Invited talk) S1-1(I) The latest estimation for the Parameter α value of Radiation Protection Optimization in China (30 min.)

Linsheng Jia, China Institue for Radiation Protection

S1-2 Monte Carlo calculation of the neutron and gamma-ray distributions inside the LHD experimental building and shielding design for diagnostics (20 min.)

Takeo Nishitani, National institute for fusion science

S1-3 Comparison of the Total Flux Distributions for the First Collision Source Method on the Volume Source in AETIUS code (20 min.)

Jong Woon Kim, Korea Atomic Energy Research Institute

S1-4 Dose Assessment Analysis on Neutron Source Terms of 70 MeV Proton and UC2 Target Reaction for RAON ISOL Target System (20 min.)

Che Wook Yim, Hanyang University

Conference Photo **12:10-12:20**

Lunch **12:20-13:30**

Session 2 **13:30-15:20**

Radiation Dosimetry

Chairs: Rui QIU (Tsinghua Univ.), Hiromi YAMAZAWA (Nagoya Univ.)

(Invited talk) S2-1(I) Technical Review on Correlation of Thyroid cancer with Nuclear Power Plants in Korea (30 min.)

Kyo-Youn Kim, Korea Atomic Energy Research Institute

S2-2 Applicability of Practical Calibration of a Small-type OSL Dosimeter For Measuring the Exposure Doses Effected by Scattered and Penetrating X-rays (20 min.)

Tohru Okazaki, Nagase Landauer, Ltd.

S2-3 Energy and Angular Dependence of the Small Type OSL Dosimeter in Diagnostic and Nuclear Medicine Regions using Monte Carlo Simulation (20 min.)

Vergil Lorenzo Estacio Cruz, Nagase Landauer Ltd.

S2-4 Small beam dosimetry-Development of PMMA phantom for the accurate determination of absorbed dose rate to water and dose distribution for Gamma Knife® dosimetry (20 min.)

Kook Jin Chun, Korea University Sejong Campus

S2-5 Development of Novel Rectum Dosimeter using OSL sheet with the aim of Direct Dose Measurement of Organ Dose during Brachytherapy (20 min.)

Takashi Asahara, Tokushima University

Coffee Break **15:20-15:40**

Session 3 **15:40-16:50**

Radiation Shielding and Activation Problem in Accelerator Facilities

Chairs: Kook Jin CHUN (Korea Univ.), Takatoshi HATTORI (CRIEPI)

(Invited talk) S3-1(I) Monte Carlo Estimations for Radiation Issues at PET Cyclotron and in its Decommissioning using FLUKA (30 min.)

Hee-Seock Lee, Pohang Accelerator Laboratory / POSTECH

S3-2 Investigation of activation range for self-shielded PET cyclotron (20 min.)

Shohei Iwai, Tokyo Nuclear Services Co.,LTD

S3-3 Measurements of activation profile of in the concrete shield of the J-PARC accelerator tunnel (20 min.)

Masayuki Hagiwara, High energy accelerator research organization (KEK)

Session 4 **16:50-18:20**

Radiation Monitoring Technique and Systems

Chairs: Kook Jin CHUN (Korea Univ.), Takatoshi HATTORI (CRIEPI)

(Invited talk) S4-1(I) Luminescence imaging of water during radiation irradiations lower energy than Cerenkov-light threshold (30 min.)

Seiichi Yamamoto, Nagoya University

S4-2 Development of Emergency Radiation Monitoring System for Special Conditions (20 min.)

Yang Liu, China institute of atomic energy

S4-3 Development of ROV system to survey the debris in the Fukushima Daiichi Power Plant (20 min.)

So Kamada, National Institue of Maritime, Port, and Aviation Technology

S4-4 Anomaly Gamma Spectra Detection Method Based on Principal Component Analysis and Mahalanobis Distance (20 min.)

Ri Zhao, China Institute for Radiation Protection

12th July (Wed.)

Session 5 **8:50-10:20**

Environmental Radiation Measurements and Assessments

Chairs: Kyo-Youn KIM (KAERI), Kenji ISHIBASHI (Kyushu Univ.)

(Invited talk) S5-1(I) Fukushima radionuclides in the marine environment from coastal region of Japan to the Pacific Ocean through the end of 2016 (30 min.)

Michio Aoyama, Fukushima University

S5-2 Estimation of atmospheric concentration of radionuclides from pulse height distribution measured by monitoring station NaI(Tl) detectors (20 min.)

Hiromi Yamazawa , Nagoya University

S5-3 The Migration Experiment of Sr-90 in Variably Saturated Soils and Hydrus-3d Numerical Simulation Research (20 min.)

Anchang Deng, China Institute for Radiation Protection

S5-4 Po-210 Distribution Image and Radioactivity Determination in Inner Organ of Fish with Nuclear Track Detector CR-39 (20 min.)

Chizuo Mori, Aichi Institute of Technology

Coffee Break **10:20-10:40**

Session 6 **10:40-12:30**

Radiation Transport and Shielding

Chairs: Chan Hyeong KIM (Hanyang Univ.), Chikara KONNO (JAEA)

(Invited talk) S6-1(I) A Revised Jenkins Formula for Electron Induced Neutron Deep Penetration Calculation (30 min.)

Hiroshi Iwase, High Energy Accelerator Research Organization (KEK)

S6-2 A Study on Calculation Method of Duct Streaming from Medical Linac Room (20 min.)

Takuma Noto, Shimizu Corporation

S6-3 Radiation field characterization of the ultrashort ultrahigh-intensity laser systems at CAEP (20 min.)

Bo Yang, Tsinghua University

S6-4 Benchmark of PHITS for an absorbed dose rate evaluation from beta-radiation (20 min.)

Fumiyoshi Nobuhara, Tokyo Nuclear Services Co. LTD

S6-5 Simulation Research on Safety Verification of Co-60 Transportation Package (20 min.)

Dongyuan Meng, China Institute for Radiation Protection

Lunch **12:30-13:30**

Session 7 **13:30-14:50**

Radiation Dosimetry and Monitoring

Chairs: Jongsoon SONG (Chosun Univ.), Chizuo MORI (Aichi Institute of Technology)

S7-1 Development of Dosimetry System for Gamma-ray Irradiation System (20 min.)

Ki Tek Han, Korean Association for Radiation Application

S7-2 Design of Radiation Detectors for Area Monitor Using Monte Carlo Simulation (20 min.)

Kyuhwan Cho, Ratoz E&G

S7-3 Development of A Low-energy X-ray Camera for Beam Monitoring of Particle Therapy (20 min.)

Koki Ando, Nagoya University Graduate School of Medicine

S7-4 Efficiency Calibration for Thyroid Monitoring using CeBr3 and Monte Carlo Approach (20 min.)

Jeong In Kim, Radiation Health Intitute (KHNP)

Poster Session **15:00-17:00** **(incl. Coffee Break)**

Banquet **18:30-20:30**

13th July (Thr.)

Session 8 **8:50-10:00**

Medical Radiation Dosimetry

Chairs: Liye LIU (CIRP), Seiichi YAMAMOTO (Nagoya Univ.)

(Invited talk) S8-1(I) Calculation of Dose Conversion Coefficients for Radiation Exposure from Medical Diagnostic Imaging (30 min.)

Rui Qiu, Tsinghua University

S8-2 Direct Radiation Dose Measurement of Rectum during High-Dose-Rate 192Ir Brachytherapy for Cervical Cancer Treatment (20 min.)

Emi Tomita, Tokushima University

S8-3 Study on Leakage Test of Iodine Adsorber Using Cyclohexane (20 min.)

Yu Jie, China Institute for Radiation Protection

Coffee Break **10:00-10:20**

Session 9 **10:20-11:50**

Radiation Detection and Sensor Technology

Chairs: Liye LIU (CIRP), Seiichi YAMAMOTO (Nagoya Univ.)

(Invited talk) S9-1(I) Spectroscopic Measurements of LX ray Using a Transition-edge Sensor Microcalorimeter for Nondestructive Analysis of Transuranium Elements (30 min.)

Keisuke Mehata, Kyushyu University

S9-2 Development of Cavity Ring-Down Spectroscopy for Carbon Isotope analysis (20 min.)

Volker Sonnenschein, Nagoya University

S9-3 Research on Real-time Indoor Location and Personal Dose Remote Monitoring Technology (20 min.)

Ri Zhao, China Institute for Radiation Protection

S9-4 Development of A Circular Shape Si-PM-based Detector Ring for Positron Emission Mammography (PEM) System (20 min.)

Kouhei Nakanishi, Nagoya university

Lunch **11:50-13:00**

Session 10 **13:00-14:20**

Nuclear(Reactor-Neutrino) Physics and Nuclear Data Library

Chairs: Jong Woon KIM (KAERI), Seiki OHNISHI (NMRI)

S10-1 Analysis of Reactor-Neutrino Oscillation Experiment from Consideration of Internal Constituent Motion (20 min.)

Kenji Ishibashi, Kyushu University

S10-2 A Low Background Measurement for the Rare Decay Search in CANDLES (20 min.)

Kyohei Nakajima, University of Fukui

S10-3 ACE library of JENDL-4.0/HE (20 min.)

Norihiro Matsuda, Japan Atomic Energy Agency

S10-4 AMPX MG Library of JENDL-4.0 (20 min.)

Chikara Konno, Japan Atomic Energy Agency

Coffee Break **14:20-14:40**

Session 11 **14:40-16:00**

Technologies for Nuclear Safety Assessment

Chairs: Wook Jae YOO (Konkuk Univ.), Kenichi WATANABE (Nagoya Univ.)

S11-1 Nuclear Accident Offsite Consequence Assessment System (NAOCAS_V3.0) Design and Development (20 min.)

Lyu Minghua, China Institute for Radiation Protection

S11-2 Research on Digital Radiation Protection Technologies in Nuclear Facilities (20 min.)

Yuan Zhao, China Institute for Radiation Protection

S11-3 Comparison of the Fukushima radioactive mapping by two different aerial radiation monitoring systems (20 min.)

Byoung-Jik Kim, Korea Institute of Nuclear Safety

S11-4 Characterization and Optimization of Three HPGe Detectors by Radiographic Imaging (20 min.)

Yunshi Xiao, China Institute for Radiation Protection

Closing Session **16:00-16:30**

Tetsuo IGUCHI (Nagoya University)

Liye LIU (CIRP)

Poster session

P1 The Development of JRODOS and Application in China

Minghua Lyu, China Institute for Radiation Protection

P2 Neutron and Photon Dose Rate Distributions in Linac Room

Kazuaki Kosako, Shimizu Corporation

P3 Estimation of Neutron Duct Streaming with the feeder for the Power Supply System in the Tokamak Fusion Device Facility

Atsuhiko Morioka Sukegawa, National Institute for Quantum and Radiological Science and Technology

P5 Measurement of activation cross sections of materials for beam windows and targets at J-PARC

Hiroki Matsuda, JAEA

P6 Derivation of Shielding Factors Using Point Kernel and Monte Carlo methods

Moon Hee Han, Korea Atomic Energy Research Institute

P7 Experiment and Analysis of Neutron Streaming in Iron-polyethylene Multi Layer Shielding

Seiki Ohnishi, National Maritime Research Institute

P8 An Evaluation of Concrete Activation from Impurities by Sensitivity Analysis for Various Nuclear Facilities

Chang Ho Shin, Hanyang University

P9 Evaluation of the Dose Rate Distribution in Primary Containment Vessel of the Fukushima Daiichi Nuclear Power Station

Keisuke Okumura, Japan Atomic Energy Agency

P10 Thermal neutron distribution in beam line tunnel of KEK electron/positron injector linac

Takahiro Oyama, KEK

P11 Determination of Target Parameters on Truncated Conical-shaped Transmission X-ray Target with Electron Energies Ranging from 30 to 70 keV

Woo Sang Ahn, Gangneung Asan Hospital, University of Ulsan College of Medicine

P12 Technical Standard and Guidance for Quality Control of Instruments Used to Measure the Activity in Nuclear Medicine

Sang Hyun Park, Korea Institute of Nuclear Safety

P13 A Development of Reconstruction Algorithm for Activation Sample Measurement Using Gamma Camera

Jae Yong Lee, Hanyang University

P14 An Application of Genetic Multi-objective Optimization Algorithm to Neutron Spectrum Unfolding Problem

MyeongHyeon Woo, Hanyang University

P15 Direct Dose Measurement of Patients during Pediatric Computed Tomography Examination

Hiroaki Hayashi, Tokushima University

P16 Effect of internal metallic ports in temporary tissue expanders on the dose distributions of postmastectomy radiation therapy

Jong Min Park, Seoul National University Hospital

P17 Establishment of Technical Standards for Personal Dosimetry Performance Test by New ANSI Criteria in Korea

Jang-Lyul Kim, Korea Atomic Energy Research Institute

P18 Comparison Between Experiment and MCNP Simulation for Retrospective Dosimetry According to the Geometry and Energy of Exposure Using a TL/OSL Method of Electronic Components in a Mobile Phone

Min Chae Kim, Korea Atomic Energy Research Institute

P19 Verification of Water Equivalence of Microfluidic Calorimeter using Monte Carlo Simulation

Tae Hoon Kim, Hanyang University

P20 Construction of Chinese Adult Female Mesh-type Phantoms with Detailed Breast Structure and Application in Dose Estimation for External Radiation

Ankang Hu, Tsinghua University

P21 Basic evaluation of the Eu:BaFBr and Ce:CaF_2 hybrid type small size dosimeter for correction of quenching effect in irradiation with carbon ions

Yuho Hirata, Nagoya university

P22 Real-time measurements of position and dose distribution using catheter-insertable scintillating fiber bundle sensor in HDR brachytherapy

Sang Hun Shin, Konkuk University

P23 Measurement of Radiation Dose Distribution in Minipig Physical Phantom Using RPLGD

Jae Seok Kim, National Radiation Emergency Medical Center,
Korea Institute of Radiological and Medical Sciences

P24 Ambient Dose Rate Monitoring at Several Site in Iitate

Kazuhiko Iijima, KEK

P25 Estimation of Photon Yield in Liquid Scintillation Counter by Using Geant4 Monte Carlo Simulation

Tsukasa Aso, National Institute of Technology, Toyama College

P26 Response Evaluation of Onion-like Single Bonner Sphere Neutron Spectrometer Using TRUST Eu:LiCAF Scintillator

Kenichi Watanabe, Nagoya University

P27 Fabrication and Characterization of a Visible/Gamma Dual Imaging Probe System Using a Flexible Image Guide

Wook Jae Yoo, Konkuk University

P28 Optimization of imaging plate method for the measurement of activated indium as fast-neutron detector in large radiation field

Makoto Kobayashi, National Institute for Fusion Science

P29 Fabrication and Characterization of UV Cured Plastic Scintillator for 3D Printing Technology

KIM Sunghwan, Cheongju University

P30 Light Output and Decay Time of Plastic Scintillators Fabricated by UV Curing Machine

Sangmin Lee, Hanyang University

P31 Development of wireless multi sensor active personal dosimeter - tablet system

Toshioh Fujibuchi, Kyushu University

P32 Estimation of the characteristic of gamma ray dose measurement with experimental wireless dose monitoring system

Toshioh Fujibuchi, Kyushu Universty

P33 Development and Characterization of the Fiber-Optic Radiation Sensor using a LYSO Scintillator

Chan Hee Park, Korean Association for Radiation Application

P34 Study of n/γ discrimination using Pulse Height Analysis Method for the 3He Neutron Survey Meter

Joonbum Choi, Hanyang University, South Korea

P35 Fabrication of SiC Detector as In-Core Power Monitor at HANARO

Junesic Park, Hanyang University

P36 Emission Image of X-ray-Irradiated CR-39 Stick Doped with Methylviologen-Encapsulated Silica Nanocapsules Using LED Light

Hirokazu Miyoshi, Tokushima University

P37 Characteristics of commercially Available CdZnTe Detector as Gamma-ray Spectrometer under Severe Nuclear Accident

Yoshihiko Tanimura, Japan Atomic Energy Agency

P38 Development and characterization of a fiber-optic gamma spectroscopy system

Sang Bin Lee, Dongguk University

P39 Development of wide one-dimensional X-ray line sensor in backscattered X-ray imaging system for infrastructure inspection

Kazuya Oohashi, Nagoya University

P40 Development of Continuous Radioactivity Measurement System on Soil Contaminated with ^{134}Cs, ^{137}Cs and ^{60}Co

Minwoo Seo, Orbitech Co., Ltd

P41 Development of radionuclide isotope identification software for large volume PVT plastic scintillator using deconvolution algorithm

Sung Ryul Kim, Orbitech Co., Ltd

P42 Development of intense gamma-ray source monitoring system in water for radiation safety

Hiroyuki Miyamaru, Osaka Prefecture University

P43 Proposal for Fast Neutron Imaging Reconstruction based on Elastic Scattering Events in Nuclear Emulsion

Kanji Watanabe, Nagoya University

P44 Development of Energy Spectrometer for Fusion Neutron in KSTAR

Takumi Ohshima, Nagoya University

P45 Quantitative Evaluation of Response of Airborne Po-218 Radioactivity to Introducing Fine Particles with Different Size Distributions from Ambient Aerosol

Jun Moriizumi, Nagoya University

P46 Feasibility of in situ beta ray measurements in underwater environment

Hye min park, Myongji University

P47 Study on Inhalation Rate of Korean Adults

Dahye Kwon, Korea Atomic Energy Research Institute

P48 Development of analysis method for airborne radiation monitoring using inverse problem solutions

Miyuki Sasaki, Japan Atomic Energy Agency

P49 Development of a Korean Radiological Dose Assessment Code (PRESS) Based on the New Recommendation of the ICRP-103

Areum Gil, Korea Atomic Energy Research Institute

P50 Impact Assessment of Using a Sedimentation Agent for Soil Contaminated by Radioactive Materials in the Process of Soil Washing by ICP-OES and Chemical Equilibrium

Sunil Kim, Chosun University

P51 Development of simultaneous evaluation methods of radioactivity in soil and dose rate using $CeBr_3$ and $SrI_2(Eu)$ scintillation detectors applicable to a radiological emergency situation

Munehiko Kowatari, Japan Atomic Energy Agency

P52 Proposal of Framework for Decision Making of Additional Monitoring of Eye Lens Dose for Radiation Workers

Munehiko Kowatari, Japan Atomic Energy Agency