

PROGRAMME



**The 9th International Symposium on
the Natural Radiation Environment (NRE-IX)
September 22 - 26, 2014, HIROSAKI, JAPAN**



Programme of Oral Presentations in NRE-IX

Monday, September 22		
15:00	20:00	Registration and welcome cocktail Room REIHO
Tuesday, September 23		
8:15	8:55	Registration
8:55	9:05	Opening remarks Room REIHO
Keynote lecture		Room REIHO
Chairpersons: S. Tokonami, J. Chen		
9:05	9:40	<u>J.P. Mc Laughlin</u> Characteristics and effects of natural radiation
9:40	10:15	<u>A.C. George</u> The history, development and the present status of the radon program in the United States of America
10:15	10:45	Coffee break (poster viewing)
Radon and thoron		Room REIHO-A
Chairpersons: C. Sainz-Fernandez, K. Skeppström		
10:45	11:00	<u>V. Gruber, W. Ringer, G. Wurm, H. Friedmann</u> Radon mapping strategies in Austria
11:00	11:15	<u>G. Ielsch, M. Cuney, F. Rossi, F. Buscail, A. Girard, A. Leon, M.E. Cushing, J. Guillevic</u> Geogenic radon potential mapping in France and French overseas territories
11:15	11:30	<u>S. Hirao, R. Hayashi, J. Moriizumi, H. Yamazawa, Y. Tohjima, H. Mukai</u> Inverse estimation of radon flux distribution for East Asia using measured atmospheric radon concentration
11:30	11:45	<u>S. Li, N. Wang, Y. Feng</u> A new method for measuring radon exhalation rate from soil sample in the laboratory
11:45	12:00	<u>J. Moriizumi, D. Kondo, Y. Kojima, H. Liu, S. Hirao, Y. Yamazawa</u> Bi-214/Pb-214 activity ratio in rainwater for residence time estimation of cloud droplets and raindrops

12:00	12:15	<u>T. Li</u> , N. Wang, S. Li Preliminary investigation of radon concentration in water in Shenzhen city (China)
12:15	12:30	<u>N. Khattak</u> , M. Khan, M. Shah, N. Ali Radon monitoring in drinking water sources located in the vicinity of Karak Thrust, southern Kohat Plateau, Pakistan
12:30	12:45	R. Mehra, <u>R. Jakhu</u> Monitoring of ^{222}Rn, ^{220}Rn concentration in air and ^{222}Rn concentration in water for assessment of annual dose in Doaba region of Punjab, India
NORM/TENORM		
Chairpersons: T. Kovács, B.U. Chang		Room REIHO-B
10:45	11:00	<u>J. Chen</u> A discussion on NORM guidelines - proposed revisions needed for practical use
11:00	11:15	<u>M. Cowie</u> Natural radioactivity associated with abrasive blasting, a case study
11:15	11:30	<u>R. Mehra</u> Radiation impact assessment of naturally occurring radionuclides using gamma ray spectroscopy
11:30	11:45	Q. Wang, <u>W. Zhuo</u> , Y. Kong, C. Zhao, D. Fan Assessment of gamma dose rate in dwellings due to decorative stones
11:45	12:00	<u>B. Bulanek</u> , J. Hulka, K. Jilek Detector Timepix for an in-situ measurement in NORM industries
12:00	12:15	<u>D. Seydou</u> , H. Abdou, I. Garba Risk of natural radiation level increase in the northern part of Niger Republic due to uranium mining and other NORM industries
12:15	12:30	<u>A. Innocent</u> , M.I. Ike Investigating the NORMs level associated with abandoned mine sites in Mistali-Jos, Nigeria
High background radiation areas		
Chairpersons: M.S. Chandrashekhara, K. Fornalski		Room AKEBONO
10:45	11:00	N.C. Da Silva, <u>P. Bossew</u> , R.J. Oliveira Natural radiation in the geological anomaly of Poços de Caldas Plateau, Brazil
11:00	11:15	<u>S.A. Auisui</u> , T. Bhongsuwan A high natural radiation area in Kaotan hot spring of Tha-Chang district, Surat Thani province, Thailand and its relation to geological formations
11:15	11:30	<u>A. Martin Sanchez</u> , J. de la Torre Perez, A.B. Ruano Sanchez, F.L. Naranjo Correa Measuring radon concentration and estimating dose in tourist caves
11:30	11:45	<u>M. Chege</u> , N. Hashim, A. Merenga, J. Tschiersch Analysis of internal exposure associated with consumption of crops and groundwater from the high background radiation area of Mrima Hill, Kenya

11:45	12:00	<u>M. Hosoda</u> , S. Tokonami, Y. Omori, S.K. Sahoo, S. Akiba, A. Sorimachi, T. Ishikawa, R.R. Nair, P. Jayalekshmi, P. Sebastian, H. Kudo, K. Iwaoka Estimation of external dose by car-borne survey in Kerala, India
12:00	12:15	<u>D. Otwoma</u> , J.P. Patel, S. Bartilol, A.O. Mustapha Dose assessment of inhabitants of Homa mountain area, Homa bay county in Kenya due to elevated natural radioactivity
12:15	12:30	<u>K.H. Angeyo</u> , L. Ntihakose, J.P. Patel, D.M. Maina Radiogenic and dosimetric characteristics of artisanal mining of a high background radiation area 'conflict mineral' columbite-tantalite
12:30	12:45	<u>S.M.J. Mortazavi</u> , M. Haghani, S. Taeb, A. Soleimani, S.A.R. Mortazavi Can tumor markers shed some light on dark corners of the puzzling issue of cancer incidence in areas with elevated levels of natural background radiation?
12:45	14:15	Lunch
Keynote lecture Room REIHO Chairpersons: K. O'Brien, P. Bossew, M. Kreuzer		
14:15	14:50	<u>E.R. Benton</u> The impact of the space radiation environment on human space exploration
14:50	15:25	<u>H. Yamazawa</u> Achievements and limitations of dynamical modeling of environmental radioactivity behavior
15:25	16:00	<u>S. Akiba</u> Epidemiological studies on cancer risk associated with low dose and dose rate radiation exposure
16:00	16:30	Coffee break (poster viewing)
Radon and thoron Room REIHO-A Chairpersons: G. Butterweck, Y. Tan		
16:30	16:45	<u>B. Sabot</u> , S. Pierre, N. Michielsen, P. Cassette A primary thoron activity standard for the calibration of thoron measurement instruments
16:45	17:00	<u>S. Pierre</u> , P. Cassette, I. Le Garrères, Y. Ménesguen, B. Sabot Factors of influence in the measurement of radon activity standards using an ionization chamber and a gamma ray spectrometer
17:00	17:15	<u>J.C. Liang</u> , P.H. Zheng, Z.J. Yang, H.R. Liu, M. Zhang, Z.S. li, L. Zhang, Q.J. Guo Development of radon and its progeny calibration facility at NIM (China)
17:15	17:30	<u>K. Mitev</u> , <u>P. Cassette</u> , S. Georgiev, B. Sabot, I. Dimitrova, I. Tartès, T. Boshkova, D. Pressyanov Absolute measurement of the activity of radon-222 absorbed in thin polycarbonate foils

17:30	17:45	R. Mehra, <u>P. Bangotra</u> , K. Kaur, S. Kanse Estimation of equilibrium equivalent concentration (EEC) of ^{222}Rn and ^{220}Rn in Malwa region of Punjab
17:45	18:00	<u>K.S. Pruthvi Rani</u> , M.S. Chandrashekara, L. Paramesh Atmospheric electrical conductivity related to radon concentration at Mysore, India
NORM/TENORM Chairpersons: S. Landsberger, S.A. Arabi Room REIHO-B		
16:30	16:45	<u>B. Robles</u> , J.C. Mora, C. Trueba, A. Baeza, J.A. Corbacho, J. Guillen, J. Rodriguez Design and results of the radiological impact assessments of all Spanish coal-fired power plants
16:45	17:00	<u>J.C. Mora</u> , B. Robles NORM management in conventional waste disposals
17:00	17:15	<u>D.H. Yoo</u> , W.G. Shin, C.H. Min Feasibility study for the assessment of the exposed dose with TENORM added consumer products
Terrestrial gamma radiation Chairpersons: S. Landsberger, S.A. Arabi Room REIHO-B		
17:15	17:30	<u>B.U. Chang</u> , E.R. Lee, Y.J. Kim, K.P. Lee Vehicle-based terrestrial γ-radiation survey using $4\times 4\times 16''$ NaI(Tl) scintillation detector for Jeju island and 30 km radius area around the Hanbit Nuclear Power Plant sites in Korea
17:30	17:45	<u>M. Yadav</u> , M. Rawat, A. Dangwal, M. Prasad, G.S. Gusain, R.C. Ramola Natural radionuclides analysis in soil samples of Purola area of Garhwal Himalaya, India
17:45	18:00	<u>A. Babatunde</u> Indoor exposure to radiation in some selected locations in Ibadan, southwestern Nigeria
Environmental radioactivity Chairpersons: S. Nakashima, V. Gruber Room AKEBONO		
16:30	16:45	<u>H. Yamazawa</u> , S. Yamada, Y. Xu, S. Hirao, J. Moriizumi An experimental method to quantitatively estimate rate constants of elemental processes of indoor radioactive aerosol particle behavior
16:45	17:00	<u>K. Skeppström</u> Naturally occurring radionuclides in drinking water in Sweden - an extent of the problem and the challenge of making accurate dose estimations
17:00	17:15	<u>Saidou</u> , E.A. Patrice Comparative study of the natural radioactivity, corresponding radiation dose and radiological risk in the uranium and oil regions of Cameroon
17:15	17:30	<u>K.M. Nagaraju</u> , M.S. Chandrashekara, K.S. Pruthvi Rani, L. Paramesh Studies on ^{226}Ra concentration and ^{222}Rn exhalation rate from soil and rock samples in Chamarajanagar district, India

17:30	17:45	<u>K. Ogungbemi</u> , S. Oyebola Investigation of lead concentration in cow teeth within Ota an urban town of Abeokuta
17:45	18:00	<u>A. Choukri</u> , O.K. Hakam Measurements of U and Ra activities in drinking water samples and of Rn in dwellings in Morocco and evaluation of their consequences
Wednesday, September 24		
Keynote lecture		
Chairpersons: S. Chałupnik, T. Kovács, H. Yamazawa		Room REIHO
8:30	9:05	<u>D. Calmet</u> International standards and radiation measurement
9:05	9:40	<u>S. Chanyotha</u> , C. Kranrod, P. Pengvanich Sytematic approach to characterization of NORM in Thailand
9:40	10:15	<u>R.C. Ramola</u> , M. Prasad, M. Rawat, A. Dangwal, G.S. Gusain, R. Mishra, S.K. Sahoo, S. Tokonami Comparative study of various techniques for environmental radon, thoron and progeny measurements
10:15	10:45	Coffee break (poster viewing)
Radon and thoron		
Chairpersons: A.C. George, J. Moriizumi		Room REIHO-A
10:45	11:00	<u>D. Fan</u> , W. Zhuo, C. Zhao, Y. Yi A new type of electrostatic integrating radon monitor with the CR-39 as alpha-particle detector
11:00	11:15	<u>G. Bátor</u> , F. Fábán, E. Tóth-Bodrogi, A. Csordás, J. Somlai, T. Kovács Intercomparison of calibrated CR-39 track thoron progeny detectors by active thoron devices under on-site circumstances
11:15	11:30	<u>Z. Li</u> , D. Xiao, G. Zhao, X. Wu Development of $^{222}\text{Rn}/^{220}\text{Rn}$ continuous monitor based on electrostatic collection method
11:30	11:45	<u>X. Wu</u> , D. Xiao, Z. Li, J. Dan, Q. Zhou, Z. He, C. Li Study on the continuous measurement method of radon and thoron progeny concentration based on α spectroscopy
11:45	12:00	J. Yang, L. Zhang, K. Abdumomin, <u>Y. Tang</u> , Q. Guo Study on peak shape fitting method in radon progeny measurement
12:00	12:15	<u>B. Chen</u> , W. Zhuo Estimation of the front-to-total activity ratio for wire screens using CFD simulation
12:15	12:30	<u>V. Joshi</u> , M. Yadav, R.C. Ramola Variation in ^{222}Rn exhalation rate from soil samples of Tehri Garhwal, India

12:30	12:45	<u>M.S. Chandrashekar</u> , K.M. Nagaraju, K.S. Pruthvi Rani, L. Paramesh Studies on radium and radon concentrations in drinking water samples of Chamarajanagar district, Karnatka state, India
Dosimetry, risk analysis and epidemiology		Room REIHO-B
Chairpersons: W. Hofmann, M. Kreuzer		
10:45	11:00	R. Winkler-Heil, <u>W. Hofmann</u> , M. Hussain, L. Pichelstorfer Analyses of local dose distributions in the lungs for the determination of risk apportionment factors
11:00	11:15	<u>A.A. Alghamdi</u> Estimating the effective dose equivalent during transport radioactive material using the two dosimeter approach
11:15	11:30	<u>S. Landsberger</u> , M.D. Yoho, E. Chen Non-destructive determination of uranium, thorium and ⁴⁰K in tobacco and their implicaiton on radiation dose levels to the human body
11:30	11:45	S.J. Chang, S.Y. Hung, <u>Y.L. Liu</u> , S.H. Jiang, J. Wu Dose conversion coefficients for external radiation protection using Taiwanese reference men
11:45	12:00	<u>A.M. Muhammad</u> , I.I. Funtua, B.B.M. Dewu, Y.I. Zakari Assessment of radiological hazard associated with a calibration facility for field radiometric instruments
12:00	12:15	<u>M. Kreuzer</u> , M. Sogl, M. Schnelzer, L. Walsh Lung cancer in German uranium miners – radon-associated risk at low exposure rate
12:15	12:30	<u>S. Akiba</u> Epidemiological studies in high background radiation areas
Environmental radioactivity		Room AKEBONO
Chairpersons: J. Chen, Saïdou		
10:45	11:00	<u>K.W. Fornalski</u> Natural background radiation measurements on the first Polish nuclear power plant site
11:00	11:15	R. Kritsanuwat, <u>S.K. Sahoo</u> , M. Fukushi, H. Arae, S. Chanyotha Measurement of uranium, thorium and uranium activity ratio in environmental samples from a tropical country, Thailand
11:15	11:30	<u>D. Nabayaogo</u> , F.P. Carvalho Environmental radioactivity in gold mining in Burkina Faso
11:30	11:45	<u>M.J. Saffuwan</u> , Z. Embong The optimization of electrokinetic remediation for heavy metal contaminated of Holyrood-Lunas (Acrisol species) soil in Sri Gading industry area, Batu Pahat, Johor, Malaysia
11:45	12:00	<u>M. Horváth</u> , E. Tóth-Bodrogi, G. Bátor, T. Kovács Study of polonium content in cigarette smoke

12:00	12:15	<u>K. Asaduzzaman</u> , M.U. Khandaker, Y.M. Amin Measurement of radioactivity and heavy metal levels in vegetables produced and consumed and their impact on Kuala Selangor communities of Peninsular Malaysia
12:15	12:30	A. Achkoun, R. Cherouaki, J. Naja, A. Fahli, M.A. Misdaq, R.M. Hamdi Study of radioactivity during the treatment of wastewaters by a phosphate bed
12:45	14:15	Lunch
14:15	19:00	Tour
Thursday, September 25		
Keynote lecture		
Chairpersons: S. Tokonami, I. Kashiwakura,		Room REIHO
R.C. Ramola		
8:30	9:05	<u>S. Chałupnik</u> , M. Wysocka, K. Skubacz, B. Michalik Radiation protection in Polish coal mines - system of monitoring and control of the hazard
9:05	9:40	R.K.K. Lam, W. Han, <u>K.N. Yu</u> Modulation of NF-KB in rescued irradiated cells
9:40	10:15	<u>J. Chen</u> , J. Whyte, K. Ford An overview of radon research in Canada
10:15	10:45	Coffee break (poster viewing)
Radon and thoron		
Chairpersons: A. Martin Sanchez, W. Zhuo		Room REIHO-A
10:45	11:00	<u>Y. Tan</u> , D. Xiao, S. Tokonami Improvement in the ²²²Rn response versus time during sharp concentration changes
11:00	11:15	<u>M. Prasad</u> , M. Rawat, A. Dangwal, M. Yadav, G. Gusain, R. Mishra, R.C. Ramola Measurement of radon and thoron progeny concentrations in dwellings of Tehri Garhwal, India using LR-115 deposition based DTPS/DRPS technique
11:15	11:30	K. Skeppström, <u>E. Wåhlin</u> Is thoron a problem in Swedish dwellings? Results of measurements of concentrations of thoron and its progenies
11:30	11:45	<u>F. Barazza</u> , W. Gfeller, C. Murith, M. Palacios An investigation of the causes for the seasonal and annual variations of indoor radon concentrations
11:45	12:00	<u>C. Pornnumpa</u> , S. Tokonami, A. Sorimachi, C. Kranrod Characteristics of indoor radon and its progeny in a Japanese dwelling

12:00	12:15	<u>R.B.S. Rawat</u> Measurement of indoor radon, thoron and their progeny concentration in residential houses of Shahjahanpur and Hardoi districts of Uttar Pradesh
12:15	12:30	R. Mehra, <u>K. Kaur</u> , P. Bangotra, B.K. Sahoo Inhalation dose estimation due to ²²²Rn/²²⁰Rn exposure using single entry pin hole based diffusion chambers
Biological effects		
Chairpersons: K.N. Yu, I. Yakymenko		Room REIHO-B
10:45	11:00	<u>H.S. Kim</u> , H. Choi, K.H. Yang Thymic lymphoma suppressive DNA damage repair pathway related gene expressions in the thymus of low-dose-rate irradiated mice
11:00	11:15	<u>C. Kawamura</u> , S. Monzen, A. Nakamura, Y. Mariya Analysis of serial change of oxidative stress-related markers in the patients with recurrent thyroid cancer undergoing ¹³¹I radionuclide therapy
11:15	11:30	<u>E.Y. Kong</u> , W.Y. Tam, S.H. Cheng, C.H. Ma, K.N. Yu Changes in global genome methylation in zebrafish embryos upon alpha irradiation
11:30	11:45	<u>C.Y.P. Ng</u> , S. Pereira, S.H. Cheng, C. Adam-Guillermin, J. Garnier-Laplace, K.N. Yu Multiple stressor effects of depleted uranium and ionizing radiation on zebrafish embryos
11:45	12:00	E. Sidorik, A. Burlaka, O. Tsybulin, S. Lukin, <u>I. Yakymenko</u> Oxidative stress induced by ionizing and non-ionizing radiation: differences and similarities
12:00	12:15	<u>M. Yamaguchi</u> , T. Hirouchi, M. Chiba, S. Monzen, H. Yoshino, J. Ishikawa, T. Tsujiguchi, A. Nishiyama, S. Murakami, J. Komura, I. Kashiwakura Effects of a c-mpl receptor agonist on mice exposed to lethal ionizing radiation
12:15	12:30	<u>S. Kumar</u> , S.S. Malini, T. Shivanandappa Radioprotective action of omega 3 fatty acid on leukocyte cell cultures
Environmental radioactivity		
Chairpersons: S. Kinase, S.K. Sahoo		Room AKEBONO
10:45	11:00	<u>S.F. Özmen</u> , I. Boztosun, A. Cesur Environmental radioactivity analysis in Mersin, Turkey following the Fukushima Dai-ichi Nuclear accident
11:00	11:15	<u>R. Figueira</u> , P. Ferreira, C. Goncalves, M. Mahiques Use of natural and artificial radionuclides for sedimentation rates determination in cores from southeastern part of Brazil
11:15	11:30	<u>A. Shadrack</u> Suggestions for the improvement of environmental radiation monitoring in Kenya
11:30	11:45	<u>A. Usacheva</u> , I. Semenov, A. Miroshnikov Cesium-137 as a tracer of current soil turbation

11:45	12:00	<u>A. Miroshnikov</u> Two types ¹³⁷Cs vertical distribution in the bottom sediments the Kara sea marginal filter
12:00	12:15	<u>S. Fakhi, R. Outayad, El. Fait, I. Vioque, M. Ben Mansour, A. Bouih, C. Galindo, A. Nourreddine</u> Behavior of isotopes of U and Th in Moroccan sedimentary rocks: metrology and geochemistry
12:30	14:15	Lunch
Radon and thoron Chairpersons: D. Fenton, Y. Uchihori Room REIHO-A		
14:15	14:30	<u>H. Lettner, H.B. Okyar, A.K. Hubmer, W. Hofmann, F. Steinhäusler</u> Deposition of radon progeny onto different surfaces in the thermal gallery Gasteiner Heilstollen
14:30	14:45	<u>A.S. Arabi, I.I. Funtua, B.B.M. Dewu</u> Evaluation of occupational exposure to radon and thoron activity in air around a nuclear research facility
14:45	15:00	<u>J.J. Sannappa, D.R. Rangaswamy, Srilatha, C. Ningappa, E. Srinivasa</u> Studies on variation of radon concentration - influenced by geology, mining activity and ground water in some parts of Karnataka state, India
Cosmic radiation Chairpersons: Y. Uchihori, D. Fenton Room REIHO-A		
15:00	15:15	<u>K. O'Brien</u> The role of first-order Fermi diffusive shock acceleration in generating cosmic-ray fluxes
15:15	15:30	<u>E.R. Benton, N.C. Lindy, A.N. Ruse, D. Petersen, W. Beasley</u> The possible role of cosmic ray extensive air showers in the initiation of lightning
15:30	15:45	<u>O. Ploc, J. Kubančák, D. Kyselová, I. Ambrožová, I. Parnahaj, K. Kudela</u> Extreme solar events measured onboard aircraft in period 2001 – 2014
15:45	16:00	<u>Y. Zhang, W. Yang, W. Zhuo</u> Response of cosmic radiation on the readout of gamma dose rate meters
Fukushima nuclear accident (special) Chairpersons: T. Iimoto, S. Mishra Room REIHO-B		
14:15	14:30	<u>S. Kinase, S. Sato, R. Sakamoto, K. Saito</u> Changes in ambient dose equivalent rates around roads at Kawamata town after the Fukushima accident
14:30	14:45	<u>J. Zheng, K. Tagami, W.T. Bu, S. Uchida, N. Ishii</u> Isotopic ratio of Cs-135/Cs-137 as a new tracer for source identification and long-term environmental behavior studies on radioactive Cs released from the Fukushima nuclear accident

14:45	15:00	<u>S. Mishra</u> , H. Arae, A. Sorimachi, M. Hosoda, S. Tokonami, T. Ishikawa, S.K. Sahoo Estimation of uranium and cesium radio isotopes in undisturbed soil affected by Fukushima Nuclear Power Plant accident and their mobility based on distribution coefficient and soil properties
15:00	15:15	<u>N. Kavasi</u> , S.K. Sahoo, H. Arae, T. Aono, S. Yoshida Analytical method development of Sr-90 measurement in soil samples affected by the Fukushima nuclear accident
15:15	15:30	<u>Y.J. Kim</u> , B.U. Chang, J.I. Byun, H.Y. Choi, S.W. Choi, D.J. Kim, D.M. Lee, S.A. Yim, J.Y. Yun Estimation of radiocesium deposition amount in Korea following the Fukushima nuclear accident
15:30	15:45	<u>K. Akimoto</u> Extreme variations of dose rates in East Fukushima
15:45	16:00	<u>R. Mészáros</u> , <u>Á. Leelőssy</u> , I. Lagzi, T. Kovács Numerical simulations of atmospheric dispersion of iodine-131 emitted from a point source
Metrology, quality assurance and quality control, international standards		
		Room AKEBONO
Chairpersons: T. Boal, N. Michielsen		
14:15	14:30	<u>N. Michielsen</u> , S. Bondiguel Is thoron an influence quantity for the measuring radon activity concentration instruments?
14:30	14:45	<u>G. Butterweck</u> , V. Schmidt, H. Buchröder, R. Hugj, E. Hohmann, E. Foerster, S. Mayer Reference instruments based on spectrometric measurement with Lucas cells
14:45	15:00	<u>T. Streil</u> , V. Oeser Mobile unit for site characterization in environmental remediation projects
15:00	15:15	<u>M. Janik</u> Intercomparison experiments as important factor for QC/QA of radon and thoron measurements
15:15	15:30	<u>K. Kumagai</u> , H. Ookubo, H. Kimura Discrimination method of the effects from artificial radiation in environmental dose rate measurement
15:30	15:45	<u>J. Fons</u> , M. Llauradó Simultaneous determination of beta emitters by liquid scintillation counting partial least squares
15:45	16:00	<u>A.J. Arifi</u> Nuclear regulations of nuclear installation as a solution to prevent nuclear accident and to get acceptance of public in Indonesia
16:00	18:00	Poster sessions Room MATSU

19:00	21:00	Symposium dinner	Room REIHO
Friday, September 26			
Keynote lecture		Room REIHO	
Chairpersons: T. Ishikawa, S. Chanyotha			
8:30	9:05	<u>W. Hofmann</u> , R. Winkler-Heil From cellular doses to average lung doses	
9:05	9:40	<u>T. Kovács</u> , Z. Sas, M. Hegedus, J. Somlai Reusing of Hungarian (NORM origin) industrial by-products	
9:40	10:10	Coffee break	
Keynote lecture		Room REIHO	
Chairpersons: D. Calmet, J.P. Mc Laughlin			
10:10	10:45	<u>T. Boal</u> , T. Colgan International standards for protection against exposure due to the natural sources of radiation	
10:45	11:20	<u>T. Ishikawa</u> A review of dose estimation studies conducted after the Fukushima Daiichi Nuclear Power Plant accident	
11:20	11:30	Short break	
11:30	13:00	NRE assembly and closing remarks	Room REIHO

Programme of Poster Presentations in NRE-IX

Thursday, September 25, 16:00-18:00	
Terrestrial gamma radiation	
TG-1	B. Salas Determination of Cs-137 and Co-60 contamination in the area of Laguna Verde Nuclear Power Plant-Mexico
TG-2	K. Inoue, M. Hosoda, M. Fukushi, M. Furukawa, S. Tokonami Absorbed dose rate in air in metropolitan Tokyo before the Fukushima Daiichi Nuclear Power Plant accident
TG-3	F. Maedera, K. Inoue, M. Sugino, R. Sano, H. Shimizu, H. Tsuruoka, M. Fukushi Natural variation of dose rate in air at Izu-Oshima Island after the Fukushima Daiichi Nuclear Power Plant accident
TG-4	H. Tsuruoka, K. Inoue, Y. Sakano, M. Hamada, H. Shimizu, M. Fukushi Variation of cesium concentrations in cedar pollen at Okutama area after the Fukushima Daiichi Nuclear Power Plant accident
TG-5	M. Furukawa, S. Kina, M. Shiroma, Y. Shiroma, N. Masuda, D. Motomura, H. Hiraoka, S. Fujioka, T. Kawakami, Y. Yasuda, K. Arakawa, K. Fukahori, M. Jyunicho, S. Ishikawa, T. Ohomoto, R. Shingaki, N. Akata, W. Zhuo, S. Tokonami Terrestrial gamma radiation dose rate in Ryukyu Islands, subtropical region of Japan
TG-6	K. Singh Assessment of natural radioactivity (^{226}Ra, ^{232}Th and ^{40}K) and radiation dose in Uttarakhand Himalaya, India
TG-7	R.C. Begy, H. Simon, S. Kelemen, I. Steopoaie Geochronology of the Iacob Lake (Danube Delta) by the Pb-210 and Cs-137 dating methods
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RT-1	E. Lara, Z. Rocha, H. Palmieri, T. Santos, A. Oliveira Radon in soil gas: distributions and correlations with the lithologies and pedologies of RMBH - metropolitan region of Belo Horizonte - Minas Gerais – Brazil
RT-2	B. Erdev, B. Munkhtsetseg, B. Enkhmaa, B. Erdenetuya Annual dose from radon in some places of Ulaanbaatar city
RT-3	T. Streil, V. Oeser, G. Horak, S. Kobelt, M. Duzynski, J. Sabol Thoron-scout the first diffusion based radon and thoron active monitor for long term measurements in buildings
RT-4	T.A. Pavlenko, N.V. Aksenov, O.A. German, M.A. Frizyuk Radon studies in Ukraine

RT-5	K. Yajima, S. Hirao, J. Moriizumi, H. Yamazawa Quantitative evaluation of indoor ²¹⁸Po behavior
RT-6	Y. Zhang, Y.X. Yang, Y.M. Zheng, X.J. Zhang Radon pollution survey of the uranium waste dumps in China
RT-7	I.N. Makundi, G.W. Mlay Assessment of indoor radon concentration in the vicinity of Manyoni uranium deposit in Singida, Tanzania
RT-8	Y. Omori, M. Shimo, M. Janik, H. Tabe, T. Ishikawa, H. Yonehara Measurement of indoor, outdoor and underfloor radon concentrations in a Japanese dwelling
RT-9	M. Taheri, M.R. Taghdir Setting up a calibration system for determination of dissolved radon in water using SSNTDs
RT-10	A. Martín Sánchez, A.B. Ruano Sánchez, J. de la Torre Pérez, M. Jurado Vargas Radon in underground waters as a natural analogue to study the escape of CO₂ in geological repositories
RT-11	M. Hosoda, T. Ishikawa, S.K. Sahoo, A. Sorimachi, Y. Yasuoka, M. Janik, S. Katoh, S. Ogashiwa, Y. Omori, K. Iwaoka, S. Tokonami Estimation of external and internal doses resulting from the use of artificial radon spa sources
RT-12	P. Bossew, T. Tollefsen, G. Cinelli, V. Gruber, M. De Cort Status of the European atlas of natural radiation
RT-13	P. Bossew Probabilistic mapping of the geogenic radon potential in Germany
RT-14	P. Bossew, Z.S. Zunic, F. Bochicchio, C. Carpentieri, G. Venoso, S. Antignani, Z. Stojanovska, J. Vaupotic, Z. Curguz, P. Kolarz, N. Veselinovic, I. Celikovic, P. Ujic Estimating the relation between radon concentrations in dwellings and schools; on the example of data from the Balkan region, South East Europe
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RT-16	A. Sorimachi, S. Tokonami, M. Janik, T. Ishikawa An intercomparison for thoron gas activity concentration measurements
RT-17	A. Tanaka, Y. Yasuoka, T. Iimoto, Y. Omori, T. Mukai Determination of radon conversion factor for exhaust monitor at radioisotope institute
RT-18	K. Iwaoka, M. Hosoda, N. Suwankot, Y. Omori, A. Sorimachi, T. Ishikawa, H. Yonehara, S. Tokonami Natural Radioactivity and radon exhalation rate in man-made tiles used as building materials in Japan

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RT-20	C. Sainz-Fernandez Indoor gamma dose rate from radon progeny in the Spanish laboratory of natural radiation (LRN)
RT-21	R. Takahashi, A. Wakabayashi, Y. Yasuoka, M. Hosoda, S. Tokonami Performance test of portable type radon concentration monitor for water sample based on the liquid scintillation counter measurement
RT-22	I.A. Zahradnik, A. Grund, G. Grimm, V. Grimm, F. Rossler, J. Buermeyer, J. Breckow Impact of energy-saving measures on the radon concentration in dwellings
RT-23	V. Duggal, A. Rani, R. Mehra, B.K. Sahoo, B.K. Sapra Measurements of radon and thoron concentrations in dwellings of northern Rajasthan using single entry pin-hole dosimeter
RT-24	S.M. Kiselev, R.A. Aladova, A.M. Marennyy, I.P. Stamat, M.V. Zhukovsky Current radon regulation in Russia: state of affairs and new challenges
RT-25	H. Kudo, S. Tokonami, N. Akata, S.K. Sahoo, M. Hosoda, Y. Omori, P. Wanabongse, C. Pornnumpa, A. Sorimachi, T. Ishikawa, S. Akiba Dose estimation for residents in high background radiation areas -correlation between radon concentration and thoron concentration-
RT-26	J. Wang, O. Meisenberg, Y. Chen, J. Tschiersch First result: mitigation of indoor thoron decay products by air door
RT-27	M. Inagaki, H. Yamanishi, T. Koga, H. Morishima Distribution of radon concentrations in spa water in Kyushu district
RT-28	M. Chege, N. Hashim, A. Merenga, J. Tschiersch, O. Meisenberg Estimation of annual effective dose due to radon and thoron concentrations in mud dwellings of Mrima Hill, Kenya
RT-29	Y. Shiroma, M. Hosoda, T. Ishikawa, S.K. Sahoo, S. Tokonami, M. Furukawa Estimation of radon emanation coefficient for representative soils in Okinawa, Japan
RT-30	M.S. Chandrashekara, K.S. Pruthvi Rani, L. Paramesh Spatial distribution of radon and progeny inside a dwelling at Mysore city, India
RT-31	K.S. Pruthvi Rani, M.S. Chandrashekara, L. Paramesh Studies on radon in soil gas, radon exhalation rate from the ground surface and radon vertical profile in the atmosphere near the ground surface at Mysore city, India
RT-32	J. Jónás, J. Somlai, Z. Sas, A. Várhegyi, Z. Gorjanác, T. Kovács Determination of the locality of the decayed radon originated from mill tailings (UMTs) in different layers of remediated uranium tailing pond
RT-33	Z. Sas, R. Kardos, J. Jónás, M. Hegedűs, A. Shahrokhi, J. Somlai, T. Kovács Simultaneous determination of radon/thoron exhalation of heat-treated red mud mixed clay samples

RT-34	A. Csordás, F. Fábián, M. Horváth, M. Hegedűs, J. Somlai, T. Kovács Preparation and characterization of ceramic based thoron sources for thoron calibration chamber
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CR-1	Y. Ohtsuka, T. Iyogi, S. Ueda, S. Hisamatsu Vertical distribution of gamma-ray dose rates in the water of a brackish lake in Aomori prefecture, Japan
CR-2	K. Yajima, T. Matsuzawa, H. Yasuda, H. Yonehara Continuous monitoring of cosmic-ray induced neutrons at the summit of Mt. Fuji
High background radiation areas	
HB-1	B. Salas Radiological inspection in an office built with contaminated rod of radioactive material, in Tlaquepaque, Jalisco, Mexico
HB-2	B. Salas Safety questioning of the operation of a particle accelerator management and radioactive sources in the Sciences Faculty of the National Autonomous University of Mexico
HB-3	B. Salas Technical questioning to power uprates of nuclear reactors of Laguna Verde Nuclear Power Plant, Mexico
HB-4	S.M.J. Mortazavi, T. Nejad-Sattari, B. Nosrati, M. Haghani Do common wheat (<i>Triticum Aestivum</i>) seeds exposed to elevated levels of natural radiation release stimulating agents in the culture medium? Similarities with bystander effect
HB-5	S.M.J. Mortazavi, M. Taheri, M. Haghani, S. Tajbakhsh, S. Zarei, S. Ranjbar, F. Momeni, S. Taeb Exposure to elevated levels of natural radiation help bacteria better cope with the lethal effects of antibiotics: is this radioadaptive response dangerous for humans?
HB-6	I. Kaniu, H. Kalambuka, I. Darby A conceptual model for rapid trace radiogenic assessment for quality characterization of a complex ecosystem
Environmental radioactivity	
ER-1	K. Guerraichi, N. Belameiri, A. Tebboune The natural and artificial radioelements in polluted and industrial area in north west of Algeria
ER-2	S. Tantra Management of groundwater natural resources in disaster area to ensure environmental sustainability
ER-3	A. Choukri, R. Marie Lydie, O.K. Hakam Investigation of natural radioactivity in drinking water in Yaounde area, Cameroon and comparison with results found in Morocco

ER-4	J. Hirouchi, Y. Terasaka, S. Hirao, J. Moriizumi, H. Yamazawa Effect of geometric structure around detector and infiltration of radionuclides on radioactivity concentration estimation from NaI(Tl) pulse height distribution
ER-5	J. Chen A discussion on the need of guidelines to control radionuclides in commercial food during normal conditions
ER-6	S. Ueda, H. Kakiuchi, H. Hasegawa, H. Kawamura, S. Hisamatsu Concentration of ¹²⁹I in aquatic biota collected from a lake adjacent to a spent nuclear fuel reprocessing plant, Rokkasho, Japan
ER-7	H. Hasegawa, S. Ueda, S. Hisamatsu Tritium concentration in shallow groundwater collected in Rokkasho, Japan, from 2009 to 2012
ER-8	A.I. Kryshev, T.G. Sazykina Method for evaluation of radioecological impact to biota using the monitoring data
ER-9	C. Dueñas, M.C. Fernández, E. Gordo, S. Cañete, E. Liger, M. Pérez Deposition patterns of atmospheric ⁷Be and ²¹⁰Pb in coast of west Mediterranean sea, Málaga, Spain
ER-10	A. Takeda, H. Tsukada, M. Takahashi, Y. Takaku, H. Hisamatsu Changes in chemical form of exogenous iodine in solid and liquid phases of soils collected from forestland in Rokkasho, Japan
ER-11	N. Akata, H. Kakiuchi, T. Tamari, M. Tanaka, T. Kawano, H. Miyake, T. Uda, K. Nishimura FWT and OBT concentration in pine needle samples collected at Toki, Japan (1998-2012)
ER-12	M. Tanaka, T. Uda Variation of atmospheric tritium concentration in three chemical forms at Toki, Japan: 2004-2013
ER-13	H. Kakiuchi, N. Akata, K. Abe, S. Hisamatsu Tritium concentrations in atmospheric water vapor and pine needles near the spent nuclear fuel reprocessing plant at Rokkasho, Aomori, Japan
ER-14	B. Umar Estimation of lead and other elements in contaminated soil of Bagega local government of Zamfara state
ER-15	S. Nakashima, A. Sasai, K. Koga, H. Yasuhara, A. Matsushima, K. Inada Environmental radioactivity of water samples collected in Higashi-Hiroshima campus, Hiroshima University, Japan
ER-16	Y. Kimura, T. Jin, H. Kimura Analysis of iodine-129 in leaf vegetable and seaweed samples by DRC-ICP-MS after leaching with tetramethyl ammonium hydroxide and separation with solid phase extraction
ER-17	N.H. Medina, M.A.G. Silveira, R.B.B. dos Santos, M. Branco, L. Vitusso Gamma ray spectrometry to monitor the distribution of potassium in sugarcane

ER-18	B.A. Pérez, M.E. López Measurement of environmental radioactive pollution at the roof of a three-story building in Lima-Peru
ER-19	R. Takashima, T. Iimoto, M. Hashimoto Collaboration of local government and experts responding increase of environmental radiation level due to the nuclear disaster: 5. Viewpoint on cost and benefit for the regulatory limits on radiation dose
ER-20	A. Sharma, A.K. Mahur, M. Yadav, R.C. Ramola, R.G. Sonkawade, A.C. Sharma, R. Prasad Measurement of natural radioactivity, radon exhalation rate and radiation hazard assessment in Indian cement samples
ER-21	A.A. Al-Zahrany, K.S. Al-Mogabes Distribution of natural (^{238}U, ^{235}U, ^{226}Ra, ^{232}Th, ^{40}K) and artificial (^{137}Cs) radioactivity in soil samples in Taif region, Saudi Arabia
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ER-23	K.S.B.K. Shuib, M.U. Khandaker, Y.M. Amin, K. Asaduzzaman Natural radioactivity and effective dose due to the bottom sea and estuaries marine animals in the coastal waters around Peninsular Malaysia
ER-24	G. Nafezi, J. Vaupotič, T. Kovács, M. Bahtijari, G. Hodolli, Z. Mulaj Radon levels and doses in dwellings in two villages in Kosovo, affected by depleted uranium
ER-25	N.B. Sarap, M.M. Janković, M.M. Rajačić, J.D. Nikolić, Ž.K. Dolijanović, D.J. Todorović Distribution of artificial radionuclides in agricultural soil at different profiles
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NT-1	M.A.G. Silveira, N.H. Medina, G. Fontana, R.H. Moreira Separation of natural radionuclides in TENORM phosphogypsum
NT-2	M.A.G. Silveira, N.H. Medina, R.H. Moreira, V.A.P. Aguiar, B. Pereira Natural radioactivity from Brazilian sands
NT-3	N.K. Mohammed, E.E. Chanai The impact of the extensive use of phosphate fertilizers on radioactivity levels in farm soil in Tanzania
NT-4	B.B. Babatunde, J.M. Pates, F.D. Sikoki Assessment of natural and artificial radioactivity in the sediments and fish of Bonny Estuary, Niger Delta, Nigeria
NT-5	S. Chanyotha, C. Kranrod, C. Pornnumpa, R. Kritsanuwat, P. Sriploy Distribution of naturally occurring radionuclides in some native vegetables and fruits in the southern, Thailand
NT-6	M. Pérez, R. Ruiz Cruces, C. Dueñas, M.C. Fernández, E. Liger, E. Gordo, R. González, L. León, P. Cañada, S. Cañete Natural radiactivity from building materials in Spain

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NT-8	A.K. Mahur, R. Kumar, D. Sengupta, A. Azam, R. Prasad An investigation of radon exhalation rates, natural radioactivity and radiation exposure in fly ash from thermal power plants, India
NT-9	J. Wang, J. Liu, Y. Chen, G. Song, C. Wang, J. Qi Gamma dose rate exposure in a uranium mining/milling area in Guangdong province, China and its radiological implications to workers
NT-10	Z. Sas, R. Kardos, J. Szántó, A. Shahrokhi, J. Somlai, T. Kovács Natural radionuclide content of NORM by-products originated from coal fired power plant
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DRE-1	Z. Paskalev, D. Apostolova Risk of lung cancer after inhaled "hot particle" in Bulgarian population
DRE-2	K.W. Fornalski Pooled bayesian meta-analysis of two Polish studies on radiation induced cancers
DRE-3	S. Mimount, O. Hakam, K. Sahaimi, K. Talsmat, A. Choukri Dosimetric evaluation in industrial radiography operations
DRE-4	G. Ferrufino Measurement of the environmental gamma dose surroundings nuclear plants of Argentina
DRE-5	M. Gupta, A.K. Mahur, K.D. Verma, R.G. Sonkawade, R. Prasad Study of radon activity, exhalation rate and radiation doses in coal and fly ash samples collected from NTPC Badarpur, Delhi, India
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BE-1	A. Ahmed, M. Fawzy, O. Abdel-Salam, F. Shahin Effect of radon inhalation on blood cells in rats
BE-2	H. Yoshino, M. Kozakai, T. Saitoh, I. Kashiwakura Effects of ionizing radiation on retinoic acid-inducible gene-i-like receptors
BE-3	Y. Son, M.J. Bae, C.G. Lee, I.S. Shin, K. Yang, K. Heo, J.S. Kim Injury of the blood-testis barrier after low-dose-rate chronic radiation exposure in mice
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BE-5	Y. Hosokawa, T. Sano Study of OH radical scavenging initiated by X-ray irradiation in human plasma
Metrology, quality assurance and quality control, international standards	
MQI-1	G. Kropat, S. Baechler, C. Bailat, J. Damet, N. Meyer, G. Butterweck Calibration of the radon measuring politrack system based on solid state nuclear track detection

MQI-2	G. Hodolli, S. Kadiri B. Grillo, M. Bahtari, K. Dollani The measurement accuracy comparison of two different dosimetry thermoluminescent systems
Other natural radiation issues	
ON-1	K. Abe, T. Iyogi, H. Kawabata, J. Chiang, H. Suwa, S. Hisamatsu Estimation of Krypton-85 dispersion from the spent nuclear fuel reprocessing plant in Rokkasho, Japan, using an atmospheric dispersion model
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FK-1	M. Kowatari, T. Kubota, Y. Shibahara, T. Fujii, S. Fukutani, K. Taniyama, H. Yamana, S. Mizuno Application of a CZT detector to in situ environmental radioactivity measurement in Fukushima area
FK-2	P. Bossew, C. Debayle Spatial correlation structure and anomalies of dose rate in the zone affected by the Fukushima NPP disaster, observed by airborne survey shortly after the accident
FK-3	K. Ohse, S. Hiradate, K. Kitayama, C. Suzuki, A. Kanno, W. Horiuchi, K. Kawatsu, H. Tsukada The chemical form of "organic" radiocesium in soil and suspended matter
FK-4	H. Shimizu, K. Inoue, K. Ishida, F. Maedera, H. Tsuruoka, M. Fukushi Cesium concentrations in shell of Japanese mitten crab around Fukushima Daiichi Nuclear Power Plant
FK-5	S. Kudo, K. Igarashi, H. Kimura Influence of Fukushima Dai-ichi Nuclear Power Plant accident on environmental radioactivity research in Aomori prefecture
FK-6	S. Ochiai, S. Nagao, M. Yamamoto, Y. Miyata, T. Murakami, S. Nishimura, T. Itono, K. Kashiwaya, K. Hamataka, Y. Kawano, T. Suzuki Radioactive cesium of Fukushima Dai-ichi Nuclear Power Plant accident in lake and coastal sediments of northern and western Japan
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FK-8	H. Fujii, T. Iimoto, S. Someya, S. Iizumi, T. Tsuzuki, S. Hamamichi Collaboration of local government and experts responding to increase of environmental radiation level due to the nuclear disaster 2. Viewpoint on the effects of radiation exposure on local residents
FK-9	H. Matsuzawa, K. Kurosawa, S. Someya, J. Nunokawa, H. Fujii, R. Takashima, T. Iimoto Collaboration of local government and experts responding increase of environmental radiation level due to the nuclear disaster 3. Viewpoint on ambient dose survey and foodstuff inspection

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FK-11	Y. Miyata, I. Kudo, K. Hamataka, Y. Hamajima, M. Yamamoto, S. Nagao Contribution of Fukushima Daiichi Nuclear Power Plant accident to Okhotsk sea
FK-12	H. Yamanishi, M. Inagaki, G. Wakabayashi, S. Hohara, T. Itoh, M. Furukawa Migration of radioactive cesium containing in grass or fallen leaves to water
FK-13	E. Bolla Face the fear in Fukushima