



International Workshop on the European Atlas of Natural Radiation

IWEANR 2017

Monday 6 – Thursday 9 November 2017

Programme

Venue: Hotel Il Chiostro, Verbania, Italy



Monday 6 November 2017

Afternoon, 14:00 – 18:00

Registration (13:00 – 14:00)

Session 1

Radon policies

Chairing: Valeria Gruber and Marc De Cort

- 14:00** Welcome and introduction to IWEANR 2017
Marc De Cort, JRC and Stefan Mundigl, DG ENER
- 14:10** “Requirements on indoor radon in Council Directive 2013/59/Euratom - The Basic Safety Standards Directive”
Stefan Mundigl
- 14:30** “Radon related requirements in the IAEA Safety Standards”
Olga German
- 14:50** “WHO's public health perspective on radon”
Francesco Bochicchio
- 15:10** “UNSCEAR's activities on radon”
Ferid Shannoun
- 15:45** *Coffee break*
- 16:15** “The new Directive Euratom BSS: Current situation of the implementation and ERA's activities”
Jose Luis Gutiérrez Villanueva
- 16:35** “MetroRADON: Metrology for radon monitoring”
Valeria Gruber
- 16:55** “Radon rEal time monitoring System and Proactive Indoor Remediation - LIFE-RESPIRE”
Giancarlo Ciotoli
- 17:15** “Radon in Big Buildings project”
Marcus Hoffmann
- 17:35** Discussion and conclusions (Moderator: *Stefan Mundigl*)



Tuesday 7 November 2017

Morning, 08:30 – 12:00

Session 2a

Sources of natural radiation: geochemical, gamma, soil, water

Chairing: Jose Luis Gutiérrez Villanueva and Alcides Pereira

- 08:30** “The European Atlas of Natural Radiation: Digital version and future steps”
Giorgia Cinelli, JRC
- 08:45** “Insights into terrestrial radionuclides mapping by compiling data from scientific literature”
Filipa Domingos, PT
- 09:00** “Radon as an indicator of geological structure and as a source of radiation hazard to the environment: The case of Ukrainian shield”
Tamara Dudar, UA
- 09:15** “Radiological studies of zeolites application on the environment”
Apostolos Kalaitzis, GR
- 09:30** “A national survey of outdoor gamma radiation in urban areas”
Carmela Carpentieri, IT
- 09:45** “Image processing techniques revealing the relationship between the field-measured ambient gamma dose rate ($H^*(10)$) and geogenic factors at a granitic area, Hungary”
Katalin Zsuzsanna Szabo, HU
- 10:00** “Terrestrial gamma radiation in Montenegro”
Perko Vukotić, ME
- 10:30** *Coffee break*
- 11:00** “Natural radiation in Estonian soil”
Krista Täht-Kok, EE
- 11:15** “Investigation on radionuclide content in superphosphate fertilizers, dose assessment and radiation protection measures”
Rositza Kamenova-Totzeva, BG
- 11:30** “Radon in waters in Serbia”
Jovana Nikolov, RS
- 11:45** “Radionuclides in drinking water in Serbia”
Natasa Todorović, RS
- 12:00** *Lunch Break*



Tuesday 7 November 2017

Afternoon, 13:15 – 14:40

Session 2b

Sources of natural radiation: instruments, buildings

Chairing: Jose Luis Gutiérrez Villanueva and Alcides Pereira

- 13:15** “A new Atmospheric Radon MONitor (ARMON): calibration, correction biases, inter-comparison and research applications”
Claudia Grossi, ES
- 13:30** “Design and development of a laboratory facility to assess Rn-22 exhalation variability from Phoshogypsum material”
Isidoro Gutiérrez-Álvarez, ES
- 13:45** “Swedish experience working with building material”
Tony Löfqvist, SE
- 14:00** “Effective radium as indoors radon hazard index for building materials”
Stylianos Stoulos, GR
- 14:15** Discussion and conclusions



Tuesday 7 November 2017
Afternoon, 14:40 – 18:00

Session 3

Special Session: Radon & Geology

Chairing: Raffaele Sassi and Claudio Mazzoli

- 14:40** “Introduction to special session on Radon & Geology”
Raffaele Sassi, IT
- 14:45** “Geological and geochemical control on Radon occurrence in Euganean Hills district (North-Eastern Italy)”
Chiara Coletti, IT
- 15:05** “Spatio-temporal variations of Rn-222 and Rn-220 across seismogenic faults during the seismic sequence of 24 August 2016 earthquake”
Livio Ruggiero, IT
- 15:25** “Radon anomalies in the northern Upper Rhine Raben (Germany) as result of recent geodynamic processes”
Rouwen Lehné, DE
- 15:45** *Coffee Break*
- 16:15** “Geochemical variations of Rn-222 and Rn-220 in the Modena province during and after the 2012 seismic sequence”
Alessandra Sciarra, IT
- 16:35** “Quantification of lead concentration and radon emanation in soils: a study in a region of geological faults”
Junior Marcos Roberto Moreira Da Silva, BR
- 16:55** “Natural Th, U and K concentration in bedrocks of major geological units in Hesse (Germany)”
Annemarie Militzer, DE
- 17:15** “Mapping of soil Rn-220 flux and dose rates in radon-prone areas. The case of volcanic outcrops in a highly urbanised city”
Carlo Lucchetti, IT
- 17:35** “Deviations in radon risk mapping using random soil gas sampling”
Milan Matolin, CZ
- 17:55** *Round-table discussion and conclusions (Moderator: Giancarlo Ciotoli)*



Wednesday 8 November 2017

Morning, 08:30 – 12:45

Session 4a

Radon-priority areas: methodology

Chairing: Marta García-Talavera and Katalin Zsuzsanna Szabo

- 08:30** “The geogenic radon hazard index - another try”
Peter Bossew, DE
- 08:50** “Detection of radon priority areas by in-situ radon soil-gas measurements: a case-study in the Cooley Peninsula (County Louth, Ireland)”
Javier Elio, IE
- 09:10** “Geogenic radon potential map of Celleno municipality (Lazio, central Italy)”
Francesca Giustini, IT
- 09:30** “An extensive indoor radon measurement campaign to define radon-priority areas in Austria - methods, influences and challenges”
Valeria Gruber, AT
- 09:50** “The influence of geological formations on geogenic radon potential and/or indoor radon in Croatia”
Vanja Radolić, HR
- 10:10** “Method of identification of radon-priority areas according to the standard European 10 x 10 km map system”
Luis Santiago Quindos Poncela, ES
- 10:30** *Coffee Break*

Session 4b

Radon-priority areas: risk, mapping, classification

- 11:00** “Multi-approach assessment of radon risk in Spanish soils”
Lluís Font, ES
- 11:20** “Mapping natural occurring radioactive materials (U, Th and K) in Ireland: implications for radon mapping”
Javier Elio, IE
- 11:40** “A preliminary exercise to derive the map of potential radon release at European scale”
Peter Bossew, DE
- 12:00** *Round-table: National interpretations of RPAs (Moderator: Peter Bossew)*
- 12:45** *Lunch break*



Wednesday 8 November 2017

Afternoon, 14:00 – 18:00

Session 5a

Relationships between variables: methodology, multivariate

Chairing: Zornitza Daraktchieva and Antonio Ferreira

- 14:00** “A preliminary exercise to derive the map of potential radon release at European scale”
Giacarlo Ciotoli, IT
- 14:20** “The influence of numbers of measurements and location on radon distribution parameters for a single geology”
Zornitza Daraktchieva, UK
- 14:40** “Indoor radon in south west England predicted by topsoil and stream sediment geochemistry. Selecting the relevant elements through a CoDA approach”
Antonio Ferreira, UK
- 15:00** “First steps in the multivariate analysis of Belgian radon data”
Francois Tondeur, BE
- 15:20** “Multivariate analysis of radon concentration relation with building characteristics from first indoor radon survey in Serbia”
Dimitrije Maletić, RS
- 15:45** *Coffee break*

Session 5b

Relationships between variables: multivariate, transport

- 16:15** “Bayesian variable selection for indoor radon risk mapping: the case of Gran Canaria”
Jesus Garcia Rubiano, ES
- 16:35** “Experimental setup for the measurement of the radon transport from the soil under controlled activation of convection”
Iliya Yarmoshenko, RU
- 16:55** Discussion and conclusions (Moderators: Zornitza Daraktchieva, Antonio Ferreira)
- 19:30** *Social dinner, Hotel Il Chiostro*



Thursday 9 November 2017

Morning, 08:30 – 10:30

Session 6a

Indoor radon

Chairing: Alexandra Laura Cucos and Kremena Ivanova

- 08:30** “*E pluribus unum*: The European Indoor Radon Map”
Tore Tollefsen, JRC
- 08:45** “National indoor radon survey in Bulgaria”
Kremena Ivanova, BG
- 09:00** “From motivation through the national radon survey to European Indoor Radon Map”
Vladimir Udovičić, RS
- 09:15** “A detailed indoor radon mapping of surrounding of Niška Banja, high radon area in Serbia”
Gordana Pantelić, RS
- 09:30** “Nationwide indoor radon survey in Montenegro”
Perko Vukotić, ME
- 09:45** “Indoor radon mapping in Bosnia & Herzegovina: Existing situation and future plans”
Maida Isović, BA
- 10:00** “Development of the first Luxembourgian indoor radon map”
Marielle Lecomte, LU
- 10:30** *Coffee break*



Thursday 9 November 2017

Morning, 11:00 – 12:45

Session 6b

Indoor radon

Chairing: Alexandra Laura Cucos, Kremena Ivanova

- 11:00** “Current status of the Romanian indoor radon survey linked with SMART_RAD_EN European project”
Alexandra Laura Cucos and Daniela Dogaru, RO
- 11:15** “Comparison of indoor radon levels in public building (schools) with radon distribution in dwellings located in Cluj-Napoca (Romania)”
Bety Denissa Burghele, RO
- 11:30** “Indoor radon and gamma dose rate in Hungarian kindergartens, a pilot survey”
Katalin Zsuzsanna Szabo, HU
- 11:45** “Development of indoor radon map in Lithuania”
Remigijus Kievinas, LT
- 12:00** “Creating of specialized database for storage of indoor radon measurement results and mapping of the territory of Belarus”
Olga Zhukova, BY
- 12:15** Discussion and conclusions (Moderators: Alexandra Laura Cucos, Kremena Ivanova)
- 12:45** *Lunch break*

Thursday 9 November 2017

Afternoon, 14:00 – 16:15

Session 7

Atlas publication, closure

Chairing: Franck Wastin, Marc De Cort, Giorgia Cinelli and Tore Tollefsen

- 14:00** “Sessions conclusions”
Session chairs
- 15:00** “Atlas publication”
Giorgia Cinelli and Tore Tollefsen, JRC
- 16:00** “Closure”



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