

# Programme of the 14<sup>th</sup> International Workshop on the Geological Aspects of Radon Risk Mapping- GARRM, Prague, September 2018

## Registration:

Sunday, September 16th, 18,00 – 20,00 ... RIM and workshop

Monday, September 17th, 18,00 – 20,30 ... workshop

Tuesday, September 18th, 8,00 – 9,30 ... workshop

(registration for RIM will be also on Monday morning at the reference areas)

## Tuesday, September 18<sup>th</sup>

9,30

Opening of the Workshop, Welcome, Introduction

**Morning session (chairing – Valeria Gruber, Matej Neznal)**

9,40 – 10,00

**Valeria Gruber, Sebastian Baumann, Wolfgang Ringer, Carlos Sainz, Luis Quindós-Poncela, Giorgia Cinelli, José-Luis Gutiérrez Villanueva**

A radon mapping exercise within the European MetroRadon project

10,00 – 10,20

**Jane Bradley, Tracy Gooding, Neil McColl**

From Directive to Publication: the UK Radon Action Plan

10,20 – 10,40

**Per Nilsson**

Adaptation and outlook of the Swedish implementation of the Euratom directive

**Short coffee break 10\*40 – 11\*00**

**Morning session (chairing – Sofija Forkapić, Peter Bossew)**

11,00 – 11,20

**Peter Bossew**

Estimation of Radon Priority Areas – sources of error and uncertainty

11,20 – 11,40

**Boris Dehandschutter**

The role of karst in identifying radon priority areas in Belgium

11,40 – 12,00

**A. Rinaldini, G. Ciotoli, L. Ruggiero, F. Giustini and G. Buccheri**

Radon Prone Areas characterization and indoor measurements aimed at the health risk assessment in the Eastern sector of Mt. Vulsini volcanic district (northern Latium, Central Italy)

12,00 – 12,20

**Sebastian Baumann, Valeria Gruber, Wolfgang Ringer, Gernot Wurm, C. Laubichler, O. Alber, S. Kuchling, C. Schleicher**

Spatial variability of indoor radon concentrations and the identification of radon priority areas in Austria

**Lunch break 12\*20 – 14\*00**

**Afternoon session (chairing – François Tondeur, Lluís Font)**

**14,00 – 14,20**

**Krista Täht-Kok, Mihail Sthokalenko, Mark Karimov, Valter Petersell, Siim Nirgi**

Assessment of high indoor Rn-risk areas according to high Rn-risk lithotypes in soil

**14,20 – 14,40**

**Igor Čeliković, Gordana Pantelić, Miloš Živanović, Ivana Vukanac, Jelena Krneta-Nikolić, Predrag Ujić, Sofija Forkapić, Boris Lončar**

Indoor Radon and Soil Gas Radon in the Vicinity of Niška Banja, Radon Priority Area

**14,40 – 15,00**

**François Tondeur**

Quest of Proxies for Indoor Radon Risk : Belgian Experience

**15,00 – 15,20**

**Li. Font, H. Alonso, M.A. Arnedo, J. Bach, J.A. Carrasco, M. A. Duch, I. Fuente, J. García-Rubiano, J. Garcia-Orellana, M. García-Talavera, C. Grossi, J. L. Gutiérrez, A. Hierro, F.J. López-Acevedo, P. Martel, V. Moreno, E. Navarro, L. Quindós, A. Ramírez, V. Rodellas, M.D. Rodriguez-González, C. Sainz, A. Sánchez, E. Sanz, A. Tejera, A. Vargas**

Multi-approach assessment of radon risk in Spanish soils

**15,20 – 15,40**

**Annemarie Militzer and Rouwen Lehné**

Designing a geology-based concept for the radon soil gas measuring campaign in Hessen, Germany

**Coffee break and poster session 15\*40 – 16\*00**

**(the main poster session will be on Wednesday afternoon)**

**Afternoon session (chairing – Nanping Wang, Boris Dehandschutter)**

**16,00 – 16,20**

**J. García-Rubiano, H. Alonso, M.A. Arnedo, J. Bach, J.A. Carrasco, M. A. Duch, Li. Font, I. Fuente, J. Garcia-Orellana, M. García-Talavera, J.G. Guerra, C. Grossi, J.L. Gutiérrez, A. Hierro, F.J. López-Acevedo, P. Martel, V. Moreno, E. Navarro, L. Quindós, A. Ramírez, V. Rodellas, M.D. Rodriguez-González, C. Sainz, A.Sánchez, E. Sanz, A. Tejera, A. Vargas**

Characterization of the spatial and temporal variations of radon in six sites representative of the Spanish geography. Methods for obtaining an average representative value

**16,20 – 16,40**

**Eric Petermann & Peter Bossew**

Estimation of spatial continuous soil gas air permeability using physical and statistical models as a support for geogenic radon risk mapping

**16,40 – 17,00**

**Nanping Wang, Rong Zhao**

Relationship between radon concentration in soil gas and soil physical properties in Beijing

**17,00 – 17,20**

**Ruggiero L., Bigi S., Brilli M., Ciotoli G., Dehandschutter B., Galli G., Giustini F., Lombardi S., Lucchetti C., Pennica F., Pizzino L., Sciarra A., Sirianni P., Tartarello M. C., Voltaggio M.**

Relationships between geogenic radon potential and gamma ray maps with indoor radon levels at Caprarola municipality (central Italy)

## **Wednesday, September 19<sup>th</sup>**

### **Morning session (chairing – Ryoko Fujiyoshi, Ivan Barneř)**

**8,40 – 9,00**

**Mansouri N., Gréau C., Ielsch G., Saâdi Z., Bertrand C.**

Radon production and migration in karstic environment: experimental data and numerical modelling (Fourbanne site, French Jura Mountains)

**9,00 – 9,20**

**Rouwen Lehné and Annemarie Militzer**

Repeated radon measurements in the context of the tectonic and geologic framework – an approach for the federal state of Hesse, Germany

**9,20 – 9,40**

**Florică Ș., Szacsvai K., Ţenter A., Cucuș A., Dicu T., Papp B., Moldovan M., Dobrei G., Lupulescu A., Burghela B., Sainz C.**

A study on the correlation between Rn index and geology in Cluj-Napoca area, Romania

**9,40 – 10,00**

**Sofija Forkapić, Robert Lakatoš, Selena Samardžić, Peter Jovanovič, Kristina Bikit-Schroeder, Dušan Mrđa**

Radon in Soil Gas Measurements by RAD7 Active Device and its Possible Correlation with Soil Grain Size and Composition

**10,00 – 10,20**

**Ivan Barneř, Petra Pacherová, Michal Poňavič**

Radon and equivalent gamma dose rate variations at different types of anthropogenic inhomogeneities – examples of pilot results

**Short coffee break 10\*20 – 10\*40**

### **Morning session (chairing – Malgorzata Wysocka, Carlo Sabbarese)**

**10,40 – 11,00**

**D. Grządziel, K. Kozak, J. Mazur, S. Guguła, K. Danyłec, M. Mroczek**

Radiological situation in the Ojców National Park

**11,00 – 11,20**

**Domingos, F., Pereira, A., Meireles, C., Sequeira, A., Lopes, L., Carrilho, J., Carvalho, P.**

Radon production rate of metamorphic rocks from the Iberian Massif (Portugal)

**11,20 – 11,40**

**C. Sabbarese, F. Ambrosino, L. Thinová, M. Briestenský, F. Giudicepietro, M. Pugliese, V. Roca**

The usefulness of the Radon signal for geophysical purposes highlighted through analytical procedures

**11,40 – 12,00**

**Alessandra Briganti, Mario Voltaggio, Michele Soligo, Paola Tuccimei, Claudio Carusi, Carlo Lucchetti, Mauro Castelluccio**

Using radon as tracer of an old NAPL contamination in groundwater (Roma, Italy)

**Lunch break 12\*00 – 13\*40**

### **Afternoon session (chairing – Giorgia Cinelli, Petr Miklyaev)**

**13,40 – 14,00**

**P. Miklyaev, T. Petrova, A. Marenny, T. Ostapchuk, P. Sidyakin, D. Schitov, M.**

**Murzabekov**

Experience of registration extremely high values of radon exhalation rate in the vicinity of the Pyatigorsk water resort, Russia

**14,00 – 14,20**

**Małgorzata Wysocka, Krystian Skubacz, Izabela Chmielewska, Michał Bonczyk, Paweł Urban, Jerzy Grycman**

Changes in radon emission in the area around the coal mine during closing process

**14,20 – 14,40**

**Ryoko Fujiyoshi, Taichi Nakamura, Misato Ohno, Masakuni Okabayashi, Bor Krajnc, Nives Ogrinc, Janja Vaupotič**

Some topics on soil radon monitoring in forest sites of northern Japan

**14,40 – 15,00**

**E. Fialová, I. Burian**

History of Radon Calibration in the Czech Republic

**Short coffee break 15\*00 – 15\*20**

**Afternoon session (chairing – Liang Grace Zhou, Aleš Froňka)**

**15,20 – 15,40**

**Liang Grace Zhou, Gnanamurugan Ganapathy, Gang Nong, Ethan Li, and Jeff Whyte**

Radon Control in Canadian Buildings: Research at National Research Council Canada

**15,40 – 16,00**

**Aleš Froňka, Petra Vyletělová, Jan Hradecký**

Radon Measurement in workplaces – experience and strategies

**16,00 – 16,20**

**Iveta Smetanová, Andrej Mojzeš, František Marko, Kamil Fekete**

Indoor radon survey – preliminary results from Sološnica village, Slovakia

**16,20 – 16,40**

**Liang Grace Zhou, Ethan Li, Gang Nong, and Jeff Whyte**

A Field Study of Full height Passive Radon Stack in the National Capital Region of Canada

**16,40 – 17,10 Main poster session**

**A.Brisudová, M. Bulko, K. Holý, M. Müllerová**

Testing of various approaches for determining geogenic radon potential

**J.Mazur, S.Guguła, K.Danyłec, K.Kozak, D.Grządziel**

Radon in water standard samples for intercomparison experiments

**J.Mazur, K.Kozak, K.Danyłec, D.Grządziel**

Sudety mountain region - radon prone area in Poland

**A.Nogarotto, G.Cinelli, R.Braga**

U, Th and K concentration in bedrock data: validity of geological grouping (country study Italy)

**Vanja Radolić, Marina Poje Sovilj, Igor Miklavčić, Denis Stanić**

Definition of radon priority/prone areas within the National Radon Action Plan - Croatian experience

**V. Roca, F. Ambrosino, S. Bianchi, R. Buompane, M. Pugliese, C. Sabbarese**

On the Realization of Thoron Controlled Atmospheres

**Sêco, S.L.R., Domingos, F., Pereira, A. & Duarte, L.V.**

Spatial variability of the terrestrial gamma dose rate of sedimentary units of the Lusitanian Basin (Portugal): implications for geogenic radon mapping

**Sferle T., Moldovan M., Cucoș A., Dicu T., Niță D., Dobrei G., Burghel B., Sainz C.**

Correlation between radon index and indoor radon in Timisoara area, Romania

**Zuzanna Podgórska**

Measurements of radon concentration in drinking water samples in Poland

**Workshop dinner 19,30 – Wednesday !!**

## **Thursday, September 20<sup>th</sup>**

### **Morning session (chairing – Paola Tuccimei, Mirosław Janik)**

**8,40 – 9,00**

**István Csige, Sándor Csegzi, Sándor Gyila, Erzsébet Sóki**

Indoor radon levels in areas affected by geogas seepages

**9,00 – 9,20**

**Mauro Castelluccio, Carlo Lucchetti, Michele Soligo, Paola Tuccimei, Alessandra Briganti, Gianfranco Galli**

Building materials of volcanic origin as a source of indoor radon concentration and gamma radiation in Caprarola town (Viterbo, Italy)

**9,20 – 9,40**

**Mirosław Janik, Peter Bossew, Osamu Kurihara**

Anomaly detection in the long-term data of radon and thoron measurement in soil using machine learning methods

**9,40 – 10,00**

**Kyu Yeon LEE, Hong Keun YOON, Chang Gyun KIM**

Microbial responses in vitro against radon exposure

**10,00 – 10,20**

**Daniel Rabago, Marta Fuente, Sixto Herrera, Luis Quindos, Ismael Fuente, Mark Foley, Carlos Sainz**

Response time of radon monitors under controlled conditions

**Short coffee break 10\*20 – 10\*40**

### **Morning session (chairing – Petra Pacherová, Tore Tollefsen)**

**10,40 – 11,00**

**T. Streil and V. Oeser**

Radon Scout Home the Radon Recorder for your Home

**11,00 – 11,20**

**Giorgia Cinelli, Peter Bossew, Elio Javier, Valeria Gruber, Roberto Braga, Alessio Nogarotto, Eric Peterman, Tore Tollefsen, Marc De Cort**

Analysis of the European Atlas of Natural Radiation data within geological and soil units

### **Roundtable discussions**

**starting 11\*40**

**SPATIAL VARIABILITY OF SOIL GAS PERMEABILITY**

**Lunch break 12\*30 – 14\*00**

**starting 14\*00**

**RADON POTENTIAL, TEMPORAL CHANGES, SEASONAL VARIATION**

**starting 15\*00**

**WORLD CAFÉ: FUTURE CHALLENGES IN THE FIELD OF NATURAL RADIATION THAT COULD BE ADDRESSED AT THE EUROPEAN LEVEL**

## **Friday, September 21<sup>st</sup>**

**Field excursion .... (an optional activity with a special fee) ....**

**Departure: Friday 8,00 - in front of Masarykova college**