



THE HENRYK NIEWODNICZAŃSKI  
INSTITUTE OF NUCLEAR PHYSICS  
POLISH ACADEMY OF SCIENCES



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# PROGRAMME

## III International Conference



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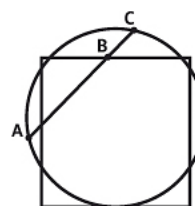
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REGISTRATION at:

***International Cultural Centre***

***25, Main Market Square (Rynek Główny)***



MIĘDZYNARODOWE  
CENTRUM  
KULTURY  
INTERNATIONAL  
CULTURAL  
CENTRE





***Sunday, May 26***      17:00 ÷ 20:00

***Monday, May 27***      from 08:15



**MONDAY, May 27, 2019**

09:00 ÷ 09:20 **OPENING CEREMONY**

**SESSION 1** Chairpersons: *Małgorzata Wysocka, Viktor Jobbágy*

09:20 ÷ 10:00		<b>INVITED PRESENTATION: Olga GERMAN</b> (IAEA, Vienna, Austria) IAEA safety standards on radon in dwellings and in workplaces
10:00 ÷ 10:20	<b>A01</b>	Stephanie <b>HURST</b> (Saxon State Ministry of Environ, & Agriculture, Dresden, Germany) Radon legislation – challenges of implementation
10:20 ÷ 10:40	<b>A02</b>	Wolfgang <b>RINGER</b> (AGES Radon and Radioecology, Linz, Austria) Activities at the international level to control radon exposure
10:40 ÷ 11:00	<b>A03</b>	Rosabianca <b>TREVISI</b> (INAIL/DiMEILA, Monteporzio Catone, Italy) Are RPA, identified on survey in dwellings, representative of radon levels in workplaces?
11:00 ÷ 11:20		<b>COFFEE BREAK</b>
11:20 ÷ 11:40	<b>A04</b>	Valeria <b>GRUBER</b> (AGES- Austrian Agency for Health and Food Safety, Linz, Austria) An introduction to the MetroRADON project – metrology for radon monitoring
11:40 ÷ 12:00	<b>A05</b>	Giorgia <b>CINELLI</b> (European Commission, JRC, Ispra, Italy) Results of analysis of MetroRADON questionnaire data on indoor radon surveys
12:00 ÷ 12:20	<b>A06</b>	Igor <b>ČELIKOVIĆ</b> ("Vinca" Institute of Nuclear Sciences, University of Belgrade, Serbia) National indoor radon surveys performed in Europe: a qualitative overview
12:20 ÷ 12:40	<b>A07</b>	Francesco <b>BOCHICCHIO</b> (Italian National Institute of Health, Rome, Italy) Extreme reverse seasonal variations of indoor radon concentration: a case study
12:40 ÷ 13:00		Gold Sponsor's presentation: <b>Mi.am</b> (Italy)
13:00 ÷ 14:00		<b>LUNCH</b>

**SESSION 2** Chairpersons: *Iveta Smetanová, Francesco Bochicchio*





14:00 ÷ 14:40		<b>INVITED PRESENTATION: Rakesh C. RAMOLA</b> (H.N.B. Garhwal Univ. Tehri Garhwal, India) Significance of Thoron measurement in indoor environment
14:40 ÷ 15:00	<b>A08</b>	Stanisław <b>CHAŁUPNIK</b> (Central Mining Institute, Katowice, Poland) Application of TLD devices for radon and thoron PAEC measurements in air - is the concept of "total" PAEC useful?
15:00 ÷ 15:20	<b>A09</b>	Paola <b>TUCCIMEI</b> (Università "Roma Tre", Roma, Italy) Assessing indoor radon levels using a scale model room
15:20 ÷ 15:40	<b>A10</b>	Gennaro <b>VENOSO</b> (Italian National Institute of Health, Rome, Italy) Experimental evaluation of ageing and fading effects over 3, 6, and 12 months for three radon concentration measurement techniques based on nuclear track detectors
15:40 ÷ 16:00		<b>COFFEE BREAK</b>
16:00 ÷ 16:20	<b>A11</b>	Eric <b>PETERMANN</b> (Federal Office for Radiation Protection, Berlin, Germany) High-resolution mapping of the geogenic radon potential using machine learning
16:20 ÷ 16:40	<b>A12</b>	Peter <b>BOSSEW</b> (Federal Office for Radiation Protection, Berlin, Germany) Development of a geogenic radon hazard index
16:40 ÷ 17:00	<b>A13</b>	Bety D. <b>BURGHELE</b> ("Babeş-Bolyai" University, Cluj-Napoca, Romania) Challenges occurring between geogenic radon and radon mitigation

18:00 **Meeting of Radon Centre - Non-governmental International Scientific Network Poland (only for members)**  
Venue: International Cultural Centre, 25, Main Market Square (Rynek Główny)

**TUESDAY, May 28, 2019**

**SESSION 3**


Chairpersons: Monika **Müllerová**, Jose Luis **Gutierrez Villanueva**

09:00 ÷ 09:40		<b>INVITED PRESENTATION: James McLAUGHLIN</b> (Univ. College Dublin, Ireland , ERA) Health aspects of radon
09:40 ÷ 10:00	<b>A14</b>	Krzysztof <b>KOZAK</b> (Institute of Nuclear Physics PAN, Kraków, Poland) Ground Heat Exchangers (GHE) and indoor radon
10:00 ÷ 10:20	<b>A15</b>	Georgy <b>MALINOVSKY</b> (Institute of Industrial Ecology UB RAS, Ekaterinburg, Russia) Combined analysis of studies on the lung cancer association with indoor radon exposure
10:20 ÷ 10:40	<b>A16</b>	Scott D. <b>CHAMBERS</b> (ANSTO, Environmental Research, Lucas Heights, Australia) Characterising urban pollution variability in central Poland using Rn-222
10:40 ÷ 11:00	<b>A17</b>	Miroslaw <b>JANIK</b> (QST, Chiba, Japan) Assessment of the impact of climate parameters on the radon time series measured indoor, outdoor and in soil
11:00 ÷ 11:20		<b>COFFEE BREAK</b>
11:20 ÷ 11:40	<b>A18</b>	Viktor <b>JOBÁGY</b> (European Commission, JRC, Geel, Belgium) Status of radon-in-water measurements in Europe: conclusions from an EC-JRC European-wide proficiency tests
11:40 ÷ 12:00	<b>A19</b>	Thomas R. <b>BECK</b> (Federal Office for Radiation Protection, Berlin, Germany) Traceable calibrations of instruments measuring radon activity concentration
12:00 ÷ 12:20	<b>A20</b>	Jaroslav M. <b>WAŚKIEWICZ</b> (Public Health England, Chilton, UK) Quality assurance in radon SSNTD measurements – PHE experience
12:20 ÷ 12:40	<b>A21</b>	Francesco <b>CARDELLINI</b> (ENEA INMRI, Rome, Italy) Production of standard radon in water solution and comparison of different measurement methods for activity determination
12:40 ÷ 13:00		Gold Sponsor's presentation: <b>PropertECO</b> (UK)
13:00 ÷ 14:00		<b>LUNCH</b>

**VII ERA WORKSHOP**

“Radon measurements: calibration, quality assurance and measurement protocols”






14:00 ÷ 14:15		Welcome (Wolfgang <b>Ringer</b> , ERA President)
14:15 ÷ 14:40		Regulatory requirements on the quality of radon measurements (Thomas <b>Beck</b> , Federal Office for Radiation Protection, Berlin, Germany)
14:40 ÷ 15:05		Accredited methods - how to maintain high quality of radon measurements? (Jadwiga <b>Mazur</b> , IFJ-PAN – Krakow, Poland)
15:05 ÷ 15:30		<b>COFFEE BREAK</b>
15:30 ÷ 15:50		A comprehensive quality control system for track etch analysis (Erik <b>Hulber</b> , Radosys – Budapest, Hungary)
15:50 ÷ 16:10		Radon adsorption in detector holder plastic – a source to incorrect calibrations (Tryggve <b>Rönnqvist</b> , Radonova Laboratories AB – Uppsala, Sweden)
16:10 ÷ 16:40		Round-table discussion
16:40 ÷ 17:00		Summary
17:00		Closure

**17:15 ERA GENERAL ASSEMBLY** (only for members)

- Welcome by the President
- Presentation and approval of minutes from last GA
- ERA administration (Secretary) + Annual budget (Treasurer). Approval of budget.
- Election results of the new ERA Executive Committee
- Announcement of ERA Award 2019
- Any other business

**WEDNESDAY, May 29, 2019**      **Conference tour**

**Meeting Place:** conference venue - International Cultural Centre, Main Market Square

Option	Meeting Time	
<b>Kazimierz - Old Jewish District</b>	<b>10:30</b>	
<b>Wieliczka Salt Mine</b>	<b>9:30</b>	
<b>Kraków Old Town with Rynek Underground</b>	<b>9:30</b>	

14:30 ÷ 15:30



**LUNCH** at International Cultural Centre, Main Market Square

#### SESSION 4

Chairpersons: Beata **Kozłowska**, Carlos **SAINZ**

15:30



**POSTER SESSION** - List of posters – page 8

#### SESSION 5      TOPIC TABLES SESSION

From 16:30 to the .... next morning, but after 22:00 we must move to Kraków pubs 😊

Table I:    *How to measure radon in the best way ?*

Table II:    *How to make good analysis and understanding of results ?*

Table III:    *How about national radon legislation and radon action plans ?*

Table IV:    *Open discussion, all other topics, but most of all about radon and radioactivity ;)*







# III INTERNATIONAL CONFERENCE „RADON in the ENVIRONMENT 2019”; KRAKÓW, POLAND

THURSDAY, May 30, 2019

## SESSION 6

Chairpersons: *Bety D. Burghelle, Mirosław Janik*

09:00 ÷ 09:40		<b>INVITED PRESENTATION:</b> Iliya <b>YARMOSHENKO</b> ( <i>Inst. of Industrial Ecology, Russia</i> ) Radon problem in context of home energy efficiency
09:40 ÷ 10:00	<b>A22</b>	Alain Niba <b>NGWA</b> ( <i>Inst. of Medical Physics &amp; Radiation Protection, Giessen, Germany</i> ) Radon measurements in big buildings
10:00 ÷ 10:20	<b>A23</b>	Talia <b>TENE</b> ( <i>Escuela Superior Politécnica de Chimborazo, Riobamba, Ecuador</i> ) Radon assessment of the most common building materials used in Chimborazo, Ecuador
10:20 ÷ 10:40	<b>A24</b>	Peter <b>JOVANOVIĆ</b> ( <i>Institute of Occupational Safety, Ljubljana-Polje, Slovenia</i> ) Measurements of radon and their progeny concentrations in show caves in Slovenia
10:40 ÷ 11:00	<b>A25</b>	Till <b>KUSKE</b> ( <i>Technische Hochschule Mittelhessen, Giessen, Germany</i> ) Radon soil-gas measurement campaign in Hessen - an approach to identifying areas with enhanced geogenic radon
11:00 ÷ 11:20		<b>COFFEE BREAK</b>
11:20 ÷ 11:40	<b>A26</b>	Tatsuo <b>AONO</b> ( <i>National Institute for Quantum and Radiological Sciences and Technology, Chiba, Japan</i> ) Radionuclide contamination in food and estimation of radiation doses from food intake since the Fukushima Nuclear Power Station accident
11:40 ÷ 12:00	<b>A27</b>	Sarata K. <b>SAHOO</b> ( <i>National Institute for Quantum and Radiological Sciences and Technology, Chiba, Japan</i> ) A comparative study of naturally occurring radionuclides and uranium activity ratio in soils of high background radiation area of India with Fukushima soils
12:00 ÷ 12:20	<b>A28</b>	Shinji <b>TOKONAMI</b> ( <i>Hirosaki University, Hirosaki, Japan</i> ) Development of radioactive aerosol chamber at Hirosaki University, Japan
12:20 ÷ 12:40	<b>A29</b>	Vladimir <b>UDOVIČIĆ</b> ( <i>University of Belgrade, Belgrade, Serbia</i> ) Radon variability due to floor level in the two typical residential buildings in Serbia
12:40 ÷ 13:00		<i>Gold Sponsor's presentation: <b>RADOSYS Ltd.</b> (Hungary)</i>
13:00 ÷ 14:00		<b>LUNCH</b>

## SESSION 7

Chairpersons: *Paola Tuccimei, Shinji Tokonami*

14:00 ÷ 14:20	<b>A30</b>	Federica <b>LEONARDI</b> ( <i>National Institute for Insurance against Accidents at Work, Rome, Italy</i> ) Radon exhalation from bulk and crushed samples: first results about a study on self-healing of concrete
14:20 ÷ 14:40	<b>A31</b>	Carlos <b>SAINZ</b> ( <i>University of Cantabria, Santander, SPAIN</i> ) The role of radon in the preventive conservation of rock art. The case of Altamira
14:40 ÷ 15:00	<b>A32</b>	Carlo <b>SABBARESE</b> ( <i>University of Campania "Vanvitelli", Caserta, Italy</i> ) Interpretation of the characteristics of a long radon time series at Campi Flegrei Caldera (Italy)
15:00 ÷ 15:20		<b>COFFEE BREAK</b>
15:20 ÷ 15:40	<b>A33</b>	Iveta <b>SMETANOVÁ</b> ( <i>Earth Science Institute, Slovak Academy of Sciences, Bratislava, Slovakia</i> ) Radon and CO <sub>2</sub> monitoring in the Važecká cave, Slovakia
15:40 ÷ 16:00	<b>A34</b>	Maja <b>EREMIC-SAVKOVIC</b> ( <i>Serbian Radiation &amp; Nuclear Safety &amp; Security Directorate, Belgrade, Serbia</i> ) Pilot study on mitigation solutions for buildings with an elevated radon levels in Serbia
16:00 ÷ 16:20	<b>A35</b>	Alessandra <b>BRIGANTI</b> ( <i>Università "Roma Tre", Roma, Italy</i> ) Evaluating MTBE residual contamination in groundwater using radon

**18:30 DEPARTURE TO CONFERENCE DINNER**

Meeting place: **conference venue**

19:30



**CONFERENCE DINNER: at "ZALEŚIE GRANGE"**



**FRIDAY, May 31, 2019**

**SESSION 8**

Chairpersons: *Talia Tene, Dominik Grządziel*

09:30 ÷ 09:50	<b>A36</b>	Leidy S. <b>LECHÓN</b> ( <i>Escuela Superior Politécnica de Chimborazo, Riobamba, Ecuador</i> ) Radon measurements in groundwater used to supply the urban area of Riobamba city
09:50 ÷ 10:10	<b>A37</b>	Subhash <b>CHANDRA</b> ( <i>Department of Physics, Nainital, India</i> ) Radon levels and associated doses in indoor environment of Garhwal Himalaya
10:10 ÷ 10:30	<b>A38</b>	Silvana <b>BELTRÁN TORRES</b> ( <i>Eötvös University, Budapest, Hungary</i> ) Geochemical study and evaluation of predictive models for soil gas radon concentration in a granitic area in Hungary
10:30 ÷ 10:50	<b>A39</b>	Nanping <b>WANG</b> ( <i>China University of Geosciences, Beijing, China</i> ) $^{222}\text{Rn}$ and $^{220}\text{Rn}$ levels in Bayan Obo rare earth mine
10:50 ÷ 11:10		<b>COFFEE BREAK</b>
11:10 ÷ 11:30	<b>A40</b>	Eka Djatnika <b>NUGRAHA</b> ( <i>Hirosaki University, Japan; National Nuclear Energy Agency, Indonesia</i> ) Preliminary survey of $^{222}\text{Rn}$ concentration in dwellings & drinking water at high background radiation area Botteng, Mamuju, Indonesia
11:30 ÷ 11:50	<b>A41</b>	Seon Yeong <b>PARK</b> ( <i>INHA University, Incheon, Republic of Korea</i> ) Potential risks of radon in soils to the indigenous microorganism: A case study of Ganghwa island in South Korea
11:50 ÷ 12:10	<b>A42</b>	Igor <b>VOINOV</b> ( <i>Metoil s.r.o., Prague, Czech Republic</i> ) Technology for removal of radon and radon daughters from drinking water

12:10

**CLOSURE of III International Conference**



## POSTER SESSION

WEDNESDAY, May 29, 2019, at 15:30



<b>P01</b>	<b>Implementing optimization in protection from radon exposure in workplaces and dwellings: some proposals</b> Francesco <b>BOCHICCHIO</b> ( <i>Italian National Institute of Health Rome, Italy</i> )
<b>P02</b>	<b>Radon in the workplace - regulatory framework and experiences in Czech Republic</b> Hana <b>PROCHAZKOVA</b> ( <i>State Office for Nuclear Safety Prague, Czech Republic</i> )
<b>P03</b>	<b>Radon migration experiments</b> Stanisław <b>CHAŁUPNIK</b> ( <i>Central Mining Institute, Katowice, Poland</i> )
<b>P04</b>	<b>A new tool for the analysis of the geographical variability of the indoor radon activity: results from a case study in Campania (Southern Italy)</b> Filomena <b>LOFFREDO</b> ( <i>Univ. of Naples Federico II, National Inst. of Nuclear Physics, Naples, Italy</i> )
<b>P05</b>	<b>Optimization of the etching condition for the new scanner-based track detector evaluation system</b> Anita <b>CSORDÁS</b> ( <i>University of Pannonia, Veszprém, Hungary</i> )
<b>P06</b>	<b>Comparison of different type of track detectors for the scanner-based evaluation system</b> Anita <b>CSORDÁS</b> ( <i>University of Pannonia, Veszprém, Hungary</i> )
<b>P07</b>	<b>Determination of the thoron emanation coefficient for natural materials</b> Karolina <b>DANYŁEC</b> ( <i>Institute of Nuclear Physics PAN, Kraków, Poland</i> )
<b>P08</b>	<b>Cytogenetic biomonitoring of inhabitants of a large uranium mineralization area on example of Kowary, Poland</b> Katarzyna <b>WALCZAK</b> ( <i>Nofer Institute of Occupational Medicine, Łódź, Poland</i> )
<b>P09</b>	<b>Development of approach to assess the ratio between the advective and diffusive radon entry into buildings</b> Illa V. <b>YARMOSHENKO</b> ( <i>Institute of Industrial Ecology Ural Branch of Russian Academy of Science, Ekaterinburg, Russia</i> )
<b>P10</b>	<b>Urban climate studies using Radon-222 – central Poland case study</b> Agnieszka <b>PODSTAWCZYŃSKA</b> ( <i>University of Lodz, Łodz, Poland</i> )
<b>P11</b>	<b>Analysis of radon time series from underground environments in Portugal and Slovakia</b> Iveta <b>SMETANOVÁ</b> ( <i>Earth Science Institute, Slovak Academy of Sciences, Bratislava, Slovakia</i> )
<b>P12</b>	<b>Radon and thoron exhalation rate measurements of building materials used in Serbia</b> Igor <b>ČELIKOVIĆ</b> ( <i>"Vinca" Insitute of Nuclear Sciences, University of Belgrade, Serbia</i> )
<b>P13</b>	<b>Effect of electronic cigarette (EC) as aerosol source on particle size distribution in indoor air and in standard radon chamber</b> Georgy <b>MALINOVSKY</b> ( <i>Institute of Industrial Ecology UB RAS, Ekaterinburg, Russia</i> )
<b>P14</b>	<b>Calibration system uncertainty for radon EEC measurements with self-absorption consideration</b> Georgy <b>MALINOVSKY</b> ( <i>Institute of Industrial Ecology UB RAS, Ekaterinburg, Russia</i> )
<b>P15</b>	<b>Various approaches for determining the radon potential and their testing</b> Monika <b>MÜLLEROVÁ</b> , ( <i>Comenius University, Bratislava, Slovakia</i> )
<b>P16</b>	<b>The continuous measurements of radon exhalation rate from soil in Slovakia</b> Monika <b>MÜLLEROVÁ</b> ( <i>Comenius University, Bratislava, Slovakia</i> )



<b>P17</b>	<b>Exploratory indoor <math>^{222}\text{Rn}</math> measurements in Riobamba Canton</b> Alejandra <b>CANTOS</b> ( <i>Escuela Superior Politécnica de Chimborazo, Riobamba, Ecuador</i> )
<b>P18</b>	<b>First survey on radon concentration in mineral spring waters in Lazio Region, Italy</b> Christian <b>DI CARLO</b> ( <i>Italian National Institute of Health, National Center for Radiation Protection and Computational Physics, Rome, Italy</i> )
<b>P19</b>	<b>Levels and effects of natural radioactivity in soil and water of Indian Himalayan Region</b> Joshi <b>SUBODH</b> ( <i>HNB Garhwal University, Tehri Garhwal, India</i> )
<b>P20</b>	<b>Preliminary investigation of radon concentration in surface water and groundwater in some suburbs of Beijing</b> Ting <b>LI</b> ( <i>China University of Geosciences, Ministry of Education, Beijing, China</i> )
<b>P21</b>	<b>Radon in Kowarian apartments</b> Jerzy <b>OLSZEWSKI</b> ( <i>The Nofer Institute of Occupational Medicine, Łódź, Poland</i> )
<b>P22</b>	<b>Indoor radon concentration in dwellings of the workers of the old uranium mine of Urgeiriça (Central Portugal)</b> Alcides <b>PEREIRA</b> ( <i>The Centre for Earth and Space Research of the University of Coimbra, Coimbra, Portugal</i> )
<b>P23</b>	<b>Exposures from radon and thoron progeny in high background radiation area in Takandeang, Indonesia</b> Miki Arian <b>SAPUTRA</b> ( <i>Hirosaki University, Hirosaki, Japan; National Nuclear Energy Agency of Indonesia</i> )
<b>P24</b>	<b>Radon on ground floor in the buildings of pre-university education in Montenegro</b> Perko <b>VUKOTIC</b> ( <i>Montenegrin Academy of Sciences and Arts, Podgorica, Montenegro</i> )
<b>P25</b>	<b>Radon potential mapping in the southern cities of China</b> Nanping <b>WANG</b> ( <i>China University of Geosciences, Beijing, China</i> )
<b>P26</b>	<b>Radon potential, gamma radiation – preliminary results</b> Dagmara E. <b>TCHORZ-TRZECIAKIEWICZ</b> ( <i>University of Wrocław, Wrocław, Poland</i> )
<b>P27</b>	<b>National comparison of methods for determination of radon in water</b> Jadwiga <b>MAZUR</b> ( <i>Institute of Nuclear Physics PAN, Kraków, Poland</i> )
<b>P28</b>	<b>Radon intercomparison tests - Katowice 2016</b> Małgorzata <b>WYSOCKA</b> ( <i>Central Mining Institute, Katowice, Poland</i> )
<b>P29</b>	<b>A new portable radon progeny monitor using a silicon photodiode</b> Yuki <b>TAMAKUMA</b> ( <i>Hirosaki University, Hirosaki, Japan</i> )
<b>P30</b>	<b>Induced radioactivity in the eye treatment room at Cyclotron Centre Bronowice facility</b> Szymon <b>GUGUŁA</b> ( <i>Institute of Nuclear Physics PAN, Kraków, Poland</i> )
<b>P31</b>	<b>A Sorben-Tec system for rapid dosimetric evaluation of radon level in drinking water</b> Igor <b>VOINOV</b> ( <i>Metoil s.r.o., Prague, Czech Republic</i> )
<b>P32</b>	<b>Calibration of a groundwater-radon monitoring station for seismic precursor study</b> Riccardo <b>CIOLINI</b> ( <i>University of Pisa, Pisa, Italy</i> )
<b>P33</b>	<b>Design, construction, and completion of an accumulation chamber with controlled conditions for studies of radon exhalation from building materials</b> Rafael Liza <b>NECIOSUP</b> ( <i>Pontificia Universidad Católica del Perú, Lima, Perú</i> )
<b>P34</b>	<b>A direct <math>^{220}\text{Rn}/^{222}\text{Rn}</math> progeny detector using a theoretical method</b> Jun <b>Hu</b> ( <i>Hirosaki University, Hirosaki, Japan</i> )
<b>P35</b>	<b><math>^{214}\text{Bi}/^{214}\text{Pb}</math> radioactivity ratio three years monitoring in rainwater in Prague</b> Fabrizio <b>AMBROSINO</b> ( <i>University of Campania “Vanvitelli”, Caserta, Italy</i> )

PropertECO are delighted to offer Gold Sponsorship of the Third International Conference in Krakow 2019. The theme, *Radon in the Environment*, covers what we do.

Containing over 30 years' experience in radon matters, PropertECO has been described as the 'the thought leader' in dealing with radon in the UK. Having previously been accorded the accolade of Britain's Best Small Business (no mean achievement for a radon business!), we have built a reputation as the radon specialist that provides practical solutions for industry and the public.

In the UK, we deliver:

- Radon testing in commercial & domestic buildings
- Consultancy, training & design of mitigation systems
- Development of unique below ground radon management systems
- Installation of hundreds of mitigation systems in all types of buildings
- Supply of specialist equipment to radon industry practitioners



We searched the globe for the best equipment and found our perfect partner. RadonAway specialise in manufacturing testing, diagnostic and mitigation equipment. They have dedicated more than 25 years to making and supplying specifically to the radon industry and over 1 million of their fans have been installed.

PropertECO have maintained strong international links and are committed to involvement in the European radon industry. We offer services and RadonAway equipment supply across Europe.

Come and see us during the conference to find out about our **NEW** RadonAway testing and mitigation developments. We'd love to chat.

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## COMPANY PROFILE

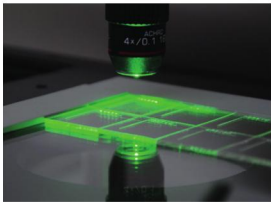
### WHAT WE DO

Over the last **25 years**, Mi.am has developed several instruments, from Spark Replica Counter to Politrack, which represents the current state of the art for SSNTD reading.

Our activity includes research, design, production and commercialisation of equipments for **radon and thoron detection**. We also run a **laboratory for radon dosimetry**.

## PRODUCTS

### Politrack®



- Research
- Dosimetry service
- CR-39 / LR115 radon
- CR-39 fast and thermal neutrons

### Radout®



- Closed type, air gap
- Easy assemble, re-usable
- Double Chamber, extended range
- CR-39 25x25 or 15x15 mm<sup>2</sup>

### Radon Mapper



- Radon and thoron monitor
- Radon in air, water, soil
- Ideal for remedial actions
- Data storage on cloud

## REPRESENTED COMPANIES

### AER



- Simple, fast and accurate
- Realtime data display
- Detection by photodiode
- Remote access via IoT

### E-Perm

Rad Elec Inc.  
Radon Measurement Systems



- Electret ion chambers
- Radon, thoron, gamma
- Radon progeny
- Short and long term measurements

### CRM-510

femto-TECH



- Ionization chamber
- Passive air diffusion
- Environmental sensors
- 1 year battery life

## Offer

- Radon and Thoron monitors
- Radon dosimetry systems
- Calibration and maintenance services
- Authorized calibration provider for Rad Elec electret voltage reader
- Agent for: Algade, Femto-Tech, Pylon Electronics, Rad Elec



## Mi.am srl

Via Bolzoni, 30  
29122 Piacenza - Italia  
Tel. (+39) 0523.952385  
Email: info@miam.it  
www.miam.it

## POLITRACK®



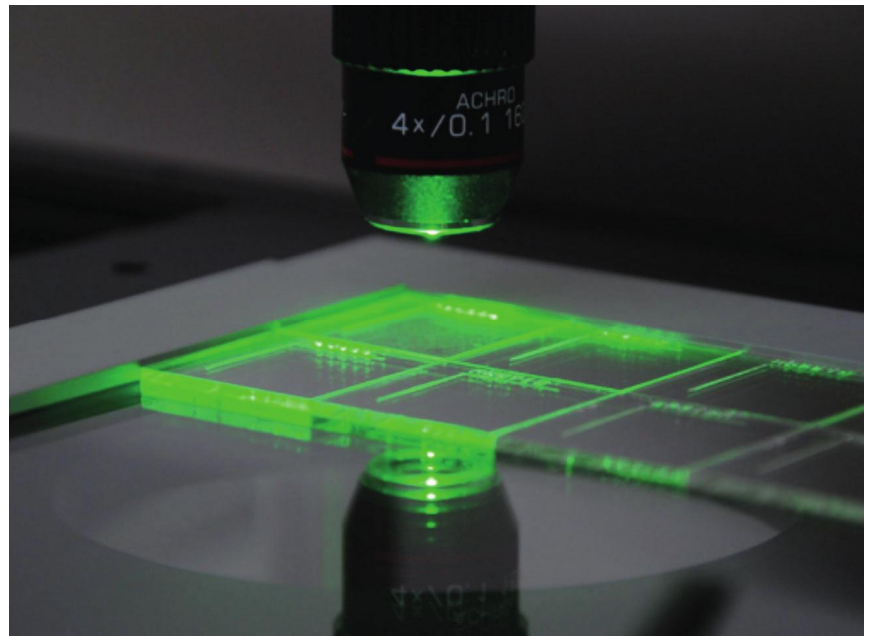
### Applications

- Research
- Dosimetry service
- Radon CR-39
- Radon LR115
- Fast and thermal neutrons
- LET spectrometry



### Features

- 200x200 mm<sup>2</sup> XY frame
- Any size of detector
- Automatic ID code reading
- Track morphological analysis
- Overlapping correction
- Ageing/fading correction (CR-39)
- Residual thickness correction (LR115)
- All parameters controlled by the operator



### Description

Politrack is a general-purpose reader for automatic scanning and tracks analysis in SSNTD. The morphological analysis allows to classify tracks coming from different particles or having different energies and to remove noise signal.

All the calculation algorithms are explained. The user can apply and/or modify the morphological filters, and in real time, through a powerful graphic tool, visualize the results. The user can customize the output template.

### Offer

- Radon and Thoron monitors
- Radon dosimetry systems
- Calibration and maintenance services
- Authorized calibration provider for Rad Elec electret voltage reader
- Agent for: Algade, Femto-Tech, Pylon Electronics, Rad Elec



### Mi.am srl

Via Bolzoni, 30  
29122 Piacenza - Italia  
Tel. (+39) 0523.952385  
Email: info@miam.it  
www.miam.it

**RADOSYS Ltd.**

*Leaflets will be available at the conference*