



**Second East European  
Radon Symposium**

[www.rad2014.elfak.rs/seeras](http://www.rad2014.elfak.rs/seeras)

May 27 - 30, 2014 | Faculty of Electronic Engineering | Niš | Serbia

# BOOK OF ABSTRACTS

**PUBLISHER:** University of Niš, Faculty of Electronic Engineering  
P.O.Box 73, 18000 Niš, Serbia  
www.elfak.ni.ac.rs

**FOR THE PUBLISHER:** Prof. Dr. Dragan Tasić

**EDITOR:** Prof. Dr. Goran Ristić

**COVER DESIGN:** Vladan Nikolić, M.Sc.

**TECHNICAL EDITING:** Sasa Trenčić and Vladan Nikolić

**PROOF-READING:** Saša Trenčić, MA

**PRINTED BY:** Nais Print, Niš

**PRINT RUN:** 350 copies

**ISBN** 978-86-6125-100-9

*The Second International Conference on Radiation and Dosymetry in Various Fields of Research (RAD 2014) and the Second East European Radon Symposium (SEERAS)* were financially supported by:

- Central European Initiative (CEI)
- International Union of Pure and Applied Physics (IUPAP)\*
- Ministry of Education, Science and Technological Development

\*To secure IUPAP sponsorship, the organisers have provided assurance that RAD 2014 Conference will be conducted in accordance with IUPAP principles as stated in the IUPAP resolution passed by the General Assembly in 2008. In particular, no bona fide scientist will be excluded from participation on the grounds of national origin, nationality, or political considerations unrelated to science.

CIP - Каталогизacija u publikaciji  
Narodna biblioteka Srbije, Beograd

539.16(048)

INTERNATIONAL Conference on Radiation and  
Dosimetry in Various Fields of Research (2nd  
; 2014 ; Niš)  
Book of Abstracts / The Second  
International Conference on Radiation and  
Dosimetry in Various Fields of Research, RAD  
2014, May 27-30, 2014, Niš, Serbia ; [editor  
Goran Ristić]. - Niš : Faculty of Electronic  
Engineering, 2014 (Niš : Nais Print). - 450  
str. ; 30 cm

Nasl. str. prištampanog teksta: Book of  
Abstracts / Second East European Radon  
Symposium SEERAS, May 27-30, 2014, Niš,  
Serbia. - Oba rada štampana u međusobno  
obrnutim smerovima. - Tiraž 350. -  
Bibliografija uz pojedine apstrakte.

ISBN 978-86-6125-100-9

а) Јопизујуће зрачење - Дозиметрија -  
Апстракт  
COBISS.SR-ID 207273996

## MEASUREMENTS OF INDOOR RADON CONCENTRATION IN KINDERGARTENS IN SOFIA, BULGARIA

**Kremena Ivanova<sup>1</sup>, Martina Tsenova<sup>1</sup>, Bistra Kunovska<sup>1</sup>,  
Zdenka Stoianovska<sup>2</sup>, Viktor Badulin<sup>1</sup>**

<sup>1</sup> National Center of Radiobiology and Radiation Protection, Sofia, Bulgaria

<sup>2</sup> Faculty of Medical Sciences, Goce Delcev University of Stip, FYR of Macedonia

As a part of the systematic survey of indoor radon in Bulgaria, indoor radon concentration was measured in 292 kindergartens buildings of Sofia city during 3 month (January – April), 2013 using the CR-39 nuclear tracks detectors. In any building at least two frequently occupied rooms (mainly playrooms) were observed. Altogether 922 measurements were performed. The frequency distribution was well described by the lognormal function. The measured radon concentrations range between 9 and 1415 Bq m<sup>-3</sup> with a geometric mean of 101 Bq m<sup>-3</sup> (2.08) and arithmetic mean 132 Bq m<sup>-3</sup> with a standard deviation of 118 Bq.m-3. The radon concentrations obtained in this survey were compared with radon concentration in Sofia dwellings obtained from previous study. A detailed statistical analysis of the building factors was present.

**Key words:** Kindergarten, indoor radon, CD-39 tracks detector

This document was created with Win2PDF available at <http://www.win2pdf.com>.  
The unregistered version of Win2PDF is for evaluation or non-commercial use only.  
This page will not be added after purchasing Win2PDF.