

Rimantė Zinkutė

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

- 1993 – 1998 PhD of Physical Sciences, Geology (05 P), Institute of Geology and Vilnius University, speciality – 2E (geology and mineralogy).
Theme of dissertation: “Trace element technogenous associations in topsoil of urbanised territories of Lithuania”, supervisor – Assoc. Prof. Dr. V. Kadūnas.
Field of research: technogenous and environmental geochemistry.
- 1984 – 1989 Kharkiv University, Faculty of Geology and Geography (part-time student), speciality of geological survey, prospecting and exploration of mineral deposits, qualification of engineer geologist.
Theme of thesis: “Application of statistical methods for revealing geochemical peculiarities of soil and soil parent material in Utena district”.
Diploma thesis prepared in the Institute of Geology, Technogenous Geochemistry Department, consultant – Dr. V. Baltakis, supervisor – V. Peresadjko (Kharkiv University)
Field of research: distribution and associations of trace elements in topsoil.
- 1973 – 1978 Vilnius University, Faculty of Mathematics and Mechanics, Applied Mathematics speciality, qualification of mathematician
Theme of thesis: “Possibilities of decomposition of mixtures of normal distributions”
Diploma thesis prepared in Vilnius University, Faculty of Mathematics and Mechanics, supervisor – Assoc. Prof. J. Kruopis
Field of research: application of mathematical-statistical methods for treatment of grain-size and geochemical data.

PROFESSIONAL EXPERIENCE

- 2013 – until now **Senior researcher**
Laboratory of Geoenvironmental Research (Geochemistry Division),
Institute of Geology and Geography, Nature Research Centre
- 2012 – 2013 **Researcher**
Laboratory of Geoenvironmental Research (Geochemistry Division),
Institute of Geology and Geography, Nature Research Centre
- 2010 – 2012 **Senior researcher**
Laboratory of Geoenvironmental Research (Geochemistry Division),
Institute of Geology and Geography, Nature Research Centre
- 2002 – 2009 **Senior researcher**
Environmental Geochemistry Department, since 2009 – Geochemistry
Department, Institute of Geology and Geography

1991 – 2001	Researcher Technogenous Geochemistry Department, since 1992 m. – Geochemistry Department, Institute of Geology
1982 – 1991	Junior researcher Department of Lithology and Mineral Resources, since 1989 m. – Technogenous Geochemistry Department, Institute of Geology
1978 09 – 1982	Engineer mathematician Department of Lithology and Mineral Resources, Institute of Geology

RESEARCH INTERESTS

Field of investigations: elucidation of distribution and associations of the total contents of chemical elements determined by x-ray fluorescence in abiotic environmental components (topsoil, Quaternary deposits, dust) of urbanised and natural territories; search for relation between geochemical accumulation in abiotic and biotic environmental components (epiphytic lichens, hair of children) in urbanised territories; determination of the influence of natural factors on background values of chemical elements in topsoil; comparison of associations formed by different types of pollution; estimation of topsoil or surface sediment level of contamination by potentially harmful elements and its change; application of mathematical-statistical methods for treatment of geochemical data; search for geochemical indicators of climate change; application of geochemical methods in archaeology.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. Rapalis P., **Zinkutė R.**, Lazareva N., Suzdalev S., Taraškevičius R. 2021. Geochemistry of the dust collected by passive samplers as a tool for search of pollution sources: the case of Klaipėda Port, Lithuania. – *Applied Sciences*, 11 (23): art. no. 11157. [https://doi:10.3390/app112311157](https://doi.org/10.3390/app112311157).
2. **Zinkutė R.**, Taraškevičius R., Jankauskaitė M., Kazakauskas V., Stankevičius Ž. 2020. Influence of site-classification approach on geochemical background values. – *Open Chemistry*, 18 (1): 1391–1411. [https://doi:10.1515/chem-2020-0177](https://doi.org/10.1515/chem-2020-0177).
3. Stančikaitė M., Gedminienė L., Edvardsson J., Stoffel M., Corona C., Gryguc G., Uogintas D., **Zinkutė R.**, Skuratovič Ž., Taraškevičius R. 2019. Holocene vegetation and hydroclimatic dynamics in SE Lithuania – Implications from a multi-proxy study of the Cepkeliai bog. – *Quaternary International*, 501, 219–239. [https://doi:10.1016/j.quaint.2017.08.039](https://doi.org/10.1016/j.quaint.2017.08.039).
4. Stakėnienė R., Jokšas K., **Zinkutė R.**, Raudonytė-Svirbutavičienė E. 2019. Oil pollution and geochemical hydrocarbon origin markers in sediments of the Curonian Lagoon and the Nemunas River Delta. – *Baltica*, 32 (1): 22–32. [https://doi:10.5200/baltica.2019.1.3](https://doi.org/10.5200/baltica.2019.1.3).
5. Taraškevičius R., Kazakauskas V., Sarcevičius S., **Zinkutė R.**, Suzdalev S. 2019. Case study of geochemical clustering as a tool for tracing sources of clays for archaeological and modern bricks. – *Baltica*, 32 (2): 139–155. [https://doi:10.5200/baltica.2019.2.2](https://doi.org/10.5200/baltica.2019.2.2).
6. Gedminienė L., Šiliauskas L., Skuratovič Z., Taraškevičius R., **Zinkutė R.**, Kazbaris M., Ežerinskis Ž., Šapolaitė J., Gastevičienė N., Šeirienė V., Stančikaitė M. 2019. The Lateglacial-Early Holocene dynamics of the sedimentation environment based on the multi-proxy abiotic study of Lieporiai palaeolake, Northern Lithuania. – *Baltica*, 32 (1): 63–77. [https://doi:10.5200/baltica.2019.1.8](https://doi.org/10.5200/baltica.2019.1.8).
7. Taraškevičius R., **Zinkutė R.**, Gedminienė L., Stankevičius Z. 2018. Hair geochemical composition of children from Vilnius kindergartens as an indicator of environmental

- conditions. – *Environmental Geochemistry and Health*. 40 (5): 1817-1840. <https://doi:10.1007/s10653-017-9977-7>.
8. **Zinkutė R.**, Taraškevičius R., Jankauskaitė M., Stankevičius Ž. 2017. Methodological alternatives for calculation of enrichment factors used for assessment of topsoil contamination. – *Journal of Soils and Sediments*, 17 (2): 440-452. <https://doi:10.1007/s11368-016-1549-4>.
 9. Taraškevičius R., Motiejūnaitė J., **Zinkutė R.**, Eigminienė A., Gedminienė L., Stankevičius Ž. 2017. Similarities and differences in geochemical distribution patterns in epiphytic lichens and topsoils from kindergarten grounds in Vilnius. – *Journal of Geochemical Exploration*, 183: 152–165. <https://doi:10.1016/j.gexplo.2017.08.013>.
 10. **Zinkutė R.**, Baužienė I., Dilys K., Mažeika J., Taminskas J., Taraškevičius R. 2015. Recent Lithuanian peri-urban ombrotrophic bog records: indices derived from the contents of lead, zinc, copper and nickel. – *Geochemistry: Exploration, Environment, Analysis*, 15: 293–318. <https://doi:10.1144/geochem2013-245>.
 11. **Zinkutė R.**, Baltrūnas V., Taraškevičius R., Karmaza B., Stakėnienė R., Šeirienė V., Kisielienė D. 2015. Quaternary interglacial sediments as possible natural sources of arsenic and molybdenum anomalies in stream sediments in Lithuania. – *Journal of Environmental Engineering and Landscape Management*. 23 (01): 60–70. <https://doi:10.3846/16486897.2014.926909>.
 12. Stančikaitė M., Šeirienė V., Kisielienė D., Martma T., Gryguc G., **Zinkutė R.**, Mažeika J., Šinkūnas P. 2015. Lateglacial and early Holocene environmental dynamics in northern Lithuania: A multi-proxy record from Ginkūnai Lake. – *Quaternary International*, 357: 44–57. <https://doi:10.1016/j.quaint.2014.08.036>.
 13. Baltrūnas V., Šeirienė V., Molodkov A., **Zinkutė R.**, Katinas V., Karmaza B., Kisielienė D., Petrošius R., Taraškevičius R., Piličiauskas G., Schmölcke U., Heinrich D. 2013. Depositional environment and climate changes during the late Pleistocene as recorded by the Netiesos section in southern Lithuania. – *Quaternary International*, 292: 136–149. <https://doi:10.1016/j.quaint.2012.11.038>.
 14. Taraškevičius R., **Zinkutė R.**, Stakėnienė R., Radavičius M. 2013. Case study of relationship between aqua regia and real total contents of harmful trace elements in some European soils. – *Journal of Chemistry*, Vol. 2013, art. ID 678140, 15 p. <https://doi:10.1155/2013/678140>.
 15. Taraškevičius R., Stančikaitė M., Bliujienė A., Stakėnienė R., **Zinkutė R.**, Kusiak J. 2012. Search for geochemical indicators of pre-urban habitation sites: case study from the Skomantai hill-fort and settlement, western Lithuania. – *Geochemistry: Exploration, Environment, Analysis*. 12(4): 265–275. <https://doi:10.1144/geochem2012-123>.
 16. **Zinkutė R.**, Taraškevičius R., Želvys T. 2011. Major elements as possible factors of trace element urban pedochemical anomalies. – *Central European Journal of Chemistry*, 9(2): 337–347. <https://doi:10.2478/s11532-011-0012-z>.
 17. Kumpienė J., Brännvall E., Taraškevičius R., Aksamitauskas Č., **Zinkutė R.** 2011. Spatial variability of topsoil contamination with trace elements in preschools in Vilnius, Lithuania. – *Journal of Geochemical Exploration*, 108(1): 15–20. <https://doi:10.1016/j.gexplo.2010.08.003>.

Scientific articles published in conference proceedings, indexed in „Clarivate Analytics Web of Science“ database:

1. Baltrūnas V., **Zinkutė R.**, Taraškevičius R., Karmaza B., Šeirienė V., Kisielienė D. 2013. Interglacial Quaternary sediments as possible natural source of anomalies of harmful chemical elements in Lithuania. – *Proceedings of the 16th International International Conference on Heavy Metals in the Environment, 23–27 September 2012. E3S Web of Conferences 1, 16010 (2013)*. 480. <https://doi.org/10.1051/e3sconf/20130104006>.
2. Taraškevičius R., Motiejūnaitė J., **Zinkutė R.** 2013. Pedogeochemical anomalies in surroundings of great cormorant colony (case study in Lithuania). *Proceedings of the 16th International International Conference on Heavy Metals in the Environment, 23–27 September*

2012. *E3S Web of Conferences* 1, 16010 (2013). 107.
<https://doi.org/10.1051/e3sconf/20130116010>.

3. Taraškevičius R., Zinkutė R., Stankevičius Ž. 2013. Important factors for geochemical research of stream sediments near storm water outflow sites. – *Goldschmidt2013 Conference (August 25–30, 2013, Florence) Abstracts. Mineralogical Magazine*. 77(5): 2313.
<https://doi:10.1180/minmag.2013.077.5.20>.

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (without citation index):

Presently no articles.

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):

1. **Zinkutė R.**, Taraškevičius R., Gulbinskas S., Stankevičius Ž., Jankauskaitė M. 2015. Variability of estimated contamination extent depending on calculation methods. – *Environment. Technology. Resources: Proceedings of the 10th International Scientific and Practical Conference (June 18–20, 2015, Rezekne, Latvia)*. Vol. II: 337–343.
<http://journals.ru.lv/index.php/ETR/article/view/234>.
2. Taraškevičius R., **Zinkutė R.**, Čyžius G. J., Kaminskas M., Jankauskaitė M. 2013. Soil contamination in one of preschools influenced by metal working industry. – *Environment. Technology. Resources: Proceedings of the 9th International Scientific and Practical Conference (June 20–22, 2013, Rezekne)*. Vol. I: 83–86.
<http://journals.ru.lv/index.php/ETR/article/view/832>

Reviewed scientific articles, published in Lithuania:

Presently no articles.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

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| 2012 – 2014 | Participant of National Project
National Research Program (NRP) “Ecosystems in Lithuania: climate change and human impact”, project “Cyclicality, dynamics and models of palaeoenvironmental changes during Quaternary warm periods (“Cycle”)", project leader – Prof. Habil. Dr. V. Baltrūnas. No. LEK-06/2012. |
| 2010 – 2011 | Participant of National Project
National Research Program (NRP) “Ecosystems in Lithuania: climate change and human impact”, project "Determining the main palaeoenvironmental conditions of Quaternary warm periods and the cyclicality of their change" ("Quaternary"), project leader – Prof. Habil. Dr. V. Baltrūnas. No. LEK-01/2010. |

INTERNSHIP AND TRAINING

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| 2015.01 | Radiation protection courses in Vilnius, temporary permit to work with ionizing radiation generator was given. |
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2013.08.25 Workshop “Reliability of geochemical data: How do we know?” in Florence.
<https://goldschmidt.info/2013/workshops>

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. Sarcevičius S., Kazakauskas V., Taraškevičius R., **Zinkutė R.** 2018. Geochemical link between building ceramics and its raw material: from the 16th century until nowadays: case study of Vilnius, Lithuania. – *IInd International Symposium "Clays and ceramics"*, 29–31 January, 2018. Book of abstracts: 50–51. University of Latvia, Academic Centre for Natural Sciences. ISBN 978-9934-18-304-1.
https://www.lu.lv/fileadmin/user_upload/lu_portal/projekti/vpp/files/TV_posma/Clays/Clays_absrtaacts.pdf

National scientific conferences:

1. Rapalis P., Lazareva N., Suzdalev S., **Zinkutė R.**, Taraškevičius R. 2021. Geležis Klaipėdos dulkėse. *Jūros ir krantų tyrimai 2021. – 14-oji nacionalinė jūros mokslų ir technologijų konferencija.* 2021 spalio 21–22 d., Klaipėda. Klaipėdos universitetas, Jūros tyrimų centras. Konferencijos medžiaga: 102–106. ISSN 2669-2147.
<http://apc.ku.lt/krantai2021/index.php/konferencijos-leidinys/>
2. Suzdalev S., Navašinskienė J., Lazareva N., **Zinkutė R.**, Rapalis P., Taraškevičius R. 2021. Ką mums atpučia jūrinių krypčių vėjai. *Jūros ir krantų tyrimai 2021. – 14-oji nacionalinė jūros mokslų ir technologijų konferencija.* 2021 spalio 21–22 d., Klaipėda. Klaipėdos universitetas, Jūros tyrimų centras. Konferencijos medžiaga: 116–119. ISSN 2669-2147.
<http://apc.ku.lt/krantai2021/index.php/konferencijos-leidinys/>
3. Suzdalev S., **Zinkutė R.**, Taraškevičius R. Vario lydinių cheminės sudėties analizės rezultatų sąsajų galimybės naudojant etalonus. *Jūros ir krantų tyrimai 2021. – 14-oji nacionalinė jūros mokslų ir technologijų konferencija.* 2021 spalio 21–22 d., Klaipėda. Klaipėdos universitetas, Jūros tyrimų centras. Konferencijos medžiaga: 120–124. ISSN 2669-2147.
<http://apc.ku.lt/krantai2021/index.php/konferencijos-leidinys/>

PARTICIPATION IN THE STUDY PROCESS

Supervision of PhD students: has not done

Scientific consultant: has never been

Supervision of bachelor and master students: has not done

OTHERS

Results since 2010

1. Co-author of chapter in the monograph:

Gregorauskienė V., Taraškevičius R., Kadūnas V., Radzevičius A., **Zinkutė R.** 2011. Geochemical characteristics of Lithuanian urban areas (chapter 23). In: C. C. Johnson, A. Demetriades, J. Locutura and R.T.Ottesen (eds). *Mapping the chemical environment of urban areas.* 393–409. Chichester, UK: JohnWiley & Sons.

2. *Scientific popularisation articles:*

Taraškevičius R., **Zinkutė R.** 2020. Arsenas ir kiti galimai pavojingi elementai kai kuriose kvartero nuogulose. – *Geologijos akiračiai*, 1–2: 9–12. ISSN 1392–0006.

Taraškevičius R., **Zinkutė R.**, Gedminienė, L. 2019. Galimai pavojingi cheminiai elementai Vilniuje – interkoreliacijų paieškos. *Geologijos akiračiai*, 3–4, 6–9. ISSN 1392–0006.

3. Expert in Technical Committee 36 “Environmental Protection” in Lithuanian Standards Board.

Results before 2010

1. Together with V. Kadūnas, V. Gregorauskienė, V. Katinas and A. Radzevičius was awarded by Lithuanian Science Prize 2005 for the cycle of atlases “Geochemical evaluation of surface sediments in Lithuania” (1993–2004), as co-author of two atlases and interpreter of “Geochemical Atlas of Panevėžys County”.

Kadūnas V., Budavičius R., Katinas V., Kliaugienė E., Radzevičius A., **Zinkutė R.** 2001. Mažeikių rajono geocheminis atlasas = Geochemical atlas of Mažeikiai district. Mažeikių rajono savivaldybė, Geologijos institutas. Vilnius–Mažeikiai. 87 p.: 6 tables, 29 maps (in Lithuanian and English).

Radzevičius A., Budavičius R., Kadūnas V., Katinas V., **Zinkutė R.**, Tverkutė Z. 1997. Panevėžio miesto geocheminis atlasas = Geochemical Atlas of Panevėžys. M 1:25000. Geologijos institutas, Panevėžio miesto savivaldybės ekologijos skyrius Vilnius-Panevėžys. 18 p.: 7 tables + 25 maps (in Lithuanian and English).

2. Monograph based on material of doctoral dissertation.

Zinkutė R. 2002. Trace element technogenous associations in topsoil of urbanised territories of Lithuania. Institute of Geology and Geography, Vilnius. 200 p., 50 fig., 72 tables, 138 references, in English, summary in Lithuanian.

3. Member of Lithuanian Metalecology Society, member of organising committee of three international conferences “Metals in the Environment”.
<https://link.springer.com/article/10.1065/espr2006.05.307#citeas>.