

# Rimantas Petrošius

## CONTACT INFORMATION

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## EDUCATION AND ACADEMIC DEGREE

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1986–1990 Lithuanian Geological Research Institute, Vilnius; Scientific Research Institute of Hydrogeology and Engineering Geology (VSEGINGEO) Institute, Moscow, Russia. Doctor degree of technical sciences (Ph.D. in natural sciences) Thesis "Methodology of tritium research in Quaternary groundwater of the Baltic Highlands". Area of research – geology, hydrogeology.  
1971–1976 Vilnius University, Faculty of Physics, engineer radiophysicist.

## PROFESSIONAL EXPERIENCE

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2010–until now Senior researcher  
Institute of Geology and Geography of the Nature Research Center,  
Laboratory of Radioisotope Investigation (at present – Laboratory of Nuclear Geophysics and Radioecology)  
2003–2009 Senior researcher  
Institute of Geology and Geography, Laboratory of Radioisotope Investigation  
1991–2003 Senior researcher  
Lithuanian Geological Research Institute  
1990–1991 Researcher  
Lithuanian Geological Research Institute  
1978–1990 Engineer, senior engineer  
Lithuanian Geological Research Institute  
1976–1978 Engineer  
Vilnius construction bureau "Venta"

## RESEARCH INTERESTS

Research areas: environmental radioactivity measurement methods, radioecology, radiation safety, isotope hydrology, application of mathematical modeling methods in radioecology and isotope hydrology, Earth's fields and their influence on organisms.

## PUBLICATIONS

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

1. Jefanova, O., Mažeika, J., **Petrošius, R.**, Skuratovič, Ž., Paškauskas, R., Martma, T., Liblik, T., & Ezhova, E. (2020). Baltic Sea water tritium and stable isotopes in 2016–2017. *Isotopes in Environmental and Health Studies*, 56(2).  
<https://doi.org/10.1080/10256016.2020.1715969>

2. Jefanova, O., Baužienė, I., Lujanienė, G., Švedienė, J., Raudonienė, V., Bridžiuviene, D., Paškevičius, A., Levinskaitė, L., Žvirgždas, J., **Petrošius, R.**, Skuratovič, Ž., & Mažeika, J. (2020). Initiation of radioecological monitoring of forest soils and plants at the Lithuanian border region before the start of the Belarusian nuclear power plant operation. *Environmental Monitoring and Assessment*, 192 (10). <https://doi.org/10.1007/s10661-020-08638-y>
3. Jefanova, O., Mažeika, J., **Petrošius, R.**, & Skuratovič, Ž. (2018). The distribution of tritium in aquatic environments, Lithuania. *Journal of Environmental Radioactivity*, 188, 11-17. DOI: 10.1016/j.jenvrad.2017.11.028 Published JAN 2018. IF 2.38 / Q2 ENVIRONMENTAL SCIENCES
4. Mikalauskienė, R., Mažeika, J., **Petrošius, R.**, Szwarczewski, P. (2018). Comparison of beta (LSC) and gamma (HPGE) spectrometric methods for lead-210 in chronological study. *Geochronometria*, 45, 34-43. DOI 10.1515/geochr-2015-0084 Published Online: JAN 2018. IF 0.723 / Q4 GEOSCIENCES, MULTIDISCIPLINARY / Q4 PALEONTOLOGY
5. Marčiulionienė, D., Lukšienė, B., Montvydienė, D., Jefanova, O., Mažeika, J., Taraškevičius, R., Stakėnienė, R., **Petrošius, R.**, Maceika, E., Tarasiuk, N., Žukauskaitė, Z., Kazakevičiūtė, L., Volkova, M. (2017). Cs-137 and plutonium isotopes accumulation/retention in bottom sediments and soil in Lithuania: A case study of the activity concentration of anthropogenic radionuclides and their provenance before the start of operation of the Belarusian Nuclear Power Plant (NPP). *Journal of Environmental Radioactivity*, 178, 253-264. DOI: 10.1016/j.jenvrad.2017.07.024 Published: NOV 2017. IF 2.31 / Q2 ENVIRONMENTAL SCIENCES

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

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

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

**Petrošius R.**, Šliaupa S., Dapšys K., Krupickas R., Žukauskas G. 2010. The possible influence of the "black spots" on the road accidents in Vilnius region. – *Sveikatos mokslai*. 20(2), 2923–2928.

**Reviewed scientific articles, published in Lithuania:**

1. **Petrošius R.**, Morkūnaitė R., Baubiniene A., Radžiūnienė J. 2019. Aspects of biogeophysical environmental research in Pavilniai regional park at the Pūčkoriai outcrop. – *Geologijos akiračiai*. 1-2, 16–23. (In Lithuanian)
2. **Petrošius R.** 2014. Unseen side of Devil Hole – anomalies of Earth's Fields? – *Geologijos akiračiai*. 3, 16–26. (In Lithuanian)

**PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS**

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2018–2020	Researcher. Project from Lithuanian agency of science, innovation and technology “Innovative multifunctional biotextile integrated with silicon dioxide and succinate development and its impact on bio systems” (IFSITEX), Partners: Nature Research Centre and University of Latvia
2012–2014	Researcher. Project from Research Council of Lithuania “Expansion of palaeovegetation in the context of the postglacial ecosystem dynamics in the eastern Baltic region“
2010–2011	Researcher. Project from Research Council of Lithuania „Cyclicality, dynamics and models of palaeoenvironmental changes during Quaternary warm periods“

## INTERNSHIP AND TRAINING

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2003, 2009, 2015, 2021 2006	Training courses according to the radiation safety periodical training program of the person responsible for radiation safety. Vilnius Energetic Training Center. Training courses “Integrating site characteristics into a near field and host rock transport model: conceptual model building, scoping calculations and the role of modelling in optimising site investigations” in Belgian Nuclear Research Centre. (SCK/CEN).
2002	Fellowship according international project (IAEA. Lit/9/005) „Tritium and Radiocarbon Transfer from Stack Release from the Ignalina NPP“, Atomic Energy Research Institute (KFKI), Budapest, Hungary.
2000	Fellowship „Process studies, modeling and dose calculation related to dispersion and transfer of radionuclides in the marine environment, RISOE National Laboratory“, Denmark.
1996	„Interregional Training Course on Isotope Applications for Analyses of Flow and transport Dynamics in Hydrological Systems“, IAEA, Wien, Austria.

## PARTICIPATION IN SCIENTIFIC CONFERENCES

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### International scientific conferences:

1. Mažeika J., Jefanova O., **Petrošius R.**, Skuratovič Ž., Lujanienė G. 2021. C-14 and other radionuclides in the environment at the Lithuanian border region before the start of the Belarusian nuclear power plant operation. – *3rd International Radiocarbon in the Environment Conference 5–9 July 2021, Gliwice, Poland*. Book of Abstracts. P 103.
2. Butkauskas D., Grauda D., Miķelsone A., Rašals D., **Petrošius R.**, Kazlauskaitė K. 2021. Experimental evidence of the impact of low-frequency electromagnetic field on the reproductive success of fruit fly *Drosophila melanogaster* and its potential to generate new point mutations at some candidate genes. – *79th International Scientific Conference of the University of Latvia, Innovative and applied research in Biology*, Proceedings, Volume 3, Riga, 2021. <https://doi.org/10.22364/iarb.2021.05>
3. Baubiniene A., Morkunaite R., Godiene G., Vaitkevicius G., **Petrosius R.** 2019. The Parallels And Co-Influence Of Historic Changes Of Hydrographic Network And Urban Structure In Vilnius Old City *13rd International Conference „Smart Bio“ 02-04 May 2019 Kaunas, Lithuania*. Abstract book. P 238.
4. Petrošius R. 2017. Investigation of Aukštadvaris Devil’s Hole by biogeophysical method. – *Earth’s Fields and their Influence on Organisms: Abstracts and materials of the International Conference at Birštonas, June 15–18, 2017*. P. 102–109.
5. Jefanova O., Mažeika J., **Petrošius R.**, Paškauskas R. 2017. Tritium in surface waters of Baltic, North and Norwegian Seas in 2016. – *4 th International Conference on Environmental*

*Radioactivity: Radionuclides as Tracers of Environmental Processes 29 May – 2 June 2017 Vilnius, Lithuania*. Book of abstracts. P. 138.

6. Jefanova O., Mažeika J., **Petrošius R.**, Skuratovič Ž. 2017. The distribution of tritium in the aquatic environments, Lithuania. – *4 th International Conference on Environmental Radioactivity: Radionuclides as Tracers of Environmental Processes 29 May – 2 June 2017 Vilnius, Lithuania*. Book of abstracts. P. 220.

#### **National scientific conferences:**

1. Mažeika J., Petrošius R., Skuratovič Ž., Jefanova O., Paškauskas R., Martma T., Liblik T., Ezhova E. 2019. Tritium and stable isotopes in water of Baltic Sea in 2016–2017. – *Sea and coastal research 2019*. Conference materials. Marine Research Institute of Klaipėda University. 2019. P. 125–128. (in Lithuanian)