

Olga Jefanova

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

2012 – 2016 PhD study of Biology (01B) was carried out at Nature Research Centre, the Laboratory of Nuclear Geophysics and Radioecology. Doctoral study granted to Vytautas Magnus University, Nature Research Centre, Innovative Medicine Centre, Agder University, and Latvian University for Decision No. 5-19.
Doctor of biomedical sciences degree since 2016 November 18. The theme of dissertation – The Distribution of Artificial Radionuclides in different Components of Aquatic and Terrestrial Ecosystem under Various Environmental Conditions. Scientific supervisor – habil. dr. E.D. Marčiulionienė; Scientific consultant – prof. habil. dr. J. Mažeika.

2006 – 2008 Master study of Ecology and Environmental Studies, Environmental Studies and Management (62103B103) at Vilnius University. Master's degree thesis – Developing Environmental Action Plan of the Ginučiai Oak-Wood. Scientific supervisor – dr. P. Mierauskas.

2002 – 2006 Bachelor study of Ecology and Environmental Studies, Ecology (61203B106) at Vilnius University. Bachelor's degree thesis – The Analysis of Publication of Scientists from the Former USSR in the Field of Ecosystem's Evolution. Scientific supervisor – habil. dr. E. Lekevičius.

PROFESSIONAL EXPERIENCE

2017 – till now Researcher at Nature Research Centre (Laboratory of Nuclear Geophysics and Radioecology);

2013 – 2017 Biologist at Nature Research Centre (Laboratory of Nuclear Geophysics and Radioecology);

2008 – 2011 Junior Researcher at Institute of Botany (Laboratory of Radioecology);

2008 02 – 2008 10 Laboratory assistant at Institute of Botany (Laboratory of Radioecology).

RESEARCH INTERESTS

Radioecology, ecology, environmental sciences

PUBLICATIONS

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

1. Mažeika J., **Jefanova O.**, Petrošius R., Lujanienė G., Skuratovič. **2022.** ¹⁴C and other Radionuclides in the Environment in the Border Region of Lithuania before the Start of the

- Belarusian Nuclear Power Plant Operation. *Radiocarbon*, online publication first view, pp. 1-14. Doi: <https://doi.org/10.1017/RDC.2022.20> ;
2. **Jefanova O.**, Bauziene I., Lujaniene G., Svediene J., Raudoniene V., Bridziuviene D., Paskevicius A., Levinskaite L., Zvirgzdas J., Petrosius R., Skuratovic Z., Mazeika 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*, 193 (10): 666; doi: 10.1007/s10661-020-08638-y;
 3. **Jefanova O.**, Mazeika J., Petrosius R., Skuratovic Z., Paskauskas 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):193-204; doi: 10.1080/10256016.2020.1715969;
 4. Bariseviciute R., Maceika E., Ezerinskis Z., Mazeika J., Butkus L., Sapolaite J., Garbaras A., Paskauskas R., **Jefanova O.**, Karosiene J., Kasperoviciene J., Remeikis V. 2019. Tracing carbon isotope variations in lake sediments caused by environmental factors during the past century: a case study of lake Tapeliai, Lithuania. *Radiocarbon*, 61 (4); 885-903; doi: 10.1017/RDC.2019.63;
 5. **Jefanova O.**, Mazeika J., Petrosius R., Skuratovic Z. **2018**. The distribution of tritium in aquatic environments, Lithuania. *Journal of Environmental Radioactivity*, 188: 11-17; doi: 10.1016/j.jenvrad.2017.11.028;
 6. Marciulioniene D., Luksiene B., Montvydiene D., **Jefanova O.**, Mazeika J., Taraskevicius R., Stakeniene R., Petrosius R., Maceika E., Tarasiuk N., Zukauskaite Z., Kazakeviciute 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;
 7. Mazeika J., Marciulioniene D., Nedveckaite T., **Jefanova O.** **2016**. The assessment of ionising radiation impact on the cooling pond freshwater ecosystem non-human biota from the Ignalina NPP operation beginning to shut down and initial decommissioning. *Journal of Environmental Radioactivity*. 151: 28-37; doi: 10.1016/j.jenvrad.2015.09.009;
 8. Marciulioniene D., Luksiene B., **Jefanova O.** **2015**. Accumulation and translocation peculiarities of ¹³⁷Cs and ⁴⁰K in the soil-plant system. *Journal of Environmental Radioactivity*. 150: 86-92; doi: 10.1016/j.jenvrad.2015.07.012;
 9. Marciulioniene E. D., Montvydiene D., Svecevicius G., Taraskevicius R., Kazlauskienė N., **Jefanova O.** **2015**. Heavy metal migration from closed landfill in the water, bottom sediments and macrophytes of neighboring aquatic ecosystem. *Fresenius Environmental Bulletin*. 24 (10): 3371-3380;
 10. Marciulioniene D., Mazeika J., Luksiene B., **Jefanova O.**, Mikalauskiene R., Paskauskas R. **2015**. Anthropogenic radionuclide fluxes and distribution in bottom sediments of the cooling basin of Ignalina Nuclear Power Plant. *Journal of Environmental Radioactivity*. 145: 48-57; doi: 10.1016/j.jenvrad.2015.03.007.

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

1. **Jefanova O.**, Marčiulionienė E.D., Montvydienė D., Žukauskaitė Z., Lukšienė B., Mažeika J. **2017**. The ecotoxicological impact of the nuclear facilities' effluent and Cs-137 on the test organism *Lepidium sativum*. *RAD Conference Proceedings, vol. 2, pp. 115-120, 2017. www.rad-proceedings.org. Proceeding of 5th international conference on radiation and applications in various fields of research. 12-16 June 2017, Budva, Montenegro. doi: 10.21175/RadProc.2017.24, www.prieiga.internetė <https://www.rad-proceedings.org/proceedings.php?id=2> ;*

2. Mikalauskienė R., Mažeika J., **Jefanova O.**, Szwarczewski P. **2015**. INVESTIGATION OF LEAD-210 AND CAESIUM-137 CHRONOLOGY OF LACUSTRINE SEDIMENTATION. *Proceedings Third International Conference on Radiation and Applications in Various Fields of Research, June 8-12, 2015, Slovenska Plaza/Budva/Montenegro, www.rad-conference.org*, pp. 307-312;
3. Marčiulionienė E. D., **Jefanova O.**, Sakalauskas V., Sevriukova O. **2015**. THE ACCUMULATION PROCESS OF ^{137}Cs AND ^{90}Sr IN THE CELL OF *NITELLOPSIS OBTUSA* ALGAE. *Proceedings Third International Conference on Radiation and Applications in Various Fields of Research, June 8-12, 2015, Slovenska Plaza/Budva/Montenegro, www.rad-conference.org*, pp. 269-274;
4. Montvydienė D., Marčiulionienė D., Kazlauskienė N., Svecevičius G., **Jefanova O.**, Zita Žukauskaitė. **2014**. Impact of closed Kairiai landfill on the Ginkūnai Pond, Lithuania. *The 9th International Conference „ENVIRONMENTAL ENGINEERING“ 22-23 May 2014, Vilnius, Lithuania SELECTED PAPERS. Article number: enviro.2014.038*. Available online at <http://enviro.vgtu.lt>

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

1. Marčiulionienė D., Lukšienė B., Montvydienė D., Sakalauskas V., Sevriukova O., Druteikienė R., **Jefanova O.**, Žukauskaitė Z. **2017**. Radiocesium Phytotoxicity to Single Cell and Higher Plants. In eds. Gupta D.K., Walther C. *Impact of Cesium on Plants and the Environment*. Netherlands, Springer. ISBN 978-3-319-41524-6. DOI: 10.1007/978-3-319-41525-3_12 pp. 209-230;
2. Marčiulionienė D., Mažeika J., Paškauskas R., **Jefanova O.** **2014**: Specific patterns of ^{137}Cs , ^{60}Co , and ^{54}Mn accumulation by macrophytes and bottom sediments. *Zoology and Ecology. Special Issue: Transformation in Lake Drūkšiai ecosystem upon Ignalina Nuclear Power Plant decommissioning. Guest Editors: V.Kesminas and V.M.Baichorov*. 24 (2): 168-177.

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

1. Romanenko V., Lujanienė G., Šemčuk S., Mažeika J., **Jefanova O.** **2022**. Assessment of radionuclide input into the Curonian Lagoon by suspended matter. *Book of abstracts 10th Jubilee International Conference on Radiation and Applications in Various Fields of Research, July 25-29, 2022, Herceg Novi/Montenegro, www.rad-conference.org*, p. 117. Doi: <https://doi.org/10.21175/rad.sum.abstr.book.2022.27.8> ;
2. Мажейка Й., **Ефанова О.**, Петрошюс Р. **2021**. Результаты радиоэкологических исследований в 30-км зоне снятой с эксплуатации Игналинской АЭС. Радиоактивность и радиоактивные элементы в среде обитания человека: материалы VI Международной конференции (Томск, 20–24 сентября 2021 г.). В 2 томах. Том 1 / Томский политехнический университет. – Томск : Изд-во Томского политехнического университета, 2021. – с. 316-320;
3. Mažeika J., Petrošius R., Skuratovič Ž., **Jefanova O.**, Paškauskas R., Martma T., Liblik T., Ezhova E. **2019**. Tritis ir vandens stabilūs izotopai Baltijos jūroje 2016-2017 metais. Konferencijos medžiaga 12-osios mokslinės-praktinės konferencijos „Jūros ir krantų tyrimai 2019“, vykusios 2019 metų gegužės 9-10 dienomis Klaipėdoje. pp.125-128; ISSN 2538-7243;
4. Мажейка Й., Битинас А., Шварчевский П., Пятрошюс Р., Скуратович Ж., **Ефанова О.**, Пашкаускас Р. **2019**. Развитие дельты реки Неман на основе радиоуглеродного датирования. Тезисы докладов Всероссийской научной конференции (с международным участием) «Геохронология четвертичного периода:

- инструментальные методы датирования новейших отожений», посвященной 90-летию со дня рождения Л.Д. Сулержицкого, Москва 24-26 апреля 2019 года, 58 стр;
5. Мажейка Й., Пятрошюс Р., Скуратович Ж., **Ефанова О.** 2018. Тритий в окружающей среде Игналинской АЭС за период её эксплуатации. *Региональная экология*, 1 (51): 20-30; doi: 10.30694/1026-5600-2018-1-20-30;
 6. **Jefanova O.**, Mažeika J., Petrošius R., Paškauskas R. 2017. Tritium in surface waters of Baltic, North and Norwegian Seas in 2016. *Proceedings of the 4th International Conference on Environmental Radioactivity ENVIRA2017: Radionuclides as Tracers of Environmental Processes*, 29 May-2 June 2017, Vilnius, Lithuania, 300 pp. Editors: Lujanienė G., Povinac P.P. pp. 91-92; ISBN: 978-609-95511-4-2;
 7. **Jefanova O.**, Marčiulionienė E.D., Vilimaitė-Šilobritienė B., Mažeika J. 2017. Cs-137 and K-40 distribution in the Neris River basin, Lithuania. *Proceedings of the 4th International Conference on Environmental Radioactivity ENVIRA2017: Radionuclides as Tracers of Environmental Processes*, 29 May-2 June 2017, Vilnius, Lithuania, 300 pp. Editors: Lujanienė G., Povinac P.P. pp. 93-97; ISBN: 978-609-95511-4-2;
 8. **Jefanova O.**, Mažeika J., Petrošius R., Visakavičius E., Paškauskas R. 2017. Konferencijos medžiaga 10-osios mokslinės-praktinės konferencijos „Jūros ir krantų tyrimai 2017“, vykusių 2017 metų balandžio 26-28 dienomis Palangoje. pp.169-173;
 9. Marčiulionienė E.D., **Jefanova O.**, Sakalauskas V., Sevriukova O. 2016. The accumulation process of ^{137}Cs and ^{90}Sr in the cell of *Nitellopsis obtusa* algae. *Radiation & Applications*. 1(2): 128-132;
 10. Žukauskaitė Z., Lukšienė B., **Jefanova O.** 2016. Investigation of Pu(III) sorption by minerals (Wustite/magnetite and hematite) and soil from aquatic solutions using Am(III) as an analogue. *Book of abstracts Fourth International Conference on Radiation and Applications in Various Fields of Research, May 23-27, Niš, Serbia, www.rad-conference.org*. pp. 383;
 11. **Jefanova O.**, Mažeika J., Marčiulionienė E.D., Nedveckaitė T. 2015. Jonizuojančios spindulių poveikio Ignalinos AE baseino-aušintuvo biotai vertinimas naudojant ERICA 1.2. 2015 m. Jaunųjų mokslininkų konferencijos "BIOATEITIS: gamtos ir gyvybės mokslų perspektyvos" pranešimų santrauka. p. 2.;
 12. Марчюленене Е. Д., Лукшене Б., **Ефанова О.**, Монтвидене Д. 2014. Биологическое действие ^{137}Cs и ^{90}Sr на растения – тесторганизмы. *Радиобиология: антропогенные излучения: материалы междунар. науч. конф. (г. Гомель, 25-26 сент. 2014 г.) / Национальная Академия наук Беларуси, Институт радиобиологии; ред. Кол.: А.Д. Наумов (гл. ред.) [и др.]. – Минск: Институт радиобиологии, 2014. – 122-124 с.;*
 13. **Jefanova O.**, Marciulioniene E. D., Luksiene B. 2014. The Spread of ^{137}Cs in Terrestrial Ecosystems of the Ignalina NPP and other Lithuanian Regions. *Research Journal of Chemistry and Environment*. 18 (1): 1-6;
 14. **Ефанова О.**, Марчюленене Е. Д., Мажейка Й. 2013. Вертикальное распределение ^{137}Cs и ^{60}Co в донных отложениях оз. Друкшяй – водоеме-охладителе Игналинской АЭС. *Геохимия живого вещества: материалы Международной молодежной школы-семинара (Томск, 2-5 июня 2013 г.); Томский политехнический университет. – Томск: Изд-во Томского политехнического университета. 134-136 с.;*
 15. Марчюленене Е. Д., **Ефанова О.**, Мажейка Й. 2013. Оценка радиоэкологической ситуации в водоеме-охладителе Игналинской АЭС после ее закрытия. *Радиоактивность и радиоактивные элементы в среде обитания человека: материалы IV Международной конференции (Томск, 4-8 июня 2013 г.); Томский политехнический университет. – Томск: Изд-во Томского политехнического университета. 341-345 с.;*
 16. Марчюленене Е. Д., **Ефанова О.**, Мажейка Й. 2013. Распределение радионуклидов между донными отложениями и водными растениями в водоеме-охладителе Игналинской АЭС. *Биогеохимия и биохимия микроэлементов в условиях техногенеза*

- биосферы: *Материалы VIII международной Биогеохимической Школы, посвященной 150-летию со дня рождения академика В. И. Вернадского.* – М.: ГЕОХИ РАН. 71-74 с.;
17. **Ефанова О. В.**, Марчюленене Д. **2013.** Аккумуляция радионуклидов моллюсками *Dreissena polymorpha*. *Радиация, экология и техносфера: материалы междунар. Науч. Конф.* – Минск: Ин-т радиологии. 61-64 с.;
 18. Marciulioniene D., Montvydiene D., Kazlauskienė N., **Jefanova O.** **2013.** INFLUENCE OF CHEMICAL AND THERMAL POLLUTION ON RADIONUCLIDE AND HEAVY METAL ACCUMULATION IN PLANTS. *Радиация, экология и техносфера: материалы междунар. Науч. Конф.* – Минск: Ин-т радиологии. 98-100 с.;
 19. Марчюлионене Е. Д., **Ефанова О.**, Гудялене И. **2012.** Оценка радиэкологической ситуации в техногенных и естественных ландшафтах Литвы биоиндикационным методом. *Тяжелые металлы и радионуклиды в окружающей среде. Материалы VII Международной научно-практической конференции. Семипалатинский государственный педагогический институт, 4 – 8 октября 2012 года. Т. II.* – Семей: 515-522.;
 20. Gudeliene I., **Jefanova O.** **2009.** ⁹⁰Sr akumuliacija Ignalinos AE regiono sausumos augaluose ir Drūkšių ežero makrofituose 2007-2008 m. *Visuomenės sveikata*, 3(46): 23-27;
 21. Gudeliene I., Marčiulionienė D., **Jefanova O.** **2009.** Peculiarities of ⁹⁰Sr distribution in hydroecosystem. *Проблемы биохимии и геохимической экологии (Семипалатинский государственный педагогический институт)*. 11(3):16-20.;
 22. Gudeliene I., Marčiulionienė D., **Jefanova O.** **2009.** Peculiarities of ⁹⁰Sr distribution in hydroecosystem. *Radioactivity and radioactive elements in environment (Proceedings of III international conference)*. Tomsk: 709-711.

Reviewed scientific articles, published in Lithuania:

1. Montvydienė D., Marčiulionienė D., Volkova M., Paškauskas R., Mažeika J., **Jefanova O.** **2016.** ¹³⁷Cs ir ⁴⁰K akumuliacija ir pernaša sistemoje Nemuno upė - užliejamosios pievos - Kuršių marios. *Visuomenės sveikata*. priedas Nr. 1: 25-28;
2. **Jefanova O.**, Marčiulionienė E.D., Mažeika J., Paškauskas R., Montvydienė D., Volkova M., Stakienienė R., Kazbaris M., Lubienė I., Misevičiūtė I., Mockutė A. **2014.** ACCUMULATION AND DISTRIBUTION OF ¹³⁷CS AND ⁴⁰K IN SOIL, SEDIMENT AND MACROPHYTES OF THE NEMUNAS RIVER AND THE CURONIAN LAGOON SYSTEM. *Technologijos mokslo darbai Vakarų Lietuvoje*. 9; 91-94;
3. **Jefanova O.**, Marčiulionienė E. D., Lukšienė B., Gudelis A., Mažeika J. **2012.** ¹³⁷Cs sklaidos aplinkoje įvertinimas, naudojant samanas kaip rodiklį. *Visuomenės sveikata*. priedas Nr.2: 52-56;

PARTICIPATION IN SCIENTIFIC CONFERENCES (2017-2021 YEARS PERIOD)

International scientific conferences:

1. 20th-24th September 2021. Online participation at “VI international conference Radioactivity and Radioactive Elements in Environment”, Tomsk, Russia. Oral presentation “Results of radioecological’s investigations in 30-km zone of the decommissioned Ignalina NPP”. <https://portal.tpu.ru/science/konf/radioactivity/eng>
2. 5th-9th July 2021. Online participation at “3rd International Conference Radiocarbon in the Environment”, Gliwica, Poland. Three poster presentations (1) “Record of environmental changes in the sediments filling the oxbow lakes (on selected examples from Vistula and Bug river valleys”); 2) “C-14 and other radionuclides in the environment at the Lithuanian border region before the start of the Belarusian nuclear power plant operation”; 3) “Reconstruction of the Nemunas delta development on the base of sedimentological,

geophysical or topographical data and radiocarbon dating”) were presented. <https://c14env.polsl.pl/>

3. 8th-13th September 2019. Participation at “5th International Conference on Environmental Radioactivity ENVIRA2019: Variations of Environmental Radionuclides”, Prague, Czech republic. Oral presentation “Initial radioecological and environmental state of Lithuanian transboundary area before the start of the operation of the NPP in Belarus” was presented. <https://www.envira2019.cz/>
4. 29th May – 2nd June 2017. Participation at “4th International Conference on Environmental Radioactivity ENVIRA2017: Radionuclides as Tracers of Environmental Processes”, Vilnius, Lithuania. One oral (“Cs-137 and K-40 distribution in the Neris River basin”) and two poster (1) “Tritium in surface waters of Baltic, North and Norwegian Seas in 2016”; 2) “The distribution of tritium in the aquatic environments, Lithuania”) presentations were presented. <http://envira2017.ftmc.lt/>

National scientific conferences:

26th-28th April 2017. Participation at “10th national conference on Marine Sciences and Technology “Investigations of the Baltic sea's Coasts and Waters Area 2017””. Poster presentation “Variations of tritium concentrations in the top layers water horisonts in the north Atlantic ocean’s seas” (in Lithuanian “Tričio koncentracijų variacijos šiaurės Atlanto jūrų paviršiniuose vandens horizontuose”) was presented. <http://apc.ku.lt/krantai2017/>

PARTICIPATION IN THE STUDY PROCESS

Supervision of bachelor students:

Dominyka Švedaitė	Bachelor’s degree thesis – Radionuclides in the Ecosystem of the river Neris before and after the Commissioning of the Belarusian NPP. Vilnius Gediminas Technical University, Bioengineering study (612J76001).	2021 – 2022
Monika Palaimaitė	Bachelor’s degree thesis – The vertical distribution of Cs-137 radionuclide in central Lithuania in forest’s ecosystem case. Vilnius University, Biology (6121DX003).	2022 –