

PERSONAL INFORMATION

Iordache Virgil Alexandru



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Sex M | Date of birth 10/03/1969 | Nationality Romanian

PRESENT OCCUPATION

2020 - Associate Professor of Ecology and Sustainability Science at the University of Bucharest

2010 - Director of the Research Centre for Ecological Services of the University of Bucharest.

2007 - Senior Scientist at the Research Centre for Ecological Services of the University of Bucharest.

WORK EXPERIENCE

from 1994 to 2024

1995 - 2007 Junior teaching positions at the University of Bucharest, 1995 - 2007 Junior Scientist at the University of Bucharest, 2007 -2020 Assistant Professor at the University of Bucharest, May 2020 – June 2024 Member of the National Council for Research Ethics in Science, May 2020 – November 2025 National Research and Development Institute for Industrial Ecology board member

Business or sector: Research and education

EDUCATION AND TRAINING

1988 - 1993

BSc and MSc in Biochemistry

1995 – 2003

PhD in Ecology, a book based on the thesis is available at [http://www.cesec.ro/pdf/Ecotoxicologie\\_2009min.pdf](http://www.cesec.ro/pdf/Ecotoxicologie_2009min.pdf)

Replace with EQF (or other) level if relevant.

1991 (interrupted in 1995) – 2004

BSc in moral and political Philosophy

2024 -

Habilitation thesis available at <https://zenodo.org/records/13684356>

Other

2024 Training Workshop "Safeguarding University Technology Transfer and Intellectual Property Security" organized by Health Security Partners  
 2010 Diplomas in Research and Financial Management in universities, UEFISCDI,  
 2010 Diploma in Project Management as a second profession recognized by the Ministry of Labour, Romania,  
 2007 One-month DAAD stage in bio-geo-interactions and remediation of mining areas at Friedrich-Schiller University of Jena, Germany  
 1998 Two-week summer school for Functional Analyses of Wetlands, University of Gent, Belgium, EC DGXII, 1996 One-month specialization in biogeochemistry and ecotoxicology, Universidad Complutense, Madrid, Spain, TEMPUS

1995 Two weeks specialization in methods for studying fluvial systems, CNRS Toulouse and Université de Rennes 1, France, in the frame of EC DGXII project ERMAS 1  
 1993 Postgraduate stage of 6 months in Ecotoxicology at Vrije Universiteit of Brussel, Belgium, TEMPUS (Dissertation written and defended in French)  
 1993 Diploma in Fundraising and project writing, Environmental Training Program, US-AID, Bucharest, Romania.

**PERSONAL SKILLS**

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	B2	B2
	Replace with the name of the language certificate. Enter level if known.				
French	C1	C2	B2	B2	B2
	Replace with the name of the language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user  
Common European Framework of Reference for Languages

Communication skills Good oral and written communication skills as a result of teaching, research, and administrative activities

Organisational/managerial skills Formal education for research management at the project, center, and organization levels  
 Director of a research center from 2010  
 The total budget of coordinated national and international research projects is 2483405 Euro (for national project, Euro equivalent of Lei; Annex 1 includes the list of projects).  
 Member of the board of INCD ECOIND since 2020 (Annex 2 includes results)  
 Member of CNECSDTI between 2020 and 2024.

Job-related skills Excellent knowledge of interdisciplinary and transdisciplinary approaches in environmental teaching, research, management, and coordination.

Digital competence

	SELF-ASSESSMENT				
	Information processing	Communication	Content creation	Safety	Problem solving
	Proficient	Proficient	Independent	Basic	Basic

Levels: Basic user - Independent user - Proficient user  
Digital competences - Self-assessment grid

Other skills Opinion articles and analyses for research and education in mass media, popularisation of science in mass media.

Driving licence A, B

## ADDITIONAL INFORMATION

Scientific publications	<p><a href="https://orcid.org/0000-0001-7183-4617">https://orcid.org/0000-0001-7183-4617</a> <a href="https://www.webofscience.com/wos/author/record/L-9078-2013">https://www.webofscience.com/wos/author/record/L-9078-2013</a> Annex 3 includes a list of publications, submitted patents, and technological developments.</p>
Citations	<p>506 with Hirsch 14 on Web of Science, 518 with Hirsch 14 on Scopus, 1017 with Hirsch 17 on Google Scholar</p>
Impact on the economy and society	<p>Solutions for the institutional evolution of the organizations involved in the management of natural resources and for the securitization of the production of ecosystem services in the context of climate change. Article in the media <a href="#">here</a>.</p> <p>Tools and technologies for the integrated management of pollution sources in catchments with mining areas (details in Annex 3, Patents and published TRL2-4 technologies)</p>
Honours and awards	<p>2024-2025 Fulbright Visiting Scholar Award to the mentor <a href="#">Prof. Peter Groffman</a> (President of the Ecological Society of America starting from the 15<sup>th</sup> of Aug 2025). News on the Fulbright-Ro page <a href="#">here</a> and on the page of the University of Bucharest <a href="#">here</a>.</p> <p>2022 Senate Award of the University of Bucharest for the research project with the most significant <b>impact in society</b>, "Tools for modeling processes at the interface between water, soil, plants, and air to promote the sustainable management of groundwater-dependent ecosystems and their integrating river basins", <a href="https://interasparadulacatusu.com/">https://interasparadulacatusu.com/</a>. An interview after this award is available <a href="#">here</a> (in Romanian).</p> <p>2020 Senate Award of the University of Bucharest for a Springer chapter. An interview after this award is available <a href="#">here</a> (in Romanian).</p> <p>2011 Gheorghe Racoviță Award of the Romanian Academy for the book Iordache V., 2009, The ecotoxicology of heavy metals in the Small Island of Braila, Danube floodplain, Ed. Ars Docendi, București, ISBN 973-558-233-3 (in Romanian)</p>
Memberships	<p>British Ecological Society, Ecological Society of America, International Society for the History, Philosophy and Social Studies in Biology, Society for Ecological Restoration (member of the European Section, President-elect of the Board of Large-scale Ecosystem Restoration Section, <a href="https://chapter.ser.org/lers/meet-your-lers-leadership/">https://chapter.ser.org/lers/meet-your-lers-leadership/</a>), Society of Environmental Toxicology and Chemistry, Société Française d'Écologie et d'Évolution, Society of Conservation Biology</p>

## ANNEXES

## Annex 1 List of projects

Table 1: Coordinated projects.

No.	International	Role	Period
1	Hydraulic, Sedimentological, and Ecological Problems of Multifunctional Riparian Forest Management EC DG XII, NAS, 40000 Euro.	Responsible for the University of Bucharest	2002-2003
2	Assessment and Reduction of Heavy Metal Inputs into Agro-Ecosystems EC DG XII, NAS, 10000 Euro.	Responsible for UB	2002-2003
3	Decision support system for areas heavily polluted with metals (DEMOS), Marie-Curie European reintegration grant (of a former fellow at the University of Jena), EC-DGXII, 40000 Euro.	Director	2005-2006
<b>National</b>			
1	Modelarea matematică a rolului carbonului organic dizolvat în exportul de metale prin percolare în zone contaminate cu metale, CNCISIS, 19270 lei	Director	2006-2008
2	Consolidarea infrastructurii de cercetare pentru biogeochimia microelementelor – INFRABIM, ANCS Capacitati, 1999100 lei <a href="https://infrabim.cesec.ro/">https://infrabim.cesec.ro/</a>	Director	2007-2009
3	Bilantul metalelor grele in agrosistemele din Romania - METAGRO CNMP (PN2 – parteneriate), 666261 lei <a href="https://metagro.cesec.ro/">https://metagro.cesec.ro/</a>	Director	2008-2011
4	Accounting for the service providing units of plants in the environmental assessment of plans and projects with biogeochemical impact at multiple scales in river basins, ASPABIR, UEFISCDI, 1999500 lei <a href="https://aspabir.biogeochemistry.ro/">https://aspabir.biogeochemistry.ro/</a>	Director	2012-2011
5	Tools for modeling processes at the interface between water, soil, plants, and air to promote the sustainable management of groundwater-dependent ecosystems and their integrating river basins, INTER-ASPA, UEFISCDI, 5287500 lei <a href="https://interasparadulacatusu.com/">https://interasparadulacatusu.com/</a>	Deputy Director and responsible for UB	2018-2020

Table 2: Role in international research projects.

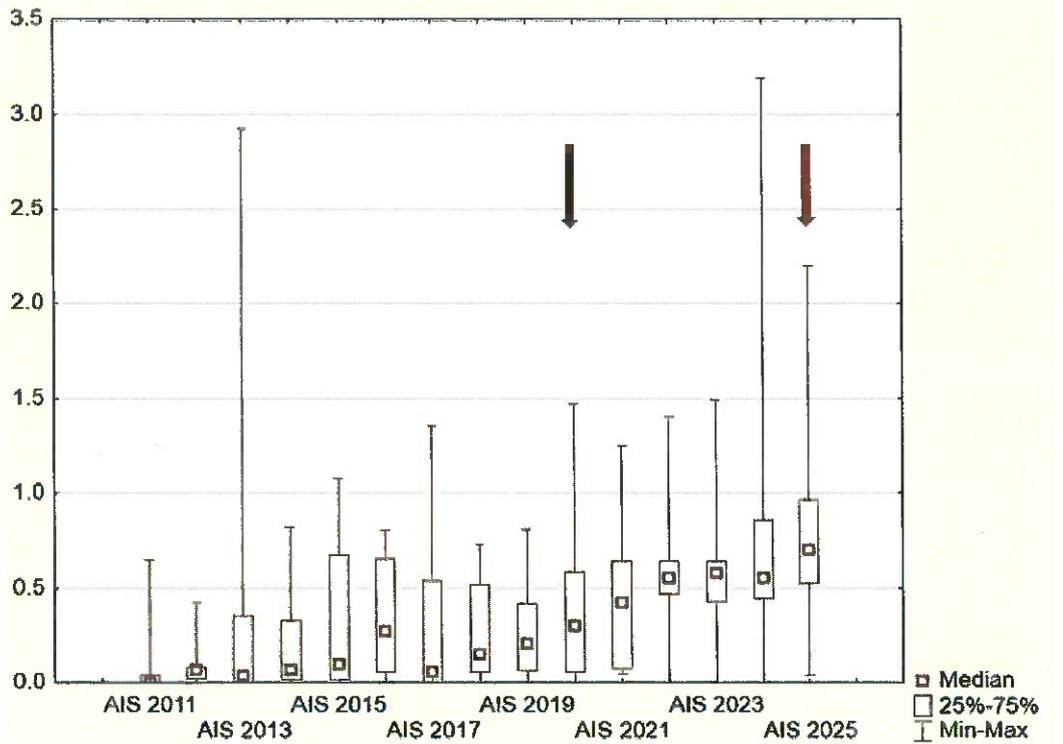
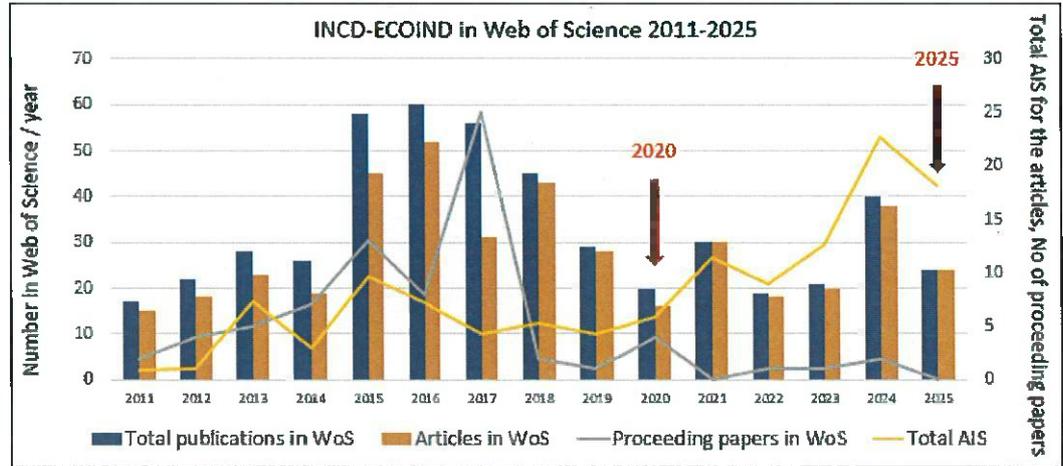
Role / Project No	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
In project writing								x	x	x	x
Project director								x	x	x	
Assistant manager		x	x			x					
Key person											x
Team member	x	x	x	x	x	x	x				

Legend of table 1: I1 = European River Margins 1 (ERMAS 1, 1994-1995, financier EC DG XII, protocol: N cycle). I2 = Functional analysis of European Wetland Ecosystems (FAEWE, 1995-1997, in consortium, financier EC DG XII, protocol: monitoring, denitrification), I3 = European River Margins 2 (ERMAS 2, 1997-1999, in consortium, financier EC DG XII, domain: N cycle), I4 Nutrient balance in Danube countries (1997 financier ECDGX1, case study heavy metals in the Danube Delta) I5 Integrating economic methods in the management of wetlands (ECOWET, 1998, financier DGXI, for the integration of functional analysis with the economic valuation methods)., I6 = Nitrogen control by landscape planning (NICOLAS, phase 1998-1999, EC DG XII, field monitoring), I7 European Valuation and Assessment tools supporting Wetland Ecosystem legislation (EVALUWET, 2001, EC DGXII, correlation of ecosystem services with social values) I8 Hydraulic, Sedimentological, and Ecological Problems of Multifunctional Riparian Forest Management EC DG XII, NAS, 2002-2003. I9 Assessment and Reduction of Heavy Metal Inputs into Agro-Ecosystems EC DG XII, NAS, 2002-2003, I10 Decision support system for areas heavily polluted with metals (DEMOS), Marie-Curie European reintegration grant (of a former fellow at the University of Jena), EC-DGXII, 2005-2006 I11 Using MicroBes for the REgulation of heavy metal mobility at ecosystem and landscape scale: an integrative approach for soil remediation by geobiological processes (UMBRELLA), FP7 collaborative project FP7-ENV-2008-1, no. 226870.

**Team member in other critical national projects**

- Theoretical and methodological foundations of the mathematical modeling of the dynamics of complex socio-ecological systems, cod CNCSIS 1028, Type A, project, 1028 (2006-2008, leader of the CESEC research group)
  - Coupling of Transgenic plants with mycorrhizal fungi for the remediation of heavy metals polluted areas (TITAN), CEEX Modul II, nr. 3183, Romanian Re-Integration Grants (RRG); (2005-2007).
  - The procedure of phytoremediation and evaluation of the risk in metal contaminated areas (FITORISC), contract PNII nr. 31-012/2007, Partnership, (2007-2010) <https://fitorisc.cesec.ro/>
  - Modeling key mechanisms involved in metals mobility in terrestrial areas and wetlands (MECOTER), contract PNII nr. 291, Ideas/2007, UEFISCDI, (2007-2010) <https://mecoter.cesec.ro/>
  - Tools for the Integrated Management of Mining Areas and River Basins (TIMMAR), contract nr. 98/2014, PNII UEFISCDI, (2014-2016) <https://timmar.biogeochemistry.ro/>
  - TRL 4 Remediation Eco-technology of tailing dams in function of geochemical, geomorphological and ecological SETting, PN-III-P2-2.1-PED-2019-2584, nr. 453/ 23rd October 2020 <https://resetbiogeochemistry.wordpress.com/>
  - Exploring the effects of heavy Metals and Temperature on the functional Traits space of grassland plants coupled to water mediated Elemental FLUXes, PN-III-P4-ID-PCE-2020-0494, nr. 156 /04.01.2021 <https://mettelflux.com/>
  - RESILIENCE AND STABILITY IN POLYCENTRIC GOVERNANCE SYSTEMS. THEORETICAL, EMPIRICAL AND APPLIED-LEVEL PERSPECTIVES (PolyGov), PN-III-P4-ID-PCE-2020-1076 // Contract PCE 215/2021 <https://polygov.wordpress.com/>
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Annex 2 The dynamic of the article influence scores of articles published by INCD-ECOIND in the period 2020-2025. The red lines indicate the start and the end of the role as board member.



## Annex 3 List of publications and open-access sets of data

**Books/Chapter in Books/Monographies (with ISBN)**

## International

1. Aligică Dragoș-Paul, Iordache Virgil, 2022, Comparative Economic Systems and the Issue of Resilience: Overview of the Classical Literature and Basic Problems of Conceptualization, The Routledge Handbook of Comparative Economic Systems, 130-150
2. Iordache Virgil, 2020, On the Possibility of Accelerating Succession by Manipulating Soil Microorganisms. In: Varma A., Tripathi S., Prasad R. (eds) Plant Microbiome Paradigm. Springer, 191-230 [https://doi.org/10.1007/978-3-030-50395-6\\_11](https://doi.org/10.1007/978-3-030-50395-6_11)
3. Neagoe Aurora, Iordache Virgil, and Erika Kothe, 2013, Upscaling the Biogeochemical Role of Arbuscular Mycorrhizal Fungi in Metal Mobility. In Goltapeh, Ebrahim Mohammadi; Danesh, Younes Rezaee; Varma, Ajit (eds.), Fungi as Bioremediators, pp. 285-312. Springer, ISBN 978-3-642-23326-5
4. Iordache Virgil, Lacatusu Radu, Daniel Scradeanu, Marilena Onete, Stelian Ion, Ioana Cobzaru, Aurora Neagoe, Florian Bodescu, Denisa Jianu, Dorina Purice, 2012, Contributions to the theoretical foundations of integrated modeling in biogeochemistry and their application in contaminated areas. In Kothe E., Varma A. (eds.), Biogeointeractions in contaminated soils, pp. 385-416, ISBN 978-3-642-23326-5
5. Jianu Denisa, Iordache Virgil, Barbara Soara, Lucian Petrescu, Aurora Neagoe, Cezar Iacob, Răzvan Orza. The Role of Mineralogy and Geochemistry in Hazard Potential Assessment of Mining Areas. In Kothe E., Varma A. (eds.), Biogeointeractions in contaminated soils, pp. 35-79. Springer, pp. 35-79, ISBN 978-3-642-23326-5
6. Neagoe Aurora, Iordache Virgil, Ileana Farcasanu. The Role of Organic Matter in the Mobility of Metals in Contaminated Sites. In Kothe E., Varma A. (eds.), Biogeointeractions in contaminated soils. Springer, pp. 297-325, ISBN 978-3-642-23326-5
7. Farcasanu Ileana, Matache Mihaela, Iordache Virgil, Aurora Neagoe, 2012, Hyperaccumulation: a Key to Heavy Metal Bioremediation. In Kothe E., Varma A. (eds.), Biogeointeractions in contaminated soils. Springer, 251-278, ISBN 978-3-642-23326-5
8. Iordache V., E. Kothe, A. Neagoe, F. Gherghel, 2011, A conceptual framework for up-scaling ecological processes and application to ectomycorrhizal fungi, in Rai M., Varma A. (ed.) Diversity and Biotechnology of Ectomycorrhiza, Springer, 255-299, ISBN 978-3-642-15196-5
9. Vadineanu, A., S. Cristofor, V. Iordache, 2001, Lower Danube River System biodiversity changes, In: B. Gopal, W. J. Junk and J. A. Davis (Eds), Biodiversity in Wetlands: Assessment, Function and Conservation, Backhuys Publishers, 29-63, ISBN 90-5782-059
10. Neagoe, A., Iordache, V., T. Altorfer. M. Anke, 2000, Die Spurenelemente Mangan, Zink, Kupfer und Molybdän in der Nahrungskett des Menschen eines teerbelasteten Lebensraumes (Rositz, Thüringen), Mengen-, Spuren- und Ultraspurenelemente in der Praventio, Wissenschaftliche Verlagsgesellschaft mbH Stuttgart, 135-146

## National

1. Iordache V., 2015, O explorare a fundamentelor eticii inter-personale, în Bălan M., Mureșan V, Etica în știință, religie și societate, Ed. Universității din București, 83-102
2. Iordache V., 2010, Reconstrucția obiectelor productive din "Originea Speciilor", in Mircea Flonta, Laurentiu Staicu, Virgil Iordache (eds.), 2010, Darwin și gândirea evoluționistă, Ed. Pelican, Giurgiu, 75-108, ISBN 978-973-1993-15-7
3. Iordache V., 2009, Ecotoxicologia metalelor în complexul de ecosisteme din Insula Mică a Brăilei, Ed. Ars Docendi, București, ISBN 973-558-233-3
4. Iordache V., 2008, Explorari dincolo de individualism si holism, Ed. Ars. Docendi, București, 2008, ISBN 978-973-558-383-5
5. Iordache V., 2009, Conceptul general de evolutie, in Staicu L. (editor) Rationalitate si evolutie: explorari filosofice ale complexitatii, Ed. Universității din București, 83-155. ISBN 978-973-737-665-7
6. Iordache V., 2008, Sensul sintezei din teoria sintetică a evoluției, în Iordache Virgil (coord.), Biologia ca forma a culturii, Ed. Ars Docendi, București, 86-95, ISBN 978-973-558-380-4
7. Cristofor S., Iordache V., A. Vadineanu, 1999, Analiza funcțională a sistemelor ecologice, în "Dezvoltarea Durabilă – metode și instrumente", vol 2., Editura Universității din București, 227-251, ISBN 973-575-333-2

## Textbooks/handbooks (for teaching)

1. Neagoe A., Iordache V., 2021, Ghid de remediere a zonelor poluate cu elemente toxice, DOI: 10.13140/RG.2.2.25793.48486/1,

- [https://www.researchgate.net/publication/350855749\\_Ghid\\_de\\_remediere\\_a\\_zonelor\\_poluete\\_cu\\_elemente\\_toxice](https://www.researchgate.net/publication/350855749_Ghid_de_remediere_a_zonelor_poluete_cu_elemente_toxice)
- lordache V., 2017, Note de curs pentru Managementul diversității biologice și bibliografie de 400 de titluri structurată pe teme cu comentarii, <http://studentecologie.blogspot.ro/2017/05/managementul-diversitatii-biologice-o.html>
  - lordache V., 2021, Lecture notes in Ecology and Environmental Management: General Ecology, Environmental Deterioration and Ecological Monitoring, <https://studentecologie.blogspot.com/2021/01/note-de-curs-ecologie-si-protectia.html>
  - Neagoe A., lordache V., Farcasanu I., 2011, Remedierea zonelor poluate, Ed. Universitatii din Bucuresti, 195 pp, ISBN 978-973-737-907-8
  - lordache V., 2006, Lucrari practice de ecologie, <http://www.cesec.ro/pdf/LP%20ecologie%20ciorna%20Virgil%20lordache.pdf>, 190 pages

#### Articles in journals with an impact factor in Web of Science

- lordache Virgil, Samuel Kuria Kiboi, 2026, Vegetation resilience in ecological autocatalysis under climate change, *Frontiers in Plant Science*, 16, 1756384
- Neagoe Aurora, Minodora Manu, Marilena Onete, Luiza-Silvia Mihai, George Dincă, Denisa Jianu, Stelian Ion, Virgil lordache, 2025, Increasing the fungal inoculation of mine tailings from 1 to 2% decreases plant oxidative stress and increases the soil respiration rate, *Scientific Reports*, 15, 30030
- Ockendon, Nancy, Taylor Shaw, Susana Bautista, Anushree Bhattacharjee, Jordi Cortina - Segarra, Virgil lordache, Vanessa O López, David Thomas, Poshendra Satyal, Jasper Van doninck, Sebastian Birk, 2025, Overcoming barriers and leveraging opportunities to scale up landscape - scale restoration in Europe, *Restoration Ecology*, 33, e70075
- Neagoe A., lordache V., 2023, A Commercial Arbuscular Mycorrhizal Inoculum Alleviated the Effects of Acid Water on *Lupinus angustifolius* Grown in a Sterilized Mining Dump, *Plants*, 12, 1983
- lordache, V., Neagoe A., 2023, Conceptual methodological framework for the resilience of biogeochemical services to heavy metals stress, *Journal of Environmental Management* 325, 116401
- Dunea D., V lordache, LN Frasin, A Neagoe, L Predescu, S lordache, 2021, Monitoring rainwater properties and outdoor particulate matter in a former steel manufacturing City in Romania, *Atmosphere* 12 (12), 1594
- Dunea D., Bretcan P., Purcoi L., Tanislav D., Șerban G., Neagoe A., lordache V., lordache Ș., 2021, Effects of riparian vegetation on evapotranspiration processes and water quality of small plain streams, *Ecology & Hydrobiology*, 21 (4), 629-640
- Ion S., Marinescu D., Ion A.V., Cruceanu S.G., lordache V., 2020, Spline wavelet multiresolution of scatter data, *Proceedings of the Romanian Academy, Series A*, 21, 311-318
- Manu M., Honciuc V., Neagoe A., Băncilă R. I., lordache V., Onete M., 2019, Soil mite communities (Acari: Mesostigmata, Oribatida) as bioindicators for environmental conditions from polluted soils, *Scientific Reports*, 9, 20259
- Constantinescu P., Neagoe A., Nicoară A., Grawunder A., Ion S., Onete M., lordache V., 2019, Implications of spatial heterogeneity of tailing material and time scale of vegetation growth processes for the design of phytostabilisation, *Science of The Total Environment*, 692, 1057-1069,
- Manu M, RI Băncilă, V lordache, F Bodescu, M Onete, 2017, impact assessment of heavy metal pollution on soil mite communities (Acari: Mesostigmata) from Zlatna Depression–Transylvania, *Process Safety and Environmental Protection* 108, 121-134
- Neagoe A, G Tenea, N Cucu, S Ion, V lordache, 2017, Coupling *Nicotiana tabacum* Transgenic Plants with *Rhizophagus irregularis* for Phytoremediation of Heavy Metal Polluted Areas, *REVISTA DE CHIMIE* 68 (4), 789-795
- Nedelescu M, Daniela Baconi, Aurora Neagoe, Virgil lordache, Miriana Stan, Paula Constantinescu, Anne-Marie Ciobanu, Alexander I Vardavas, Marco Vinceti, Aristidis M Tsatsakis, 2017, Environmental metal contamination and health impact assessment in two industrial regions of Romania, *Science of The Total Environment*, 50, 984-995
- Manu M, M Onete, L Florescu, F Bodescu, V lordache, 2017, Influence of heavy metal pollution on soil mite communities (Acari) in Romanian grasslands , *North-Western Journal of Zoology*, 13, 200-210
- Manu M, V lordache, RI Băncilă, F Bodescu, M Onete, 2016, The influence of environmental variables on soil mite communities (Acari: Mesostigmata) from overgrazed grassland ecosystems–Romania, *Italian Journal of Zoology* 83 (1), 89-97
- Ion S, D Marinescu, AV Ion, SG Cruceanu, V lordache, 2015, Water flow on vegetated hill. 1D shallow water equation type model, *Analele Universitatii "Ovidius" Constanta-Seria Matematica* 23 (3), 83-96
- Ene C. D., Lavinia L Ruta, Ioana Nicolau, Claudia V Popa, Virgil lordache, Aurora D. Neagoe, Ileana C Farcasanu, 2015, Interaction between lanthanide ions and *Saccharomyces cerevisiae* cells, *Journal of Biological Inorganic Chemistry*, 20, 1097-1107
- Păun A, Neagoe A., Păun M., Baciu I., lordache V., 2015, Response of oxidative stress variables, proteins and chlorophyll in three plant species caused by moderate soil pollution with toxic elements, *Polish Journal of Environmental Studies*, 24(3), DOI: 10.15244/pjoes/30935

19. Păun A, Neagoe A., Păun M., Baciuc I., Iordache V., 2015, Heavy metal induced differential responses to oxidative stress and protection by mycorrhization in sunflower grown at lab and field scales, *Polish Journal of Environmental Studies*, 24(3), DOI: 10.15244/pjoes/32099
20. Ion S, Marinescu D., Cruceanu Ș. D., Iordache V., 2014, A data porting tool for coupling models with different discretization needs, *Environmental Software and Modelling*, 62, 240-252
21. Ruta, LL, Popa, VC, Nicolau, I, Danet, AF, Iordache V., Neagoe, AD, Farcasanu, IC, 2014, Calcium signaling mediates the response to cadmium toxicity in *Saccharomyces cerevisiae* cells, *FEBS Letters*, 588(17), 3202-3212
22. Nicoara A., Aurora Neagoe, Paula Stancu, Giovanni de Giudici, Francesca Langella, Anna Rosa Sprocati, Iordache V., Erika Kothe, 2014, Coupled pot and lysimeter experiments assessing plant performance in microbially assisted phytoremediation. *Environmental Science and Pollution Research*, 21(11), 6905-6920
23. Neagoe A., Paula Stancu, Andrei Nicoară, Marilena Onete, Florian Bodescu, Roxana Gheorghe, Iordache V., 2014, Effects of arbuscular mycorrhizal fungi on *Agrostis capillaris* grown on amended mine tailing substrate at pot, lysimeter, and field plot scales. *Environ Sci Pollut Res*, 21(11), 6859-6876
24. Neagoe A., Iordache V., Hans Bergmann† and Erika Kothe, 2013, Patterns of effects of arbuscular mycorrhizal fungi on plants grown in contaminated soil. *Journal of Plant Nutrition and Soil Science*, 176, pp. 273-286
25. Iordache V., S. Ion, A. Pohoacă, 2009, Integrated modeling of metals biogeochemistry: potential and limits, *Chemie der Erde - Geochemistry*, 69, 125-169.
26. Iordache V., Gherghel F, Kothe E, 2009, Assessing the Effect of Disturbances on Diversity of Ectomycorrhiza. *Int. J. Environ. Res. Public Health*, 6(2):414-432
27. Neagoe A., D. Merten, Iordache V., G. Buechel., 2009, The effect of bioremediation methods involving different degrees of soil disturbance on the export of metals by leaching and by plant uptake. *Chemie der Erde - Geochemistry*, 69, pp. 57-73.
28. Pinay G., Gumiero B. Tabacchi E. Gimenez O. Planty-Tabacchi A. M., Hefting M., Burt T., Black V., Nilsson C., Iordache V., Bureau F. Vought L., Petts G., Décamps H., 2007, Patterns of denitrification rates in European alluvial soils under various hydrological regimes, *Freshwater Biology*, 52, 252-266

#### Patents and published TRL2-4 technologies

##### National

1. ISMMA (Ion S., Marinescu D., Cruceanu S. G., Iordache V., 2020, Procedeu de analiza a proceselor de mediu prin masurari punctuale la scari spatiale variabile, OSIM, A/00750, 19.11.2020 (submitted))

A production scheme of a TRL4 technology for upscaling aboveground plant traits from organism to service providing unit scale is published in [Iordache and Neagoe \(2025, figure 9\)](#).

A block diagram for the transition of an eco-technology accelerating the ecological succession by myco-phytoremediation and landscape design of the vegetation patches from TRL4 to TRL6 is published in [Neagoe et al. \(2025, figure 7\)](#).

A procedure for linking knowledge mapping with technology development, from TRL 1 to TRL 6, was proposed to UEFISCDI and ANC after being communicated [here](#).

#### Articles in journals and scientific volumes indexed in international databases

1. Dunea Daniel, Ștefania Iordache, Virgil Iordache, Larisa Purcoi, Laurențiu Predescu, 2019. MONITORING OF THE EVAPOTRANSPIRATION PROCESSES IN RIPARIAN GRASSLANDS, *Scientific Papers Series A. Agronomy*, 62 (1), 278-285 (Web of Science Core Collection, Copernicus, Google Scholar)
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**Sets of data**

1. Neagoe, A. D., Manu, M., Mihai, L.-S., & Iordache, V. A., 2025, Data from a pot scale experiment with mine tailing material and *Agrostis capillaris* L. alone, or mixed with *Melilotus albus* Medik, Zenodo.  
<https://doi.org/10.5281/zenodo.15847780>
2. Iordache, V. A., 2025, Data indicating patterns in the scientific production of long-term ecological research, Zenodo.  
<https://doi.org/10.5281/zenodo.16784386>
3. Neagoe A., Constantinescu P., Nicoara A., Onete M., Iordache V., 2020, Data from experiments with tailing material and *Agrostis capillaris* at three scales: pot, lysimeter and field plot, Data in Brief, 28, 104964 (PubMed Central, PubMed/Medline, Scopus, ESCI, DOAJ)

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