



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s)

**Petronela COZMA**

Adress

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Nationality

Romanian

Web pages

<https://ro.linkedin.com/in/petronela-cozma-9a47249b/en>  
<https://www.researchgate.net/profile/Cozma-Petronela>  
<https://publons.com/researcher/4562020/petronela-cozma/>  
<https://orcid.org/0000-0002-9237-3423>

### Position

**Lecturer, “Gheorghe Asachi” Technical University of Iasi, Romania, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management**

**PhD in Engineering Sciences: Environmental Engineering, MSc, Engineer**

### Work experience

**Dates**

**February 2022- present**

**Occupation or position held**

**Lecturer**

Main activities and responsibilities

**Lectures/Laboratories/Projects/Seminars sustained in present:**

- ✓ *Sustainable Industrial Production* (lecture, project, master students assessment)
- ✓ *Ethics and Integrity* (lecture, seminar, master students assessment)
- ✓ *Unit Processes and Equipments for Waste Treatment* (lecture, laboratory, master students assessment)
- ✓ *Environmental Protection* (lecture, seminar, bachelor students assessment)
- ✓ *Practical training (for domain)* (laboratory, bachelor students assessment)

**Dates**

**15/02/2016 – February 2022**

**Occupation or position held**

**Assistant professor**

Main activities and responsibilities

**Courses/Laboratories/Projects/Seminars sustained:**

- ✓ *Sustainable Industrial Production* (project, master students assessment)
- ✓ *Risk Assessment and Management* (laboratory, master students assessment)
- ✓ *Interpersonal Relationship Management* (seminar, master students assessment)
- ✓ *Environmental monitoring* (laboratory, master students assessment)
- ✓ *Policies and strategies for sustainable development* (seminar, master students assessment)
- ✓ *Ethics and Integrity* (course, seminar, master students assessment)
- ✓ *Unit Processes and Equipments for Waste Treatment* (laboratory, master students assessment)
- ✓ *Technologies to acquire, monitor and diagnose the quality of the environment* (laboratory, bachelor students assessment)

Main activities and responsibilities	<ul style="list-style-type: none"> <li>✓ <i>Sources of Radiation and Protection Technologies</i> (laboratory, bachelor students assessment)</li> <li>✓ <i>Analytical chemistry</i> (laboratory, bachelor students assessment)</li> <li>✓ <i>Environmental Protection</i> (lecture, seminar, bachelor students assessment)</li> <li>✓ <i>Practical training (for specialization)</i> (laboratory, bachelor students assessment)</li> </ul>
<b>Dates</b>	<b>2010 → present</b>
Occupation or position held	<b>Member</b> of Editorial Production and Secretariat of journal: <b><i>Environmental and Engineering Management Journal, (IF = 0.858)</i></b> , <a href="http://omicron.ch.tuiasi.ro/EEMJ/">http://omicron.ch.tuiasi.ro/EEMJ/</a>
Main activities and responsibilities	<b>Voluntary work, unpaid:</b> Editorial Production and Secretariat: <ul style="list-style-type: none"> <li>✓ Electronic correspondence with authors</li> <li>✓ Search of international referrers</li> <li>✓ Receiving of printed copies, sending to the Scientific Advisory Board members, libraries, international exchanges</li> <li>✓ Managing of e-mails from international reviewers and authors in first, second and third (if applicable) peer-reviewed</li> <li>✓ Manual check of possible plagiarism using the anti-plagiarism software</li> <li>✓ Typing text in template journal manuscripts</li> </ul>
Name and address of employer	Environmental Engineering and Management Journal, Department of Environmental Engineering and Management, under the aegis of Gheorghe Asachi Technical University, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	International Journal that publishes reviewed original research papers
<b>Dates</b>	<b>28/09/2021 - 27/09/2025</b>
Occupation or position held	<b>Substitute member</b> in the <b>COST ACTION</b> project: "Cross-Border Transfer and Development of Sustainable Resource Recovery Strategies Towards Zero Waste" (FULLRECO4US) Coordinator: University of Borås, Sweden, ID: OC-2020-1-24963, CA20133, <a href="https://www.cost.eu/actions/CA20133/">https://www.cost.eu/actions/CA20133/</a>
<b>Dates</b>	<b>07/10/2021 - 06/10/2025</b>
Occupation or position held	<b>Researcher</b> in the <b>COST ACTION</b> project, member of the national network "A sound proteome for a sound body: targeting proteolysis for proteome remodeling", (ProteoCure), CA20113, Management Committee RO: Dr. Carmen Doina Manciu, UMF Iasi <a href="https://www.cost.eu/actions/CA20113/#tabs Name:Description">https://www.cost.eu/actions/CA20113/#tabs Name:Description</a>
<b>Dates</b>	<b>01/10/2020 – 02/08/2022</b>
Occupation or position held	<b>Research assistant</b> within the project entitled " <i>Integrating environmental bioremediation with biomass valorization and critical raw materials recovery by phytomining (PHYTOMIN)</i> ", <b>Contract no. nr. 269PED / 2020</b> , Project manager: Professor Maria Gavrilescu
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- State-of-the art in phytoremediation as basis of phytomining and challenges beyond the state-of-the-art</li> <li>- Screening of heavy metals (including critical metals), plants (annual and perennial, accumulators and hyperaccumulators), soils (3 categories) for phytomining experiments</li> <li>- Conceptual approach, designing and adjusting the experimental program, setting protocols for soil sampling procedures, available methods, techniques for soil, plants, metals characterization and analysis</li> <li>- Development of an experimental demonstration programme operating as an integrated system by exploring and demonstrating innovative, integrated and eco-efficient solutions based on phytoextraction of (critical) metals from polluted soils (phytomining) and recovery of these metals by appropriate processes (chemical, thermal, biological)</li> <li>- Exploitation and protection of project results, publication in journals, books (ensuring the optimal protection of all results, through identifying, assessing, protecting and subsequently exploiting the foreground Intellectual Property Rights (IPR) generated during the project; publication of papers in ISI and BDI journals.</li> </ul>
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research

<b>Dates</b>		<b>30/10/2020 – 28/10/2022</b>
Occupation or position held	<b>Research assistant</b> within the project entitled <i>"Evaluation of Sustainability of Eco-Friendly Processes used in Wastewater Treatment based on an Integrated Environmental and Economic Assessment Approach (SusTrEE)"</i> , <b>PN-III-P2-2.1-PED-2019-2430</b> , Project manager: Lector Raluca-Maria Hlihor	
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Detailed analysis of unconventional, ecological and low-cost processes used to remove persistent pollutants from wastewater, according to the current state of research in the literature</li> <li>- Assessment of the interaction between microorganisms and environmental pollutants considering different modeling tools</li> <li>- Assessing the overall impact and costs of wastewater treatment strategies in a comprehensive analysis combining LCA and LCC methodologies</li> <li>- Exploitation and protection of project results, publication in journals, books</li> </ul>	
Name and address of employer	University of Agricultural Sciences and Veterinary Medicine from Iași, 3 Aleea Mihail Sadoveanu Street, fiscal code 4541840, legally represented by Prof. univ. dr. Gerard JITĂREANU, as RECTOR	
Type of business or sector	Scientific research	

<b>Dates</b>		<b>16/09/2019 – 22/09/2019</b>
Occupation or position held	<b>Project director Assistant COZMA PETRONELA</b> , Contractor "Gheorghe Asachi" Technical University of Iasi, Mobility project developed within Program 1 - Development of the national research-development system, Subprogram 1.1 - Human resources, <b>Mobility projects for experienced researchers from diaspora (MCD2019)</b> entitled <i>"Advanced research on remediation technologies applied for clean-up of contaminated sites"</i> , contract no.13 / 05.08 .2019, <b>project PN-III-P1-1.1-MCD-2019-0084</b> , Budget approved / settled: 5,210.00 lei, Name of the financier: UEFISCDI	
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- debating current research topics in the field of environmental protection and creating opportunities for collaboration and transfer of knowledge, thus facilitating the transfer of competencies between the "Gheorghe Asachi" Technical University of Iași, Iași, Romania (TUIASI) represented by the head of the host institution Asist.dr.ing. Petronela Cozma and Ecole Nationale Supérieure de Chimie de Rennes, Rennes, France (ENSCR) represented by Lidia Gabriela Favier, PhD</li> <li>- addressing advanced knowledge in the field of bioremediation of environmental matrices contaminated (water, air, soil) with organic pollutants</li> <li>- experience exchange between the researchers involved, participation in working visits and training courses</li> </ul>	
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)	
Type of business or sector	Scientific research	

<b>Dates</b>		<b>30/09/2016 – 30/09/2018</b>
Occupation or position held	<b>Research assistant</b> within the project entitled <i>"Strategies and solutions for eco-design and eco-innovation processes and products from recycled materials in the context of circular economy (ECOINDE)"</i> , <b>Contract no. 64BG/2016</b> , Project manager: Professor Maria Gavrilescu	
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Screening of eco-innovation and eco-design practices according to the economic agent production profile (SC. RONDOCARTON srl).</li> <li>- Elaboration of the program and protocol for the transfer of knowledge from the coordinator to the economic agent.</li> <li>- Assessment of methods for implementing the transfer of knowledge.</li> <li>- Assessment of indicators of knowledge transfer.</li> <li>- Exploitation and protection of project results, publication in journals, books.</li> </ul>	
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)	
Type of business or sector	Scientific research	

<b>Dates</b>		<b>03/04/2017 – 30/06/2018</b>
Occupation or position held	<b>Researcher</b> within the project entitled <i>"Modelling pesticide dynamics in vegetables and assessment of human health risks (MODPEST)"</i> , <b>PN III- PED project, code PN-III-P2-2.1-PED-2016-1662, Contract no. 10PED/2017</b> , Project manager: Lecturer Raluca-Maria Hlihor	
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Detailed analysis on already available experimental data regarding the pesticides residues in fruits and vegetables.</li> <li>- Thorough understanding of methods applied for identifying human health risk of pesticide residues in vegetable products.</li> </ul>	

Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Human health risk analysis of pesticides residues in vegetable products.</li> <li>- Risks characterization and interpretation.</li> <li>- Uncertainty analysis, achieved through a probabilistic Monte-Carlo type approach, which involves mathematical and statistical models to estimate the frequency at which an event can take place.</li> <li>- Exploitation and protection of project results, publication in journals, books.</li> </ul>
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research
<b>Dates</b>	<b>01/08/2017-31/12/2019</b>
Occupation or position held	<b>Researcher</b> within the project entitled " <i>Exploring and exploiting the abilities of microorganisms and plants and their interactions for environmental bioremediation (BIOREMIP)</i> ", <b>PN-III-P4-ID-PCE-2016-0683, Contract no. 65/12.07.2017</b> , Project manager Professor Maria Gavrilescu
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- State-of-the-art and vision beyond, in the bioremediation of soil and aquatic pollution.</li> <li>- Selection of microorganisms, plants, inorganic and organic persistent pollutants and characterization.</li> <li>- Contaminant phytotoxicity and plant tolerance in single plant/contaminant system.</li> <li>- Synergism tests and analysis of microbe-plant-contaminant interactions in water.</li> <li>- Mechanism tentative for contaminants bioabsorption by plants without and with microorganisms (MF fungi and PGPB bacteria).</li> <li>- Modelling the immobilization/mobilization process of contaminants onto soil.</li> <li>- Exploitation and protection of project results, publication in journals, books.</li> </ul>
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research
<b>Dates</b>	<b>26/06/2017 – 15/12/2017</b>
Occupation or position held	<b>Expert in ethics and professional deontology</b> within the project entitled " <i>Continuous improvement of university teaching staff - guarantee of professional deontology and academic ethics (PERF-DEONTETIC)</i> ", <b>FDI, CNFIS-FDI-2017-0065</b> , Project manager Professor Seghedin Neculai Eugen
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Participation in the elaboration, publication and support of the courses in the project.</li> <li>- Respecting the ethics and deontology of the project activity.</li> <li>- Compliance with the rights and obligations mentioned in the individual labor contract.</li> </ul>
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research
<b>Dates</b>	<b>01/10/2011 – 03/09/2016</b>
Occupation or position held	<b>Research assistant</b> (under the period 03/10/2012 - 26/03/2013) full time position and <b>Member</b> of research group 01/10/2011 – 03/10/2012, 26/03/2013 – present) part time position, within the project <b>PN-ID-PCE-2011-3-0559</b> , entitled " <i>Biosorption and Bioaccumulation in the Bioremediation of Environmental Compartments Contaminated with Persistent Pollutants (BIOSACC)</i> ", Project Manager Professor Maria Gavrilescu
Main activities and responsibilities	<ul style="list-style-type: none"> <li>- Laboratory studies on biosorption / bioaccumulation of heavy metals and persistent organic pollutants</li> <li>- Assessment, analysis and interpretation of experimental data</li> <li>- Modeling of biosorption and bioaccumulation processes</li> <li>- Life cycle assessment and risk assessment</li> <li>- Analysis of process performance and cost involved using specific assessment tools (AspenPlus, Gabi softwares)</li> <li>- Studies on biosorption and bioaccumulation processes in airlift bioreactors</li> <li>- Modeling, simulation and scale up</li> <li>- Exploitation and protection of project results, publication in journals, books</li> </ul>
Name and address of employer	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research

<b>Dates</b> 01/10/2012 – 26/03/2013	
Occupation or position held	<b>Assistant Professor</b>
Main activities and responsibilities	<b>Laboratory:</b> <i>Chemical and Biological Engineering</i> : applications (laboratory, seminars, bachelor students evaluation)
Name and address of employer	“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
<b>Dates</b> 26/03/2013 – 30/09/2013	
Occupation or position held	<b>Assistant Professor</b>
Main activities and responsibilities	<b>Seminar:</b> <i>Integrated Pollution Prevention and Control</i> : applications (seminars, bachelor students evaluation)
Name and address of employer	“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Academic
<b>Dates</b> 01/10/2009 – 01/10/2012	
Occupation or position held	<b>PhD Student</b> under the aegis of EURODOC “Doctoral Scholarships for research performance at European level” project ID_59410, financed by the European Social Fund and Romanian Government
Main activities and responsibilities	- Participation at an advanced academic training - Elaboration of PhD Thesis entitled: “ <i>Decontamination of fluid fluxes in pneumatic contactors</i> ” under the supervision Prof. Maria Gavrilescu and Prof. Anton Friedl from Vienna Institute of Technology, which involves: designing and building of an experimental set up, which includes a pneumatic device at laboratory scale (pneumatic contactor with rectangular cross-section), experimental research, modeling and simulations of the applied processes, publishing of scientific papers, participation on national and international conferences. - Research stage performed at Vienna University of Technology, Austria - Writing and sustaining the thesis in English (September 20, 2012, with a very good rating)
Name and address of employer	“Gheorghe Asachi” Technical University of Iasi, “Cristofor Simionescu” Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Type of business or sector	Scientific research
<b>Dates</b> 01/10/2007 - 01/10/2009	
Occupation or position held	<b>Shop manager</b>
Main activities and responsibilities	- compliance with working hours, fire and safety regulations; - coordination of sellers activity; - cultivating and maintaining professional relationships with clients; - promotion of products according to customers' needs and interests; - correct use of PC, cash register, printer, POS; - resolving different problems arising in relation to customers and sellers, incidents and complaints; - controlling and supervising all activities of sellers during working hours; - creating and maintaining a positive atmosphere in the collective; - prepare the following documents: cash register, report administration, reception of products.
Name and address of employer	SC BENVENUTI SRL, 36 Bucium Street/21 Bahlui Road, Iassy (Romania)
Type of business or sector	sales
<b>Dates</b> 01/11/2005 - 08/02/2007	
Occupation or position held	<b>Shop assistant</b>
Main activities and responsibilities	sale of products, customer guidance and counselling, exposure and arranging the products, cleaning, payments distributors, products administration
Name and address of employer	SC VALGOS SRL, Tudor Vladimirescu Blvd., Iulius Mall, Iassy (Romania)
Type of business or sector	sales



## Education and training

	<b>Dates</b> 5 November 2021 - 27 November 2021
Title of qualification awarded	Graduation of the course " <b>Interactive and creative methods of teaching - learning - evaluation, rules of ethics in the elaboration of scientific materials and intellectual property law</b> " organized within the project " <b>Integrated platform for improving the quality of the teaching process, by digitizing the activities of compliance with ethics and academic integrity, tracking the employability of graduates</b> "
Principal subjects / occupational skills covered	Member of the target group <b>Subjects studied:</b> <ul style="list-style-type: none"> <li>✓ Ethics and academic integrity - creative methods</li> <li>✓ Quality management in higher education</li> </ul>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, 67 Blvd. Prof. Dimitrie Mangeron, 700050 – Iași
	<b>Dates</b> 9 november – 8 december 2018
Title of qualification awarded	Graduation of the program " <b>Quality, Ethics and Academic Integrity</b> " organized within the project " <b>Center for Studies and Consultancy for the Quality of Education, Ethics and Academic Integrity (CEEIA-CENTER)</b> "
Principal subjects / occupational skills covered	<b>Subjects studied:</b> <ul style="list-style-type: none"> <li>✓ Quality management in higher education</li> <li>✓ Active and interactive methods in stimulating learning</li> <li>✓ Development, evaluation and presentation of scientific materials</li> <li>✓ Ethics and deontology</li> <li>✓ Quality, ethics and academic integrity</li> </ul>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, 67 Blvd. Prof. Dimitrie Mangeron, 700050 – Iași
	<b>Dates</b> 18 octomber- 9 november 2019
Title of qualification awarded	Graduation of the program " <b>Authorized Professional Training Program for Multiple Specialization Occupations</b> " for " <b>Key Competences, Common to Multiple Occupations - Communication in English</b> "
Principal subjects / occupational skills covered	Specialization course for " <b>Common Key Skills for Multiple Occupations - Communication in English</b> " – <b>Subjects studied:</b> <ul style="list-style-type: none"> <li>- English as medium of instruction for technical higher education</li> <li>- Methodology of technical subjects using EMI</li> <li>- Design of educational materials for technical subjects using informational technologies</li> <li>- Virtual learning solutions</li> </ul>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, 67 Blvd. Prof. Dimitrie Mangeron, 700050 – Iași
	<b>Dates</b> 2012 – 2013
Title of qualification awarded	<b>Graduation certificate of pedagogical training program levels I and II</b>
Principal subjects / occupational skills covered	<b>Subjects covered:</b> <ul style="list-style-type: none"> <li>✓ Educational Psychology</li> <li>✓ Pedagogy</li> <li>✓ Educational Communication</li> <li>✓ Methodology of curriculum</li> <li>✓ Classroom Management</li> <li>✓ Educational Project Management</li> <li>✓ Teaching technical disciplines</li> <li>✓ eLearning</li> </ul>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Teaching Staff Training, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
	<b>Dates</b> 01/10/2009 - 01/10/2012
Title of qualification awarded	<b>PhD in Environmental Engineering, Diploma No. 2645 from 17.01.2013</b>
Principal subjects / occupational skills covered	Elaboration of PhD Thesis with the title: " <i>Decontamination of fluid fluxes in pneumatic contactors</i> " in joint supervision with Vienna Institute of Chemical Engineering, PhD Supervisors: Prof. Maria Gavrilescu and Prof. Anton Friedl

Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Level in national or international classification	ISCED 6
<b>Dates</b>	<b>2007 - 2008</b>
Title of qualification awarded	<b>Master of Science in Environmental Management, Diploma no. 5214 from 10.09.2009</b>
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> <li>- Ecology and environmental protection</li> <li>- Environmental audit</li> <li>- Life cycle assessment</li> <li>- Risk estimation and management</li> <li>- Environmental policy making</li> <li>- Cost-profit analysis in environmental protection</li> <li>- Research for dissertation</li> <li>- Sustaining the dissertation on the topic: "Soil Contamination by Persistent Organic Pollutants. Case Study: Dioxin Contamination"</li> </ul> Scientific Coordinator: Prof. Dr. Eng. Maria Gavrilescu <b>Awarded grade: 10</b>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Level in national or international classification	ISCED 5
<b>Dates</b>	<b>2002 - 2007</b>
Title of qualification awarded	<b>Diplomat Engineering, Diploma no. 76311 from 10.07.2008</b> The graduation diploma included two parts:
Principal subjects / occupational skills covered	<ul style="list-style-type: none"> <li>- <i>research stage</i>, which consisted in the application of efficient methods for removal of persistent organic pollutants from different contaminated media</li> <li>- <i>design stage</i>, which consisted in the designing of a plant for producing precipitated calcium carbonate, by bubbling carbon dioxide from a thermal plant flue gases, in a suspension of hydrated lime (calcium hydroxide)</li> </ul> Environmental Biodiversity Analytical Chemistry and Instrumental Analysis Environmental Microbiology Fundamentals of Soil Sciences Chemical and Biochemical Thermodynamic and Kinetics Transfer Phenomena and Unit Operation Biotechnologies in Environmental Protection Waste Treatment, Valorisation and Management Bioremediation Technologies and Biotechnologies for Wastewater Treatment Integrated Pollution Prevention and Control Technologies for Soil Decontamination <b>Grade obtained at diploma exam: 10, General average: 10</b>
Name and type of organisation providing education and training	"Gheorghe Asachi" Technical University of Iasi, "Cristofor Simionescu" Faculty of Chemical Engineering and Environmental Protection, Department of Environmental Engineering and Management, 73 Blvd. Prof. Dimitrie Mangeron, 700050 Iasi (Romania)
Level in national or international classification	ISCED 5
<b>Dates</b>	<b>1998 - 2002</b>
Title of qualification awarded	<b>High Scholl Diploma, No. 33 from 18.07.2002</b>
Principal subjects / occupational skills covered	Specialization in Chemistry-Biology
Name and type of organisation providing education and training	"Garabet Ibraileanu" High Scholl Iasi (High Scholl), 1 Oastei Stret, Iasi (Romania)

## Personal skills and competences

Mother tongue(s)

**Romanian**

Other language(s)

Self-assessment

European level (\*)

**English**

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C1   Proficient user	C2   Proficient user	B1   Independent user	B2   Independent user	B2   Independent user

(\*) [Common European Framework of Reference \(CEF\) level](#)

Social skills and competences

- Good communication skills gained through my experience as sales manager; PhD student; research assistant; assistant professor; student
- Ability to establish and maintain good working relations with people of different national and cultural backgrounds gained through my work experience abroad and in academic institute
- Extremely organised person gained through my experience as sales manager; PhD student; research assistant; assistant professor

Organisational skills and competences

- Good capacity for coordination and management of human resources gained through my experience as sales manager, being responsible for a team of three people
- Ability to setting goals and deadlines, to integrate new information's in a short time period gained through my experience as PhD student, research assistant; assistant professor

Technical skills and competences

### Research directions:

- physico-chemical processes applied for the decontamination of gaseous effluents
- chemical and biological processes applied for the decontamination of environmental polluted with persistent pollutants components (inorganic and organic): biosorption / bioaccumulation / phytoremediation of heavy metals and persistent organic pollutants
- modeling, simulation and process design
- integrated pollution prevention and control
- sustainable industrial production
- risk assessment

### Membership in organizations and professional groups:

- Member of *Academic Organization of Environmental Engineering and Sustainable Development*;
- Member of the research group *Chemical and biological processes in environmental engineering and management* (coordinator Prof. Maria Gavrilescu)
- Member of *Environmental Engineering and Impact Assessment Research Center*
- Member of *FEMS (Federation of European Microbiological Societies)*
- Member of *EFB (European Federation of Biotechnology)*

### Internships and specializations abroad:

- **GaBi Training: Introduction to Sustainability and LCA Training – Online – November 18, 9:30am -12:30pm and 2:00pm -6:00pm**
- **GaBi Jump Start Training** - Understand GaBi's modular and intuitive process-based approach to modeling the life cycle of a product from cradle-to-grave.
- Training on the application of probabilistic methods to quantify variability and uncertainty in order to estimate the exposure of the different population groups (children, adults, adolescents) exposed to diets to the consumption of food contaminated with pesticides using **RENO software tool**
- 6 months of **research stage** at Vienna University of Technology, Institute of Chemical Engineering, Vienna, Austria
- Training on modeling, simulation and designing of processes using **Aspen Plus simulation program**, Vienna University of Technology, Institute of Chemical Engineering, Vienna, Austria

### Activity with students:

- coordination of the elaboration of: 14 bachelor thesis; 8 dissertation thesis in collaboration with Prof.dr.eng. Maria Gavrilescu; 16 research papers in the session of the student scientific circles
- organization of study trips (1 study visit in 2019)
- presentation of the university's educational offer in high schools: 2 high schools (2013), 2 high schools (2017), 5 high schools (2018), 6 high schools (2019), 2 high schools (2021)
- internship coordinator, Environmental Engineering field, bachelor students (since 2016)
- professional advisor for the first year bachelor students (2019-2020, 2020-2021, 2021-2022, 2022-



2023) in the field of Environmental Engineering; second year of students master, specialization Environmental Management (2016-2017)  
- bachelor students tutor: first year (2 students) and second year (2 students)  
- responsible for employability situations of graduate students of bachelor and master programs, Environmental Engineering field (since 2018)

**Activity in committees/secretariat at department and faculty level:**

- Secretary of the *Student Scientific Circles Committee*, event organized by the Faculty of Chemical Engineering and Environmental Protection, Technical University "Gheorghe Asachi", section Environmental Engineering and Sustainable Development (secretary since 2016)  
- Elaboration of the master schedule of *Environmental Engineering and Management* department (specializations MM, MTVD, EMSE) (since 2016)  
- Member of the Editorial Board and the Secretariat of the *Environmental Engineering and Management Journal* (since 2010)  
- Substitute member of the Electoral Board by faculty (2019)  
- Member of the admission committee for undergraduate students by faculty (academic year 2020-2021, 2021-2022)

**Other relevant activities:**

- **Scientific reviewer** for the following journals: **Energy (2017); Sustainable Energy Technologies and Assessments (2018); Journal of the Science of Food and Agriculture (2020); Processes (2021); Toxics (2022)**  
- **Invited Editor** for **Processes** journal, Special Issue: **Microbial Bioremediation of Environmental Pollution (2021-2022)**

**Organizing and participating in scientific events:** member in the secretariat of 5 international conferences and one national competition; participation in over 70 scientific events

**Prizes:**

- **First Prize** for the paper "Studies on the behavior of persistent organic pollutants into the environment", presented at Student Scientific Days of the Faculty of Chemical Engineering Iasi, May 2007  
- **International prizes (13):** •**GOLD MEDAL** Project: *Integrating environmental bioremediation with biomass valorization and critical raw materials recovery by phytomining (Phytomin)*, Project Director: Prof.univ.dr.eng. Maria Gavrilescu, **European Exhibition of Creativity and Innovation, 14th Edition of EUROINVENT**, 26-28 May 2022, Palace of Culture, Iasi, Romania; •**SPECIAL AWARD** Project: *Integrating environmental bioremediation with biomass valorization and critical raw materials recovery by phytomining (Phytomin)*, Project Director: Prof.univ.dr.eng. Maria Gavrilescu, **European Exhibition of Creativity and Innovation, 14th Edition of EUROINVENT**, 26-28 May 2022, Palace of Culture, Iasi, Romania; •**Bronze Medal**, Project: *Evaluation of Sustainability of Eco-friendly Processes Used in Wastewater Treatment based on an Integrated Environmental and Economic Assessment Approach (SusTrEE)*, Project director: Raluca-Maria Hlihor, **European Exhibition of Creativity and Innovation, 14th Edition of EUROINVENT**, 26-28 May 2022, Palace of Culture, Iasi, Romania; • **Diploma of Gold Metal**, Book: *Exploring and exploiting the abilities of micro-organisms, plants and their interactions to bioremediate the environment*, **European Exhibition of Creativity and Innovation, 14th Edition of EUROINVENT**, (Euroinvent Book Salon), 26-28 May 2022, Palace of Culture, Iasi; •**Diploma of Honour Gold Metal** for the paper "Evaluation of sustainability of eco-friendly processes used in wastewater treatment based on an integrated environmental and economic assessment approach (SUSTREE)" during "The 25th INTERNATIONAL EXHIBITION OF INVENTICS-INVENTICA 2021", 23.06.2021 – 25.06.2021; •**Best Paper Award** for the paper "Initial Screening of Biosorption Process Modelling and Optimization for its Industrial Scale-up" presented at the "International Scientific Conference „Applications of Chemistry in Nanosciences and Biomaterials Engineering" offered by Academy of Romanian Scientists, 25-26 June 2021; •**Best Paper Award** for the paper "Investigation of Chemical Stress Generated by Lead on the Growth and Physiology of Zea Mays L" presented at the "International Scientific Conference „Applications of Chemistry in Nanosciences and Biomaterials Engineering" offered by Academy of Romanian Scientists, 25-26 June 2021; •**Best paper presentation** (Paper title: Biosorption and bioaccumulation: eco-friendly solutions used for the removal of heavy metals from wastewaters), "Life sciences today for tomorrow" International Congress, 22-23 October 2020, Iasi, Romania, Section Horticulture and Environment Engineering "Horticulture - Science, Quality, Diversity and Harmony", Faculty of Horticulture, University of Agricultural Sciences and Veterinary Medicine "Ion Ionescu de La Brad" from Iasi; •**Excellent Paper Award** (Paper title: Effects induced by heavy metals stress on seedlings development of lettuce), **Academics World International Conference- Rome**, Italy 20th July 2019; •**Diploma of Excellence Invent** Salon, 12th Edition, Baia Mare (2018); •**Diploma of Gold Medal, EuroInvent 10th Edition 2018**, EuroInvent Book Salon

(2018); •**Diploma of Excellence Euroinvent 2013-European Exhibition of Creativity and Innovation** (2013); •**Grand Prize Euroinvent 2012-European Exhibition of Creativity and Innovation** (2012)

- **Awarding of research results (7):** •Mihaela Rosca, **Petronela Cozma**, Mariana Minut, Raluca-Maria Hlihor, Camelia Betianu, Mariana Diaconu, Maria Gavrilescu, New evidence of model crop *Brassica napus* L. in soil clean-up: comparison of tolerance and accumulation of lead and cadmium, *Plants-Basel*, 2021, code: PN-III-P1-1.1- PRECISI-2021- 67695; •Mariana Minut, Mihaela Rosca, Raluca-Maria Hlihor, **Petronela Cozma**, Maria Gavrilescu, Modelling of Health Risk Associated with the Intake of Pesticides from Romanian Fruits and Vegetables, *Sustainability*, 2020, 12(23), code: PN-III-P1-1.1- PRECISI-2021- 56919; •Camelia Smaranda Betianu, **Petronela Cozma**, Mihaela Rosca, Elena-Diana Comăniță Ungureanu, Ioan Mămăligă, Maria Gavrilescu, Sorption of organic pollutants onto soils: surface diffusion mechanism of congo red azo dye, *Processes*, 2020, 8(12), code: PN-III-P1-1.1- PRECISI-2021- 60372; •Raluca-Maria Hlihor, Manuela Olga Pogăcean, Mihaela Rosca, **Petronela Cozma**, Maria Gavrilescu, Modelling the behavior of pesticide residues in tomatoes and their associated long-term exposure risks, (PRECISI 2019), submission code PN-III-P1-1.1-PRECISI-2019-33093; •**Petronela Cozma**, Cristina Ghinea, Ioan Mămăligă, Walter Wukovits, Anton Friedl, Maria Gavrilescu, Environmental impact assessment of high pressure water scrubbing biogas upgrading technology, *CLEAN – Soil, Air, Water*, 41(9), 917–927, (2013), submission code PN-II-RU-PRECISI-2014-8-6635; •**Petronela Cozma**, Elena Niculina Drăgoi, Ioan Mămăligă, Silvia Curteanu, Walter Wukovits, Anton Friedl, Maria Gavrilescu, Modelling and optimization of CO<sub>2</sub> absorption in pneumatic contactors using artificial neural networks developed with clonal selection based algorithm, *International Journal of Nonlinear Sciences and Numerical Simulation*, 16(2), 97–110, (2015), submission code PN-II-RU-PRECISI-2015-9-8664; •**Petronela Cozma**, Walter Wukovits, Ioan Mămăligă, Anton Friedl, Maria Gavrilescu, Modeling and simulation of high pressure water scrubbing technology applied for biogas upgrading, *Clean Technologies and Environmental Policy*, 17(2), 373-391, (2015), submission code PN-II-RU-PRECISI-2015-9-8416.

#### Patents (2 patent applications at national level)

- Patent Application – Reference No. 5192 / 21.05.2018; OSIM Registry: A / 00361, Title: PROCEDURE FOR OBTAINING BIODEPOSITED TYPE MATERIALS FOR THE CONSTRUCTION AND FUNCTIONAL ELEMENTS OF EUROVALLES
- Patent Application - Reference No. 5379/04.07.2022; Title: INTEGRATED METHOD FOR THE RECOVERY OF CRITICAL METALS FROM POLLUTED SOILS THROUGH PHYTOMINING, Authors: Gavrilescu Maria; Cozma Petronela; Mariana Diaconu; Ungureanu-Comăniță Elena-Diana; Minuț Mariana; Vasilachi Ionela-Cătălina; Paiu Maria; Hlihor Raluca-Maria; Bulgariu Laura; Apostol Maria; Simion Isabela-Maria

Computer skills and competences

Competent with Microsoft Office programmes, OriginLab, Aspen Software, GaBi 4 Software, RENO Software

#### Additional information

##### SCIENTIFIC ACTIVITY

**62** published papers in ISI ranked journals/journals included in data bases, peer reviewed, CNCSIS quoted/Conference Proceedings, from which **20 paper are published in ISI journals**

**7** books/book chapters

**Over 150** participation as author on scientific events

**Total number of citations: 242** without self citations according to Web of Science

HIRSCH index: **h= 11**.

#### Annexes List of publication

Date  
February, 2023

Signature  
Lecturer dr.eng Petronela Cozma