

FUNDING APPLICATION
Section C – CV

C.1 CURRICULUM VITAE

Personal information

Name, Surname:	Petroiu (Andruseac) Gabriela-Gladiola		
Date of birth:	17.08.1970	Sex:	F
Nationality:	Romanian		
Researcher unique identifier(s) (ORCID, Researcher ID etc.):	https://orcid.org/0000-0002-8420-2771 Scopus Author ID: 27567575000		
URL for personal website (if case):			

Education

Year	Faculty/department - University/institution - Country
2011	Ph.D. Diploma in Computer Science, confirmed by the MECTS Order no. 6468/2011, Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi" of Iași, Romania
1994	Bachelor of Engineering , Electrical field, Specialization in Electronics and Telecommunications Technical University "Gheorghe Asachi" of Iași, Faculty of Electronics and Telecommunications.

Positions - current and previous

(Academic sector/research institutes/industrial sector/public sector/other)

Year	Job title – Employer - Country
2017-present	ASSOCIATE PROFESSOR, "Grigore T. Popa" University of Medicine and Pharmacy Iași, Faculty of Medical Bioengineering, University Street No. 16, 700115, Iași, Romania, Responsible for courses in the subject of Informatics, Automation of Medical Processes and Procedures, Medical Robotics and Computerized Techniques for Designing Complex Biomaterials
2013- 2017	LECTURER, "Grigore T. Popa" University of Medicine and Pharmacy Iași, Faculty of Medical Bioengineering, University Street No. 16, 700115, Iași, Romania, Responsible for courses in the subject of Informatics, Biomedical Systems Automation, Computerized Techniques for Designing Complex Biomaterials
1998-20013	ASSISTANT, "Grigore T. Popa" University of Medicine and Pharmacy Iași, Faculty of Medical Bioengineering, University Street No. 16, 700115, Iași, Romania, Responsible for practical courses in the subject of Medical Informatics and Biostatistics, Multimedia Informatics Courses.

Career breaks (if case)

Year	Reason
yyyy-yyyy	-----

Project management experience

(Academic sector/research institutes/industrial sector/public sector/other. Please list the most relevant.)

Year	Project title - Role – Funder – Budget – link to project webpage
2024	Secondary Education Project (ROSE), Grant Scheme for Universities - Competitive Category, Beneficiary: "Gr. T. Popa" University of Medicine and Pharmacy from Iași, Subproject title: "Support for first-year students at the Faculty of Medical Bioengineering at risk of dropping out, for improving academic performance (BioRemedis)", grant agreement no. 409/SGU/SS/2023, implementation period: 01.02.2024-31.07.2024, project director: Prof. Dr. Anca Galaction; Team member.
2023	FDI Project, Area 6: Supporting excellent research in universities funded by the Institutional Development Fund 2023, project code CNFIS-FDI-2023-F-0238, titled " <i>Developing institutional capacity for multidisciplinary biomedical research (BiomedTech)</i> ", project implemented during the period 10.04.2023-5.12.2023, project director: Prof. Dr. Anca Galaction; Team member.
2023	FDI Project, Area 2: Internationalization of higher education in Romania, funded by the Institutional Development Fund 2023, project code CNFIS-FDI-2023-F-0022 " <i>Increasing the visibility and impact of the "Grigore T. Popa" University of Medicine and Pharmacy Iași on the international educational scene (InterMedIS 6.0)</i> ", project implemented during the period 01.09.2023-30.11.2023, project director: Prof. Dr. Liliana Foia; Team member.
2022	FDI Project, Area 6: Supporting excellent research in universities funded by the Institutional Development Fund 2022 with the title " <i>Developing the support mechanism for institutional capacity through biomedical technologies (BiotechMed)</i> ", project implemented during the period 01.04.2022-16.12.2022, project director: Prof. Dr. Anca Galaction; Team member.
2022	Secondary Education Project (ROSE), Grant Scheme for Universities - Competitive Category, Beneficiary: "Gr. T. Popa" University of Medicine and Pharmacy from Iași, Subproject title: "Support for first-year students at the Faculty of Medical Bioengineering at risk of dropping out, for improving academic performance (BioRemedis)", grant agreement no. 359/SGU/SS/III from 10.09.2020, implementation period: 01.02.2022-31.07.2022, project director: Prof. Dr. Anca Galaction; Team member.
2021	FDI Project, Area 6: Supporting excellent research in universities funded by the Institutional Development Fund 2021 with the title " <i>Developing institutional capacity for biomedical research (BioFiziotech)</i> ", project implemented during the period 15.05.2021-17.12.2021, project director: Prof. Dr. Anca Galaction; Team member.
2020-2021	Secondary Education Project (ROSE), Grant Scheme for Universities - Competitive Category, Beneficiary: "Gr. T. Popa" University of Medicine and Pharmacy from Iași, Subproject title: "Support for first-year students at the Faculty of Medical Bioengineering at risk of dropping out, for improving academic performance (BioRemedis)", grant agreement no. 359/SGU/SS/III from 10.09.2020, implementation period: 1.10.2020-31.07.2021, Team member.
2020	FDI Project, no. CNFIS-FDI-2020-0249, area 6: Supporting excellent research in universities funded by the Institutional Development Fund 2020, " <i>Supporting excellent research through the development of medical technologies and biotechnologies (FizioBiotech)</i> "; Coordinator "Grigore T. Popa" University of Medicine and Pharmacy Iași, project director Prof. Dr. Anca-Irina Galaction; Team member.
2019	FDI Project, " <i>Supporting excellent research through biomedical technologies and biotechnologies (TechBiotech)</i> ", Coordinator "Grigore T. Popa" University of Medicine and Pharmacy Iași, 2019, project director Prof. Dr. Anca-Irina Galaction; Team member.
2019	Institutional Development Grant, contract no. 42M/18.11.2019, National competition for funding scientific events and associated activities, 2019 competition, titled: <i>Organization of the International Scientific Event "IEEE International Conference on E-Health and Bioengineering –</i>

	<i>EHB 2019</i> ", project funded by the Ministry of Research and Innovation according to the funding contract no. 42M/18.11.2019, Project Director.
2019	FDI Project, " <i>Supporting excellent research through biomedical technologies and biotechnologies (TechBiotech)</i> ", Coordinator "Grigore T. Popa" University of Medicine and Pharmacy Iași, 2019, project director Prof. Dr. Anca-Irina Galaction; Team member.
2016-2017	UMF Grant, contract no. 31592/23.12.2015, titled " <i>Remote Monitoring of Physiological Parameters to Improve the Prediction of Fetal Outcome</i> ", is being implemented during 2016-2017; Coordinator "Grigore T. Popa" University of Medicine and Pharmacy Iași; Team member.
2015-2016	UMF Grant, contract no. 30891/2014, titled " <i>Innovative Technologies in Special Education: Improve Science, Technology, Engineering, and Mathematics Skills of Dyslexic Children</i> "; 22,000 lei, implemented during 2015-2016; Coordinator "Grigore T. Popa" University of Medicine and Pharmacy Iasi; Project director.
2014-2017	Partnership Project, contract no. 21/2014, titled " <i>Integrated assistance system for communication and telemonitoring aimed at individuals with severe neurolocomotor disabilities (SIACT)</i> ", PN-II-PT-PCCA-2013-4-0761, is being implemented in the period 2014-2017; Coordinator Gheorghe Asachi Technical University Iași, project director Assoc. Prof. Dr. Eng. Radu Gabriel Bozomitu; "Grigore T. Popa" University of Medicine and Pharmacy Iași as a partner, Team member.
2013-2015	ERANET-IB Project, contract no. 6-003/29.05.2013, titled " <i>MICROscale downstream processing TOOLbox for Screening and process development (MICROTOOLS)</i> ", UEFISCDI, conducted during 2013-2015, Coordinator Grigore T. Popa University of Medicine and Pharmacy Iași, project director Prof. Dr. Eng. Anca-Irina Galaction; Team member.
2011-2013	POSDRU/81/3.2/S/59805 project titled " <i>Professional training in the field of medical emergency and promotion of new technologies usage for healthcare sector staff</i> ", implemented by Grigore T. Popa University of Medicine and Pharmacy Iași in partnership with the College of Physicians of Romania and SIVECO SA during 2011-2013, project director Assoc. Prof. Dr. Dan Zaharia; Team member.
2008-2011	Partnership Project, contract no. 12115/2008, titled " <i>Investigation, assistance, and control system for neurological disorders based on the brain-computer interface (BCISIS)</i> ", PNII, conducted during 2008-2011; Coordinator Grigore T. Popa University of Medicine and Pharmacy Iași, project director Prof. Dr. Eng. Anca Lazăr; Team member.
2007-2010	Partnership Project, contract no. 11-070/2007, titled " <i>Integrated e-health solution for monitoring vital parameters in patients with chronic conditions (SIMPA)</i> ", PNII, conducted during 2007-2010; Coordinator Grigore T. Popa University of Medicine and Pharmacy Iași, project director Prof. Dr. Eng. Radu Ciorap; Team member.
2007-2010	Partnership Project, contract no. 11-067/2007, titled " <i>Integrated system for real-time telemonitoring of patients and elderly people (TELEMON)</i> ", PNII, conducted during 2007-2010; Coordinator Grigore T. Popa University of Medicine and Pharmacy Iași, project director Prof. Dr. Eng. Hariton Costin; Team member.
2007-2010	Partnership Project, contract no. 71046/2007, titled " <i>New high-resolution biomagnetometric methods and techniques for biomedical investigation and diagnosis (BIOMAG)</i> ", PNII, conducted during 2007-2010; Coordinator Grigore T. Popa University of Medicine and Pharmacy Iași, project director Prof. Dr. Phys. Octavian Baltag; Team member.
2006-2008	CEEX Project, contract no. 69/2006, titled " <i>Communication system for individuals with severe neuro-locomotor disabilities (TELPROT)</i> ", CEEX II-03/28.07.2006, conducted during 2006-2008; Coordinator Gheorghe Asachi Technical University Iași, project director Prof. Dr. Eng. Vlad Cehan; "Grigore T. Popa" University of Medicine and Pharmacy Iași as a partner; Team member.
2006-2008	CEEX Project, contract no. 11-3/2006, titled " <i>Open intelligent platform for managing heterogeneous medical data, support for clinical decision optimization in virtual medical communities (MIDAS)</i> ", CEEX II 2006, conducted during 2006-2008; Coordinator IPA SA, project

	director Eng. Cristina Ogescu; Grigore T. Popa University of Medicine and Pharmacy Iași as a partner; Team member.
2005-2008	CEEX Project, contract no. 26/10.10.2005 titled " <i>Multimedia platform for the implementation of complex medical teleservices (TELMES)</i> ", CEEX I 2005, conducted during 2005-2008; Coordinator National Institute for Research and Development in Communications - ISCC Bucharest, project director Eng. Sorin Pușcoci; Grigore T. Popa University of Medicine and Pharmacy Iași as a partner; Team member.

Other relevant professional experiences

(e.g. institutional responsibilities, organisation of scientific meetings, membership in academic societies, review boards, advisory boards, committees and major research or innovation collaborations, other commissions of trust in public or private sector)

Year	Description - Role
2024	Editor of the <i>Advances in Digital Health and Medical Bioengineering</i> (currently in the process of being published by Springer Nature), Editors: Hariton-Nicolae Costin • Ratko Magjarević • Gladiola-Gabriela Petroiu, Volume 1: Medical Devices, Measurements, and Artificial Intelligence Applications; Volume 2: Health Technology Assessment, Biomedical Signal Processing, Medicine and Informatics; Volume 3: Telemedicine, Biomaterials, Environmental Protection, Medical Imaging, and Biomechanics.
2023-present	Vice President of the International Society for Digital Health and Education (ISDHE).
2016-2019	Member of the Department of Biomedical Sciences Council. Grigore T. Popa University of Medicine and Pharmacy Iași.
2008-2019	Member of the Faculty Council of Medical Bioengineering, Grigore T. Popa University of Medicine and Pharmacy Iași.
2008-present	Member of the Society of Physicians and Naturalists of Iași, Bioengineering Section.
2008-present	Member of the Steering Committee of the Romanian Society of Medical Bioengineering.
2007-present	Chair of the Organizing Committee and Member of the Scientific Committee for the "IEEE International Conference on E-Health and Bioengineering," which has been held since 2007. Organized 11 editions, out of which 8 were indexed in the IEEE database and in the Web of Science Core Collection - Clarivate.

C.2 Track record of the last 10 years

A list of the ten most important scientific outputs (publications, patents, technologies etc).

1. Silviu-Ioan Bejinariu, Ramona Luca, Ilie Onu, **Gladiola Gabriela Petroiu**, Hariton Costin, *Image Processing for the Rehabilitation Assessment of Locomotion Injuries and Post Stroke Disabilities*, 9th IEEE International Conference on E-Health and Bioengineering (EHB 2021), Iasi, Romania, November 18-19, 2021, ISBN: 978-1-6654-4000-4/21, DOI 10.1109/EHB52898.2021.9657714, WOS:000802227900174
2. Teofil Ursache, **Gladiola Gabriela Petroiu**, Cristian Rotariu, *Remote monitoring of blood pressure by using wireless devices*, 9th IEEE International Conference on E-Health and Bioengineering (EHB 2021), Iasi, Romania, November 18-19, 2021, ISBN: 978-1-6654-4000-4/21, DOI 10.1109/EHB52898.2021.9657600, WOS:000802227900061
3. Teofil Ursache, Andrei Cretu, **Gladiola Petroiu**, and Cristian Rotariu, *A Wireless Low-Cost Device for Transcutaneous Electrical Nerve Stimulation*, The 12th International Symposium on Advanced Topics in

Electrical Engineering, March 25-27, 2021, Bucharest, Romania (ATEE 2021), DOI 10.1109/ATEE52255.2021.9425089, WOS:000676164800026

4. Ramona Luca, Silviu-Ioan Bejinariu, Hariton Costin, Florin Rotaru, **Gladiola Petroiu**, *Human Activity Recognition using Inertial Data*, THE 12th INTERNATIONAL SYMPOSIUM ON ADVANCED TOPICS IN ELECTRICAL ENGINEERING, March 25-27, 2021, Bucharest, Romania (ATEE 2021), DOI 10.1109/ATEE52255.2021.9425112, WOS:000676164800038

5. Ion Raluca, Bedouin Yvan, Gloriant Thierry, Andruseac Gladiola, Gordin Doina-Margareta, Cimpean Anisoara, *In vitro study of human endothelial progenitor cells behaviour on nitrated Ni-free Ti-27Nb alloy*, Rev. Progress in Natural Science-Materials International, Volume: 29, Issue: 4, Pages: 466-471, DOI: 10.1016/j.pnsc.2019.08.001, WOS:000496914300015, 2019, **IF 4.7** (2022).

6. Dragos Sardaru, Daniel Boldureanu, **Gladiola Andruseac**, Dana Matei, Dan Zaharia-Kezdi, Iona Poeta, *Paralytic Lumbar Disc Herniation. A Four Years Social and Economic Impact Study for North-East Region of Romania*, Revista de Cercetare si Interventie Sociala Vol. 57 Pages: 2017, 67-77 , WOS:000404424800004, ISSN: 1583-3410, eISSN: 1584-5397, IDS Number: EZ0VR, **IF 0.736** (2019)

7. Radu Calin Pahonie, Amado Stefan, Ioana Raluca Adochiei, Carmen Luiza Costuleanu, Gabriela Gladiola Andruseac, George Ungureanu, Dragos Petrica Sardaru, *Experimental Characterisation of the Mechanical Properties of Lightweight 3D Printed Polymer Materials for Biomechanical Application in Ankle-Foot Orthosis*, Rev MATERIALE PLASTICE, Volume: 54 , Issue: 2 , Pages: 396-401, 2017, WOS:000408702100044, ISSN: 2668-8220, eISSN: 0025-5289, IDS Number: FF2BE, **IF 1.517** (2019)

8. Carmen Luiza Costuleanu, Gabriela Boldureanu, **Gabriela Gladiola Andruseac**, Management of Toxic Packaging Waste Related to Environmental Protection in Iasi and Neamt Counties, REVISTA DE CHIMIE Volume: 68 Issue: 5 Pages: 1058-1062 Published: MAY 2017, WOS:000405816300036, ISSN: 0034-7752, **IF 1.755** (2019)

9. Alexandru Pasarica, Radu Gabriel Bozomitu, Daniela Tarniceriu, **Gabriela Gladiola Andruseac**, Hariton Costin, Cristian Rotariu, *Analysis of Eye Image Segmentation Used in Eye Tracking Applications*, REVUE ROUMAINE DES SCIENCES TECHNIQUES-SERIE ELECTROTECHNIQUE ET ENERGETIQUE Volume: 62 Issue: 2 Pages: 215-222 Published: APR-JUN 2017, WOS:000405648900017, ISSN: 0035-4066, **IF 0.7** (2022)

10. Radu Calin Pahonie, Amado Stefan, Carmen Luiza Costuleanu, Daniel Boldureanu, **Gabriela Gladiola Andruseac**, *Managing and Analyzing the Constructive and Functional Parameters on Fiberglass Custom Sensor Design for an Aerodynamic Balance*, MATERIALE PLASTICE Volume: 54 Issue: 1 Pages: 155-159 Published: MAR 2017, WOS:000400629900034, ISSN: 0025-5289, **IF 1.517** (2019)

11. **Gladiola Gabriela Petroiu (Andruseac)** and Stavros Gkanatsios, *Robotic Orthosis for Recovery of People With Different Trauma*, 7th IEEE International Conference on E-Health and Bioengineering (EHB 2019), Iasi, Romania, November 21-23, 2019, ISBN: 978-1-7281-2603-6/19, WOS:000558648300069.

12. **Gladiola Gabriela Petroiu (Andruseac)**, Mihaela Moscalu, Alexandru Pășărică, Cristian Rotariu, Anca Zbranca-Toporas and Dragos Sardaru, *EMS-based Analysis of Electrohysterograms for Patients with Preterm Birth Risk*, 7th IEEE International Conference on E-Health and Bioengineering (EHB 2019), Iasi, Romania, November 21-23, 2019, ISBN: 978-1-7281-2603-6/19, WOS:000558648300020.

C.3 Narrative CV

A narrative summarizing which work has had the greatest importance and impact.

I have started my research career during my Bachelor of Engineering's studies, culminating in a Ph.D. in Computer Science from the Technical University "Gheorghe Asachi" of Iași in 2011. My role has evolved from an Assistant to an Associate Professor at "Grigore T. Popa" University of Medicine and Pharmacy Iași, where I have been instrumental in developing and teaching courses in Informatics, Medical Robotics, Biomedical

Systems Automation and other key subjects since 2017. Throughout my research career, I have published 11 books with ISBNs and over 70 research articles, garnering more than 200 citations and achieving an h-index of 13 according to the Clarivate database. I have served as the project director for 2 projects and been a team member in 23 additional projects over the past ten years.

The primary focus of my research was the application of image processing in the field of rehabilitation, specifically aiming to refine the assessment methodologies for locomotion injuries and post-stroke disabilities through advanced image analysis techniques, enhancing the precision of rehabilitation outcomes (DOI: 10.1109/EHB52898.2021.9657714). Despite the potential of image processing to significantly impact rehabilitation accuracy, challenges such as data variability and the need for algorithm optimization persist. In the realm of telehealth, my research aimed to innovate remote monitoring practices, particularly focusing on blood pressure monitoring using wireless devices to ensure continuous and accurate patient care outside traditional clinical settings (DOI: 10.1109/EHB52898.2021.9657600). Although wireless technologies offer extensive benefits for patient monitoring, issues like signal interference and data security require careful consideration. My exploration into medical device innovation concentrated on developing a low-cost, wireless solution for transcutaneous electrical nerve stimulation, striving to make this therapeutic technology more accessible and user-friendly (DOI: 10.1109/ATEE52255.2021.9425089). However, the variability in patient responses and the need for device customization present ongoing challenges in this field. Through my work in biomedical informatics, I aimed to leverage inertial data for nuanced human activity recognition, enhancing the specificity and applicability of this information in personalized patient care and rehabilitation (DOI: 10.1109/ATEE52255.2021.9425112). Despite the potential of inertial data, the complexity of human movement and potential data inaccuracies pose significant analytical challenges. My research in biomedical materials focused on studying endothelial progenitor cell interactions with advanced biomaterials to improve the compatibility and effectiveness of medical implants (DOI: 10.1016/j.pnsc.2019.08.001). While these materials hold promise for enhancing cell integration and function, the intricate dynamics of cell-material interactions remain a complex area of study. In addressing the intersection of healthcare and society, my work analyzed the broader impacts of medical conditions, such as lumbar disc herniation, highlighting the necessity for integrated medical and socioeconomic strategies to mitigate these conditions' effects (DOI: 10.1016/j.rcis.2017.05.004). The multifaceted nature of healthcare impacts necessitates comprehensive approaches that consider both individual well-being and societal costs. My investigation in the domain of 3D printing and biomechanics aimed to harness the potential of 3D printing technology to develop customized, mechanically optimized materials for ankle-foot orthoses, aligning with the goals of personalized medicine and advanced rehabilitation solutions (DOI: 10.37358/MP.17.2.4747). The challenge lies in achieving the requisite material properties that balance durability and comfort while being tailored to individual patient needs. In the area of environmental health, my research endeavored to bridge medical science and environmental protection, focusing on the management of toxic packaging waste. This work underscores the critical need for integrating sustainable practices within healthcare to mitigate environmental impacts and safeguard public health (DOI: 10.37358/RC.17.5.5733). The complexity of this task is compounded by the diverse nature of medical waste and the necessity for effective, yet environmentally benign, disposal strategies. My exploration within computer vision in healthcare was dedicated to advancing eye image segmentation techniques for eye-tracking applications, merging the precision of computer vision with medical diagnostics and patient care (DOI: 10.25038/STEE.2017.017). The primary challenge in this domain is to refine image analysis algorithms to accurately interpret nuanced eye movement data, which is crucial for various applications, from diagnostic procedures to enhancing user interfaces for individuals with disabilities.

Data
02.04.2024

Semnătura
Gabriela Gladiola PETROIU (ANDRUSEAC)

