

## Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Laurentiu – Marian Angheluta**  
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Nationality Romanian  
Date of birth 28.03.1983  
Gender Male

### Work experience

Dates	2017 – present
Occupation or position held	<b>Scientific Researcher II</b>
Main activities and responsibilities	Development of methods for internet teleoperation, informatic tools for online access to research infrastructure; web programming and database design; 3D digitizing methods (laser scanning and photogrammetry) and imagistic investigations with X Rays; project management; scientific papers and patents; development of non-invasive methods for cultural heritage investigation
Dates	2012 – 2017
Occupation or position held	<b>Scientific Researcher III</b>
Main activities and responsibilities	Development of methods for internet teleoperation, informatic tools for online access to research infrastructure; web programming and database design; 3D digitizing methods (laser scanning and photogrammetry) and imagistic investigations with X Rays; project management; scientific papers and patents; development of non-invasive methods for cultural heritage investigation
Dates	01.04.2009 - 01.10.2012
Occupation or position held	<b>Scientific Researcher</b>
Main activities and responsibilities	Design and development of software for control, monitoring and data acquisition; development and construction of automated investigation devices for cultural heritage; artwork investigation using optoelectronic methods; artefact laser cleaning
Dates	2006 – 2009
Occupation or position held	<b>Research Assistant</b>
Main activities and responsibilities	Design and development of software for control, monitoring and data acquisition; development and construction of automated investigation devices for cultural heritage; artwork investigation using optoelectronic methods; artefact laser cleaning.
Type of business or sector	Research and Development
Employer	National Institute for Research and Development in Optoelectronics INOE 2000

### Education and training

Dates	2002-2006
Title of qualification awarded	Bachelor of Computer Science and Physics
Name and type of organisation providing education and training	West University of Timisoara, Faculty of Computer Science and Physics Bachelor project : 'Laserul cu YAG:Nd in curatarea si diagnosticarea suprafetei unui artefact din piatra' [YAG:Nd Laser in Cleaning and Analyzing of a Stone Decoration's Surface.], coordinated by dr. eng. Roxana Radvan and dr. Madalin Bunoiu
Dates	2006-2008
Title of qualification awarded	Master of Physics

Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics – Optics Spectroscopy Plasma Lasers and Electronics department Thesis project: ‘Sistem optoelectronic automatizat de analiza calitativa a suprafetelor cu tehnica LIF’ [Automated optoelectronic device for qualitative analysis of the surfaces using the LIF technique] coordinated by dr. eng. Roxana Radvan and prof. dr. Tiberiu Tudor
Dates	2008 – 2011
Title of qualification awarded	PhD Graduate in Sciences - Physics
Name and type of organisation providing education and training	University of Bucharest, Faculty of Physics – Optics Spectroscopy Plasma Lasers and Electronics Department
Certifications and specializations	
2016	Cultural heritage investigator – Certificate no. L 00039738
2016	Trainer – Certificate no. K 00158744
2016	Photographer – Certificate no. L 00042575
2015	Level 1 Practice Permit for Nuclear Activities (CNDX)
2015	Training on unmanned airborne vehicle control and data acquisition (LIDAR, photogrammetry, multispectral imaging, infrared imaging)
2015	Training on X-Ray generator operation and data acquisition
2014	Level 2 “Radiological safety in practice with ionizing radiation sources”, CNCAN no 83/2014
2014	Intensive programming course (11 weeks): PHP/MYSQL web programmer 1
2013	Intensive programming course (11 weeks): JAVA Fundamentals 1
2010	Study scholarship at Demokritus University of Thrace, Xanthi, Greece – april – august 2010; on mathematical models for the correlation of the photonic investigation data
2009	Training at Polytec, Waldbronn – Germany, on laser doppler vibrometers
2008	Training at ENEA institute, Frascati – Italy, on LIBS technique experiments for qualitative and quantitative analysis
<b>Personal skills and competences</b>	
<b>PC Skills</b>	
Programming languages	JAVA SE, Pascal, Delphi, C++, Visual Basic
Software de automatizare	Labview
Procesare, editare, print 3D	Agisoft Photoscan, 3D Studio Max, Meshlab, CloudCompare, ZEdit Pro, ZPrint
Programare WEB	HTML5, PHP, CSS, JavaScript, JQuery
Baze de date	MySQL, MsAccess
Editare grafică	Adobe Photoshop, Gimp
Editare video	Adobe Premiere, Camtasia Studio, Movie Maker, Vdub
<b>Data acquisition and processing</b>	
	Scanare laser 3D: Surphaser, NextEngine HD
	Printare 3D: ZPrint 450, 3D Kreator Motion
	UAV (LIDAR, multispectral, termic, foto)
	Radiografiere: ISOVOLT 160M1
	Vibrometrie: PSV400
	Fotogrametrie: close-range, aeriană, macro
<b>Mother tongue(s)</b>	Romanian
<b>Other language(s)</b>	English [very good], French [good]
<b>Professional organizations</b>	ISPRS - International Society of Photogrammetry and Remote Sensing CIPA Heritage Documentation

## National projects coordinator

PN-III-P2-2.1-PED-2016-1407 - Platformă digitală integrată pentru valorizarea peisajului cultural din Munții Buzăului. Studiu de caz: cadrul natural și monumentele istorice din zona Aluniș-Bozioru

PN-II-PT-PCCA-2013-4-0495 – Centru pentru valorizarea proiectelor cultural-stiintifice in arheologie

## Experience in field campaigns (selection)

Lady's Church in Bucharest

Fundenii Doamnei Church in Buchares

Painted tombs in Constanța

Mosaic edifice in Constanța

Workshop at CHRESP 2008 in Ljubljana, Slovenia

Workshop at Sf. Stefan din Nessebar – Bulgaria

Martryr's Monument in Moisei, Maramureș

Church B4, Basarabi-Murfatlar, Constanta

Gate of Kiss, Table of silence in Târgu Jiu (2015 - present)

Omnium Sanctorum, Santa Maria Magdalena (Sevilla, Spania)

Mezquita (Cordova, Spania)

Parroquia Arciprestal Basilica Santa Maria (Morella, Spania)

Ulpia Traiana Sarmizegetusa (2015-2017)

Rupestal complex in Aluniș-Bozioru (2017)

## Patents

- [RO125258-A2] Autolaborator pentru investigare, diagnosticare, monitorizare si restaurarea componentelor de patrimoniu - Striber J., Angheluta L., Radvan R., Deciu C., Simileanu M., Ene D., Savastru R.
- [RO125260-A2] Dispozitiv optoelectronic si procedeu pentru analiza stratigrafica a compozitiei chimice a materialului straturilor superficial ale obiectelor de arta cu tehnica LIBS - Striber J., Angheluta L., Radvan R., Simileanu M., Savastru R.
- [RO125259-A2] Dispozitiv optoelectronic si procedeu pentru analiza calitativa a suprafetelor obiectelor de arta cu tehnica LIF - Striber J., Angheluta L., Radvan R., Simileanu M., Savastru R.
- [RO127589-A2] Sistem complex, teleoperat prin Internet, de investigare a operelor de arta utilizand fluorescenta indusa cu ajutorul laserului - Angheluta L., Moldovan A., Ene D., Radvan R., Savastru R.
- [RO126708-A2] Procedeu de asociere a informațiilor de tip imagistic obținute în urma investigațiilor nedistructive, noninvasive, realizate cu tehnici fotonice - Angheluta L., Ene D., Radvan R., Savastru R.
- [RO129590-A2] Metodă cu diodă laser pentru controlul planeității documentelor - Radvan R, Ene D., Angheluta L.
- [RO127775-A2] Sistem de investigare radar in plan vertical, aplicabil in evaluarea cladirilor istorice - Ratoiu L., Angheluta L., Ene D.
- [RO129317-A2] Dispozitiv optoelectronic si procedeu pentru masurarea si analiza calitativa a suprafetelor interioare ale obiectelor de arta si arheologice cu tehnica LIF - Radvan R., Ene D., Ratoiu L., Angheluta L.

## Books and chapters

- Collaborative Control Concept for a Teleoperated Field Investigation Platform in the Conservation of Artworks, Laurentiu Angheluta – The unknown face of the artwork, Editors: Roxana Rădvan, Sevim Akyüz, Monica Simileanu, © İstanbul: İstanbul Kültür University, (2012), ISBN 978-605-4233-94-6, (2012)
- e-book: "The Holy Great Sovereigns Constantine and Helen Church" of Magurele, Ilfov County, Romania – Part 1 – Preparative Research, R. Radvan, L.C. Ratoiu, A.S. Moldovan, D. V. Ene, M. Simileanu, L. M. Angheluta, S. Petrescu, M. Arhip - Ed. Univers Stiintific ISBN: 978-973-1944-58-6, Ed. Top Form ISBN: 978-973-7626-83-7
- e-book: "The Assumption of the Holy Virgin" Church of Tismana Monastery – Documentation and Investigations – Part 1 2009-2011, R. Radvan, M. Dumbravician, L.C. Ratoiu, I. Olteanu, D. V. Ene, I. Ivanescu, L. M. Angheluta, M. Simileanu, I. Marcel, L. Constantin – Ed. Univers Stiintific ISBN 978-973-1944-58-6, Ed. Top Form ISBN: 978-973-7626-84-4
- e-book: "The Assumption of the Holy Virgin" Church of Tismana Monastery – Documentation and Investigations – Part II 2012-2016, R. Radvan, L.C. Ratoiu, A. Chelms, M. Dinu, I. Cornea, L. Ghervase, L. Constantin, C. Constantin, C. Stancu, Laurentiu Angheluta - Ed. Univers Stiintific ISBN: 978-973-1944-58-6, Ed. Top Form ISBN: 0978-973-7626-82-0 (2016)

## Published papers

- Virtual archaeodrome for the archaeological site from Ulpia Traiana Sarmizegetusa, L.M. Angheluta, R.Radvan, A.I. Chelms, L.C. Ratoiu, I.M. Cornea, L. Ghervase - Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., Vol.: XLII-5-W1, 2017, pages: 351-356, ISSN: 2194-9034

2. Integrated Digital Platform for the Valorization of a Cultural Landscape, L. M. Angheluță, L. Ratoiu, A. I. Chelmus, R. Rădvan, and A. Petculescu, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, Vol. XLII-5-W1, 2017, pages: 389-393, ISSN: 2194-9034
3. 3D digitization of an antique decorative textile artifact using photogrammetry, L. M. Angheluta, R. Radvan – *Romanian Reports in Physics*, - in press 2017
4. X-Ray imagistic investigation of historical military artifacts, L. M. Angheluta, A.I. Chelmus - *Restitutio-„PRIMUM NON NOCERE” - Restaurarea patrimoniului față în față cu „vârstele” acestuia*, ISSN 2065-2992, 2016
5. Analysis of radio wave propagation in soil with applications in archeology, A.I. Chelmus, D.V. Ene, L. M. Angheluta - *Romanian Reports in Physics*, vol. 68, no. 2, pp. 813-821, ISSN 1221-1451 43 822, 2016
6. LDV data interpretation and validation protocols, A. I. Chelmus, R. Radvan, L. M. Angheluta, L. C. Ratoiu - *Restitutio- „PRIMUM NON NOCERE” - Restaurarea patrimoniului față în față cu „vârstele” acestuia*, ISSN 2065-2992, 2016
7. An Interdisciplinary Field Campaign For Modern Investigation And Monitoring In Preservation And Restoration, Angheluta, Laurentiu-Marian; Ene, Dragos Valentin - *International Journal of Conservation Science* Volume: 6 Pages: 455-464, 2015
8. CERES – Centru pentru valorizarea proiectelor cultural-stiintifice în arheologie, L. M. Angheluta, Restitutio-„PRIMUM NON NOCERE” - *Restaurarea patrimoniului față în față cu „vârstele” acestuia*, ISSN 2065-2992, 2015
9. Folkmedia: a modern approach on preservation of romanian folklore archive - M Simileanu, S. Ispas, L. C. Ratoiu, L. M. Angheluta, C. Neamu, *International Journal of Conservation Science*, vol. 6, no. 2, pp. 201-208, ISSN 2067-533X, 2015
10. Multi-Purpose Online Instrument For A Conservation-Restoration Mobile Research Laboratory, Laurentiu Angheluta, D. Ene - *Romanian Journal of Physics*, Volume: 60 Issue: 9-10 Pages: 1606-1617, 2015
11. Open-restoration site – modern intervention, trainings and long term monitoring processes, Laurentiu-Marian Angheluta, Dragos-Valentin Ene, Roxana Radvan, Monica Simileanu, Lucian Ratoiu - *Restitutio: Realities and solutions of the specialists in the heritage conservation and restoration domain*, in 2014 Romania, nr.8, 2014, ISSN 2065-2992, pg: 34-37
12. Open access platform for in situ campaigns. Case study for martyrs' monument from Moisei, Maramures, Romania, Simileanu, Monica; Angheluta, Laurentiu M.; Cortea, Ioana M.; et al. - *University Politehnica Of Bucharest Scientific Bulletin- Series A-Applied Mathematics And Physics* Volume: 76 Issue: 3 Pages: 245-252 (2014)
13. Online platform of control, monitoring and e-learning for conservation-restoration resources –Laurentiu Angheluta, Dragos Ene - *Proceedings of The Second International Conference on E-Learning and E-Technologies in Education (ICEEE2013)*, pp. 308-312, ISBN 978-1-4673-5093-8 (c), 2013
14. Using Virtual World Environments in Conservation-Restoration – L. M. Angheluta, 2013 Sixth International Conference on Developments in eSystems Engineering, Abu Dhabi, 2013, pp. 221-224, ISSN 2161-1343
15. The teleoperation of a LIF scanning device - L. M. Angheluta, A. Moldovan, R. Radvan, The teleoperation of a LIF scanning device, *U.P.B. Sci. Bull., Series A*, 73/4 (2011) 193 -200.
16. New Perspectives for Cultural Heritage Conservation Raised beyond Advanced Science and IT - Dragos-Valentin Ene, Roxana Radvan, Laurentiu-Marian Angheluta, Adrian-Septimiu Moldovan, 2010 Developments in E-systems Engineering, vol. 00, no. , pp. 616-620, 2011, ISBN: 978-0-7695-4593-6
17. A Theoretical Approach Based on the Correlation of Unified Data for Different Analyzing Techniques Used in the Modern Investigation of Artworks – Laurentiu Angheluta, Alexandros Rigas, 2010 Developments in E-systems Engineering, London, 2010, pp. 89-92, ISBN: 978-1-4244-8044-9
18. Digital mapping of on-site related photonic investigations over a 3-D surface area – Laurentiu M. Angheluta, Roxana Radvan, Dragos Ene, *Coalition*, no.2, July 2010, p. 7-11
19. Laser spectroscopy methods for an 18th century grisaille painting investigation – J. Striber, R. Radvan, L. -M. Angheluta, *Journal of Optoelectronics and Advanced Materials*, Vol. 11, No. 11, November 2009, p.1815-1820
20. Early Fungal Contamination Tracking – Laurentiu Angheluta, J. Striber, R. Radvan, I. Gomoiu, V. Dragomir, M. Simileanu, *International Journal of Systems Applications, Engineering & Development*, Issue 4, Volume 2, ISSN: 2074-1308, 2008
21. Automated Optoelectronic Device for Qualitative Analysis of the Artwork Surfaces using the LIF technique, Laurentiu Angheluta, Joakim Striber, Roxana Radvan, Monica Simileanu – *Romanian Reports in Physics*, Vol 60, No. 4, 2008. ISSN: 1221-1451
22. Advanced Research Technology for Art and Archaeology – ART4ART mobile laboratory, Monica Simileanu, Walter Maracineanu, Joakim Striber, Cristian Deciu, Dragos Ene, Laurentiu Angheluta, Roxana Radvan, Roxana Savastru, *Journal of Optoelectronics and Advanced Materials*, vol 10, no. 2, febr. 2008
23. Non-Contact and Non-Invasive Photonic Device for Qualitative Fungal Contamination Control, Laurentiu Angheluta, Joakim Striber, Roxana Radvan, Ioana Gomoiu, Vivian Dragomir – *Proceeding MCBC'08 Proceedings of the 9th WSEAS International Conference on Mathematics & Computers In Biology & Chemistry*, World Scientific and Engineering Academy and Society (WSEAS) Stevens Point, Wisconsin, USA ©2008, p 199-205, ISBN: 978-960-6766-75-6
24. Laser cleaning of XVIIIth C. parchment with polychrome inscriptions, M. Simileanu, Georgia Avgerinidou, Laurentiu Angheluta, R. Radvan, L. Miu, J. Striber - *Optoelectronics and Advanced Materials - Vol.2, No.9, Septembrie 2008*, Pg. 587- 592 ISSN 1842-6573
25. Monitoring and Prediction of Cultural Heritage Artifacts Conservation Status, R.Radvan, D.Ene, W.Maracineanu, M.Simileanu, C.Deciu, L.Angheluta, J.Striber, V.Dragomir - *The e-Journal of Nondestructive Testing - Proceedings of The 9th Int. Conference on NDT of Art 2008 Jerusalem, Israel, Mai 2008, 2008*, ISSN 1435-4934

## Oral presentations and posters

1. Virtual archaeodrome for the archaeological site from Ulpia Traiana Sarmizegetusa, L.M. Angheluta, R.Radvan, A.I. Chelmus, L.C. Ratoiu, I.M. Cortea, L. Ghervase - 2017 GEOMATICS & RESTORATION – Conservation of Cultural Heritage in the Digital Era, Florence, Italy, 2017, 22-25 May
2. Integrated digital platform for the valorization of a cultural landscape, Laurentiu Angheluta, R. Radvan, Lucian Ratoiu, A. Petculescu - 2017 GEOMATICS & RESTORATION – Conservation of Cultural Heritage in the Digital Era, Florence, Italy, 2017, 22-25 May

3. X-Ray imagistic investigation of historical military artifacts, L. M. Angheluta, A.I. Chelmus - Restitutio-„PRIMUM NON NOCERE” - Restaurarea patrimoniului față în față cu „vârstele” acestuia , ISSN 2065-2992, 2016
4. CERES – Centru pentru valorizarea proiectelor cultural-stiintifice în arheologie, L. M. Angheluta, presented la Restitutio- „PRIMUM NON NOCERE” - Restaurarea patrimoniului față în față cu „vârstele” acestuia , Bucuresti, Romania, November, 2015
5. E-Infrastructure for Cultural Heritage Investigation - R. Radvan, M. Simileanu, D. V. Ene, L. M. Angheluta, poster at GILT-En ART 2015, Evora, Portugal., mai, 2015
6. Relational database design for the digitization of cultural heritage paper documents – Angheluta Laurentiu-Marian – Workshop on the design of virtual centres of Medieval Studies – ISCH COST: IS1005 Medieval Cultures & Technological Resources – WG4 – VCMS Design, april 2013
7. Metoda moderna de vizualizare a investigatiilor fotonice. Studiu de caz: morminte pictate din judetul Constanta – Angheluta Laurentiu-Marian, Ene Dragos Valentin, Moldovan Adrian-Septimiu - a XLIVa Sesiune Stiintifica Internationala Pontica
8. Editing protocol for the digital mapping of related imagistic investigations – L. M. Angheluta, Lasers in the Conservation of Artworks VIII – Radvan et al. (eds) (C) 2011 Taylor & Francis Group, London, ISBN 978-0-415-58073-1, p. 215-219
9. Reprezentare virtuală detaliată a Cavoului Hypogeu de la Constanța – Laurențiu Angheluță, Dragoș Ene, Atelier de lucru privind lucrările de conservare – restaurare ale componentelor artistice la monumente istorice. Al treilea atelier – București 2009
10. A Theoretical Approach Based on the Correlation of Unified Data for Different Analyzing Techniques Used in the Modern Investigation of Artworks – Laurențiu Angheluță, Alexandros Rigas, International Conference on Developments in eSystems Engineering DeSE10, 6-8 september 2010, London, UK
11. Pachet digital de vizualizare a informațiilor investigațiilor complementare – Laurențiu Angheluță, Dragoș Ene, Control și Autocontrol Prezervarea Patrimoniului Cultural, Comunicare in Cercetarea de Excelenta pentru Restaurare prin Tehnici Optoelectronice, 1-3, Nov 2010, Bucuresti, Romania
12. Laserul cu mediu activ solid YAG: Nd în investigarea și restaurarea artefactelor din piatră, Laurentiu Angheluta, Roxana Radvan, Conferinta studenteasca de Stiinta si Tehnologie, mai 2006, Timisoara
13. Multispectral Imaging Applied on Valuable Artwork Objects From Sucevita Monastery and From the “Dimitrie Gusti” Village Museum From Romania, Laurențiu Angheluță, Balkan Symposium on Archaeometry: Science Meets Archaeology & Art History, Ohrid, Republic of Macedonia, sept 2008
14. Laser Spectroscopy Methods' Optimisation for Painting Analysis, Joakim Striber , Angheluta Laurentiu, Roxana Radvan, Ariadna Zec, LIBS 2008 International Conference, Berlin, 21-27 sept 2008
15. Complex LIF and LIBS Mapping on Wooden Painted Objects, Joakim Striber, Laurentiu Angheluta, Monica Simileanu, Roxana Radvan, Dan Mohanu, LIBS 2008 International Conference, Berlin, 21-27 sept 2008
16. Stain Discrimination Using Laser Induced Spectroscopy , Monica Simileanu, Laurentiu Angheluta, Maria Giurginca, Lucretia Miu, Roxana Radvan , Seminar&Workshop CRP 2008, Torino-Italia, sept 2008
17. Monitorizare calitativa nedistructiva a suprafetelor utilizand tehnica LIF, Laurentiu Angheluta, Simpozion National cu participare Internationala : Cercetarea pluridisciplinara si monitorizarea unor monumente din Romania in curs de restaurare, Bucuresti, sept. 2008