

## Curriculum vitae Europass



### Personal information

First name(s) / Surname(s) **ONIGA Valeria-Ersilia**  
Address(es) Victoriei Street, Number 5A, Balciu, Miroslava, Romania  
Telephone(s) Mobile (+40-745) 634 472  
Fax(es) -  
E-mail [valeria-ersilia.oniga@academic.tuiasi.ro](mailto:valeria-ersilia.oniga@academic.tuiasi.ro)  
Nationality Romanian  
Date of birth 12 October 1983  
Gender Female

### Current position / Occupational field

**Professor** at TU Iasi/ Photogrammetry and Remote Sensing

Dates **February 2022** → present

Occupation or position held **Professor**

Main activities and responsibilities

- teaching lectures, projects and practical laboratory works,
- organization of practical activities for students,
- head of "Photogrammetry, Remote Sensing and Digital Cartography" laboratory,
- member in doctoral guidance boards and doctoral commissions,
- scientific coordinator of bachelor theses,
- scientific coordinator of master theses.

Name and address of employer **"Gheorghe Asachi" Technical University of Iasi**, Dimitrie Mangeron Boulevard, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro>

Type of business or sector Engineer, Civil Engineering, Geodetic Engineering

### Professional experience

Dates **February 2018** → **February 2022**

Occupation or position held **Associate Professor**

Main activities and responsibilities

- teaching lectures, projects and practical laboratory works,
- organization of practical activities for students,
- head of "Photogrammetry, Remote Sensing and Digital Cartography" laboratory,
- member in doctoral guidance boards and doctoral commissions,
- scientific coordinator of bachelor theses,
- scientific coordinator of master theses.

Name and address of employer **"Gheorghe Asachi" Technical University of Iasi**, Dimitrie Mangeron Boulevard, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro>

Type of business or sector Engineer, Civil Engineering, Geodetic Engineering



Dates **October 2014 → February 2018**

Occupation or position held **Lecturer**

Main activities and responsibilities

- teaching lectures, projects and practical laboratory works,
- organization of practical activities for students,
- head of “Photogrammetry, Remote Sensing and Digital Cartography” laboratory,
- member in doctoral guidance boards,
- scientific coordinator of bachelor theses,
- scientific coordinator of master theses.

Name and address of employer **“Gheorghe Asachi” Technical University of Iasi**, Dimitrie Mangeron Boulevard, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro>

Type of business or sector Engineer, Civil Engineering, Geodetic Engineering

Dates **February 2009 → October 2014**

Occupation or position held **Teaching Assistant**

Main activities and responsibilities

- teaching projects and practical laboratory works,
- organization of practical activities for students,
- scientific coordinator of bachelor theses.

Name and address of employer **“Gheorghe Asachi” Technical University of Iasi**, Dimitrie Mangeron Boulevard, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro>

Type of business or sector Engineer, Civil Engineering, Geodetic Engineering

Dates **February 2007 → March 2011**

Occupation or position held **Geodesy Dipl. Engineer**

Main activities and responsibilities Land survey and measurements processing, ground plans preparation.

Name and address of employer **S.C. „AQUAPROIECT” S.R.L.**, Arcu Street, no. 51, Iasi, Romania  
Phone/Fax:+40 232 410394, :+40 232 410394  
E-mail: [aqua@mail.dntis.ro](mailto:aqua@mail.dntis.ro)

Type of business or sector Hydrotechnical Construction Design

Dates **May 2008 → May 2009**

Occupation or position held **Geodesy Dipl. Engineer**

Main activities and responsibilities Carrying out works related to geodesy and cadastre domains

Name and address of employer **S.C. „S.C ”TOPOCAD COMPANY” S.R.L.”**, Petre Țuțea Street 2B, Bl. 907, Tr.1, et.4, ap.14, Iasi, Romania  
Phone/Fax:+40 232 225191

Type of business or sector Carrying out works related to Geodesy, Topography, Cadastre and Cartography domains

## Education and training

Period **2021**

Title of qualification awarded **Certificate of habilitation in GEODESIC ENGINEERING**, by Order no. 4560 MD of the Ministry of Education, Research and Innovation, from 3.08.2021

Disciplines approach/competence Habilitation thesis title: „Research regarding the creation and accuracy assesment of 3D models obtained by using digital images, TLS and ALS point clouds”

Name and type of organisation providing education and training Technical University of Civil Engineering Bucharest, Bd. Lacul Tei, no. 124, 020396, Bucharest,  
Phone/Fax 021 242 1208, <http://www.utcb.ro/>

Period **October 2009 → September 2013**

Title of qualification awarded **PhD in Civil Engineering**, by Order no.5581 MD of the Ministry of Education, Research and Innovation from 3.12.2013

Disciplines approach/competence Ph.D.Thesis title: „Comparative study on methods for 3D modelling of urban area” (295 pages with annexes), 2013; scientific coordinator: Prof. univ. Ph.D Eng. Dumitru Onose

Name and type of organisation providing education and training Technical University of Civil Engineering Bucharest, Bd. Lacul Tei, no. 124, 020396, Bucharest,  
Phone/Fax 021 242 1208, <http://www.utcb.ro/>



Period **October 2003→ June 2007**  
 Title of qualification awarded **Graduation certificate of psycho-pedagogical module, level I and II**  
 Disciplines approach/competence Educational Psychology; Pedagogy, Methodology of teaching specialty; Teaching practicum; Counselling and school orientation; Classroom management.  
 Name and type of organisation providing education and training **“Gheorghe Asachi” Technical University of Iasi**, Romania, Bd. Dimitrie Mangeron, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro/>, Department for teacher’s preparation

Period **October 2002→ July 2007**  
 Title of qualification awarded **Diplomat Eng., profile of Geodetics, Cadastre specialization**  
 Disciplines approach/competence - Photogrammetry and Remote Sensing, Cartography, Topography, Geodesy, GIS, Mathematics, Programming, Statistics,  
 - Design and development of projects for geodetic networks implementation by means of satellite and terrestrial technologies,  
 - Achievement of topo-geodetic measurements for drawing up topographic plans for different objectives, preparation of cadastral documentation for real estate, new construction staking and their behavioural monitoring over time,  
 - Development of single and integrated cartographic products in a Territorial Information System,  
 - Using information technology in solving engineering problems, regarding both the numerical methods applications and the computer assisted graphics.  
 Name and type of organisation providing education and training **“Gheorghe Asachi” Technical University of Iasi**, Romania, Bd. Dimitrie Mangeron, no.67, 700050, Iasi, Romania, Phone/Fax +40232231041, <http://www.tuiasi.ro/>, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of “Terrestrial Measurements and Cadastre”  
 Level in national or international classification ISCED 6

### Personal skills and competences

Mother tongue **Romanian**

Other languages **English, French**

Self-assessment

European Level (\*)

**English language**

**French language**

#### Understanding

Listening

**C1**

Proficient user

Reading

**C2**

Proficient user

#### Speaking

Spoken interaction

**C1**

Proficient user

Spoken production

**C1**

Proficient user

#### Writing

Written Expression

**B2**

Independent user

**B2** Independent user

**B2** Independent user

**B2** Independent user

**B2** Independent user

**B2** Independent user

Social skills and competences Sociable, team spirit, born leader

Organisational skills and competences As a student I was involved in many extracurricular activities.  
 Facile interactions with the academic, economic and geodetic domains.  
 Scientific coordinator of the bachelor theses, master theses and Ph.D theses  
 Main organizer of workshops: **“Learn more about photogrammetry and remote sensing”** (2016-2019,2023), **“Georeferencing and processing of UAS images and UAS/LiDAR-UAS point clouds”** (2023), **“Georeferencing and processing of laser scanning data”** (2017), **“Georeferencing and processing of terrestrial laser scanner point clouds (TLS) and UAV images”** (2019) and member of **GEOMAT Symposium** organizing committee (2013 - 2023).

Technical skills and competences Usage of modern tools for topographic measurements and processing.  
 Usage of open-source and commercial software for processing and multitemporal analysis of satellite images, aerial images, UAS images, terrestrial laser scanner point clouds (TLS) and aerial laser scanner point clouds (ALS).  
 Usage of open-source and commercial software for 3D building model creation.



Computer skills and competences	Mastering the <b>Autodesk Map</b> , for graphic applications, <b>TopoLT</b> , <b>TopoSys</b> and <b>MapSys</b> software for topographic measurements computation and <b>Leica Cyclone</b> , <b>Maptek Point Studio</b> , <b>Lisa</b> , <b>Opals</b> , <b>CloudCompare</b> , <b>Imagine Photogrammetry</b> , <b>3DF Zephyr</b> , <b>Pix4D Mapper</b> , <b>Reality Capture</b> , <b>PhotoScan</b> , <b>QGIS</b> and <b>Snap</b> for photogrammetry and remote sensing data processing. Flight planning for UAV platforms A good grasp of Matlab programming language.
Artistic skills and competences	Passionate of painting, design and 3D graphic
Driver certificate	Authorization certificate D category, Driving licence B category
Other skills and competences	Extremely high workforce, with a constant desire of self-sufficiency, creative, with a special ability to find solutions to technical problems Understanding methods for rapid assessment of damages for different disaster scenarios (e.g. landslides, flooding); Collaboration with local governments, universities, non-profits, building code bodies etc. in developing codes and public policies around resilience Supporting dynamic hazard and resilience assessment done by other partners with damage information.

### Additional information

Author of 31 scientific papers "in extenso" and co-author of 30 scientific papers  
Author of 8 specialized books  
Web of Science Citation Index: h-index: 5 -19 papers/92 citations; 63 verified reviews  
<https://www.webofscience.com/wos/author/record/34535590>  
Scopus: h-index: 5 -17 papers/112 citations;  
<https://www.scopus.com/authid/detail.uri?authorId=55837374900>  
Google Scholar Citation Index: h-index: 9 - 64 papers/387 citations  
<https://scholar.google.com/citations?user=nKEBZFMAAAAJ&hl=en>

Patent application entitled "INNOVATIVE CALIBRATION AND TESTING FIELD FOR THE DIGITAL CAMERAS MOUNTED ON UAS (Unmanned Aerial System)" from 18/10/2017, no. A / 00834

Patent application entitled "Innovative method for filtering, segmenting and classifying point clouds for the derivation of digital terrain models (DTM) based on Airborne Laser Scanner (ALS) data" from 21/07/2017, no. A / 00501

Four awards for research results -UEFISCDI

1. „Proposed Methodology for Accuracy Improvement of LOD1 3D Building Models Created Based on Stereo Pléiades Satellite Imagery”, PN-IV-P2-2.3-PRECISI-2023-73092
2. „3D Modeling of Urban Area Based on Oblique UAS Images—An End-to-End Pipeline”, PN-IV-P2-2.3-PRECISI-2023-70848
3. "Determining the Suitable Number of Ground Control Points for UAS Images Georeferencing by Varying Number and Spatial Distribution", PN-III-P1-1.1-PRECISI-2020-49630
4. "3D Calibration Test-Field for Digital Cameras Mounted on Unmanned Aerial Systems (UAS)", PN-III-P1-1.1-PRECISI-2019-29928

In May 2014, May 2016, June 2017, June 2018 and June 2019 I had power point presentations, organized as seminars and lectures in the field of 3D modelling of urban area and camera calibration at the Department of Geodesy and Geoinformation, Vienna University of Technology

In May 2015 and May 2022, I had power point presentations, organized lectures in the field of 3D modelling of urban area, at Universidade Lisboa, Departamento de Engenharia Geográfica, Geofísica e Energia

Donation of "Opals" software (Department of Geodesy and Geoinformation, Vienna University of Technology - Prof. Univ. Ph.D Eng. Norbert Pfeifer) for "Photogrammetry, Remote Sensing and Digital Cartography" laboratory (TU Iasi)

Acquisition of the low-cost UAV „DJI Phantom 4 Pro v2" and "DJI Mavic Mini 2" for "Photogrammetry, Remote Sensing and Digital Cartography" laboratory (TU Iasi)

Acquisition of the UAV digital oblique camera „SHARE 102S Pro" for "Photogrammetry, Remote Sensing and Digital Cartography" laboratory (TU Iasi)

Designing and implementation of a 3D calibration object for digital non-metric cameras calibration for "Photogrammetry, Remote Sensing and Digital Cartography" laboratory (TU Iasi)

Member of the Council of Department of "Terrestrial Measurements and Cadastre"

Member of the Council of Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering

President of Commission 8 "Spatial Planning and Development" of the Union of Romanian Surveyors

President of Commission 7 "Education" of the Romanian Society of Photogrammetry and Remote Sensing

Member of international scientific review committees for conferences and journals

President and founding member of "Young Photogrammetrist Society"

Certificate of Competence - Remote Pilot (A1/A3 and A2 categories)

Member of international scientific review committees for conferences

1. International Conference on Multidisciplinary Academic Research & Global Innovation (MARGI-2016-2023) Beijing, China
2. International Conference on Multidisciplinary Innovation in Academic Research (MIAR-2016-2023) Almaty, Kazakhstan
3. International Conference on "Global Issues in Multidisciplinary Academic Research" (GIMAR-2016-2023), Dubai-UAE;
4. International Conference on "Multidisciplinary innovation in business engineering science & technology" (MI-BEST-2016-2023), Manila Philippines
5. International Conference on "Trends in Multidisciplinary business & economic research" (TMBER-2016-2023), Bangkok, Thailand
6. International Conference on "New directions in Multidisciplinary research & practice" (NDMRP-2016-2023), Istanbul, Turkey
7. International Conference on „Multidisciplinary trends in academic research" (MTAR-2016-2023), Bangkok, Thailand.
8. International Conference on Global Trends in Academic Research, (GTAR-2016-2023), Bandung, Indonesia
9. International Conference on Multidisciplinary Innovation for Sustainability and Growth (MISG-2016-2023) Kuala Lumpur, Malaysia
10. International Conference on „Multidisciplinary trends in academic research" (MTAR-2015-2023), Bangkok, Thailand.
11. International Conference on „Innovative trends in multidisciplinary academic research" (ITMAR-2015-2023), Istanbul, Turkey.
12. Emerging trends in academic research (ETAR-2015-2023), Bali Indonesia.
13. International Conference on Innovation Challenges in Multidisciplinary Research & Practice (ICMRP-2015-2023) Kuala Lumpur, Malaysia

Organizer of national and international scientific manifestations

1. Member of organizing committee of "Scientific Symposium with International participation **Geomat**" (2013–2019, 2021–2023), Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Iasi.
2. Member of organizing committee of "Scientific Symposium with International participation **Geoprevi 2015**", Faculty of Geodesy, Technical University of Civil Engineering Bucharest.
3. Main organizer of „**Georeferencing and processing of UAS images and UAS/LiDAR-UAS point clouds**" workshop, 09-10 November 2023, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
4. Main organizer of „**Learn more about Photogrammetry and Remote Sensing, V<sup>th</sup> ed.**" workshop, 03-05 May 2023, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
5. Main organizer of „**Georeferencing and processing of terrestrial laser scanner point clouds (TLS) and UAV images**" workshop, 28-29 March 2019, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
6. Main organizer of „**Learn more about Photogrammetry and Remote Sensing, IV<sup>th</sup> ed.**" workshop, 11-12 April 2019, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
7. Main organizer of „**Learn more about Photogrammetry and Remote Sensing, III<sup>d</sup> ed.**" workshop, 19-20 April 2018, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
8. Project manager of „**Learn more about Photogrammetry and Remote Sensing, second ed.**", 27-28 April 2017 (winner of a national competition).
9. Main organizer of „**Learn more about Photogrammetry and Remote Sensing, first ed.**" workshop, 21-22 April 2016, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.
10. Main organizer of "**Georeferencing and processing of laser scanning data**" workshop, 11-12 May 2017, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, Department of "Terrestrial Measurements and Cadastre", Iasi.

**Reference persons**

- Norbert Pfeifer, Prof. Univ. Ph.D Eng. Viena University of Technology
- Fabio Remondino, researcher at 3D Optical Metrology unit from Fondazione Bruno Kessler: FBK, Trento, Italy

**Appendix** Scientific activity



## Appendix

### Scientific papers (ISI journals)

1. Oniga, V.-E.; Loghin, A.-M.; Macovei, M.; Lazar, A.-A.; Boroianu, B.; Sestras, P. *Enhancing LiDAR-UAS Derived Digital Terrain Models with Hierarchic Robust and Volume-Based Filtering Approaches for Precision Topographic Mapping*. *Remote Sens.* **2024**, *16*, 78. <https://doi.org/10.3390/rs16010078>
2. Breaban, A.-I.; Oniga, V.-E.; Chirila, C.; Loghin, A.-M.; Pfeifer, N.; Macovei, M.; Nicuta Precul, A.-M. *Proposed Methodology for Accuracy Improvement of LOD1 3D Building Models Created Based on Stereo Pléiades Satellite Imagery*. *Remote Sens.* **2022**, *14*, 6293. <https://doi.org/10.3390/rs14246293>
3. Oniga, V.-E.; Breaban, A.-I.; Pfeifer, N.; Diac, M. *3D Modeling of Urban Area Based on Oblique UAS Images—An End-to-End Pipeline*. *Remote Sens.* **2022**, *14*, 422. <https://doi.org/10.3390/rs14020422>
4. Pradeep G.S., Danumah Jean Homian, Nikhil S., Prasad Megha K., Patel Nilanchal, Mammen Pratheesh C., Rajaneesh A., Oniga Valeria-Ersilia, Ajin R. S., Kuriakose Sekhar L. (2022)- *Forest Fire Risk Zone Mapping of Eravikulam National Park in India: A Comparison Between Frequency Ratio and Analytic Hierarchy Process Methods*, *Croatian Journal of Forest Engineering* 43(1), pp. 22, (IF 2.088), DOI: 10.5552/crojfe.2022.1137
5. E., Oniga, A.-I., Breaban, N. Pfeifer, C., Chirilă, (2020)- *Determining the Suitable Number of Ground Control Points for UAS Images Georeferencing by Varying Number and Spatial Distribution*, *Remote Sensing (IF 4.118)*, DOI: 10.3390/rs12050876
6. E., Oniga, N. Pfeifer, A., Loghin, (2018)- *3D calibration test-field for digital cameras mounted on Unmanned Aerial Systems (UAS)*, *Remote Sens.* **2018**, *10*(12), 2017; <https://doi.org/10.3390/rs10122017>.
7. Oniga, E., Chirilă, C. (2016), *Analogous vs. digital cameras for buildings 3D models creation*, *Environmental Engineering and Management Journal*, Volume 15/2016, no. 6, pag. 1293-1303, June 2016, Iasi, Romania, ISSN 1582-9596.
8. Oniga, E., Diac, M. (2013)– *Metric and non-metric cameras calibration for the improvement of real-time monitoring process results*, *Environmental Engineering and Management Journal*, Volume 12/2013, no. 4, pag. 719-726, April 2013, Iasi, Romania, ISSN 1582-9596.
9. Moca, V., Popia, A., Oniga, E., Sălceanu G. (2013)– *Analysis of deformations in cartographic projections used in cadastral works performed in the city of Iasi*, *Environmental Engineering and Management Journal*, Volume 12/2013, no. 4, pag. 699-708, April 2013, Iasi, Romania, ISSN 1582-9596.

### Scientific papers (ISI Proceedings)

10. Oniga, V. E., Morelli, L., Macovei, M., Chirila, C., Breaban, A. I., Remondino, F., and Sestras, P.: *PPK processing to boost UAS accuracy in cadastral mapping*, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLVIII-1/W1-2023, 345–352, <https://doi.org/10.5194/isprs-archives-XLVIII-1-W1-2023-345-2023>, 2023.
11. Oniga, E., Chirilă, C., Stătescu, F. (2017), *Accuracy Assessment of a complex building 3D Model reconstructed from images acquired with a low-cost UAV*, *Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.*, XLII-2/W3, pp. 551-558, doi:10.5194/isprs-archives-XLII-2-W3-551-2017, 2017.
12. Oniga, E., Macovei, M., Negrila, A. (2017), *Accuracy assessment of a 3D model reconstructed from images acquired with a low-cost UAV*, *Modern Technologies for the 3rd Millennium (23-24 March, 2017 – Oradea, Romania)*, 61-66.
13. Oniga, E., Cardei, M. (2015), *A new method for the accuracy evaluation of a manufactured piece*, Published under licence by IOP Publishing Ltd., IOP Conference Series: Materials Science and Engineering, Volume 95 (1), 012088, (double blind peer-review article), <http://iopscience.iop.org/article/10.1088/1757-899X/95/1/012088/meta>
14. Diac, M., Chirilă, C., Oniga, E., Hogas H. (2016)– *Creating hydrological risk maps based on the rectified digital terrain model in the Nicolina Hydrographical basin*, 16<sup>th</sup> International Multidisciplinary Scientific Geo Conference, SGEM 2016, Albena, Bulgaria, Book 2 Water Resources, forest, marine and ocean ecosystems, Volume I, ISSN: 1314-2704, doi: 10.5593/sgem2016B31, pp. 219-226.
15. Oniga, E., Chirila, C., Macovei, M. (2016)– *Low-cost aerial unmanned aerial systems in cadastral applications*, 16<sup>th</sup> International Multidisciplinary Scientific Geo Conference, SGEM 2016, Albena, Bulgaria, Book 2 Informatics, Geoinformatics and Remote Sensing, Volume II, , ISSN: 1314-2704, DOI : 10.5593/sgem2016B22, pp. 947-954.
16. Chirila, C., Oniga, E., Dumitru, P. D. (2014)– *Quasigeoid fitting to the GNSS/levelling benchmarks in Iasi city area*, 14<sup>th</sup> International Multidisciplinary Scientific Geo Conference, SGEM 2014, 17 – 26 June, 2014, Albena, Bulgaria, Environmental Economy, ISSN: 1314-2704, Conference proceedings, Volume II, pp. 411-418.
17. Oniga, E., Chirila, C. (2013)– *Object based digital non-metric images accuracy*, 13<sup>th</sup> International Multidisciplinary Scientific Geo Conference, SGEM 2013, Albena, Bulgaria, Volume II, Environmental Economy, ISSN: 1314-2704, Cross Ref, SCOPUS, pp. 655-662.
18. Chirila, C., Oniga, E., Mihalache, R. M. (2013)– *Local quasigeoid modelling in Iasi city area*, 13<sup>th</sup> International Multidisciplinary Scientific Geo Conference, SGEM 2013, Albena, Bulgaria, Volume II, Environmental Economy, ISSN: 1314-2704, Cross Ref, SCOPUS, pp. 301-308.
19. Oniga, E. (2012)– *Comparative study on methods for 3D modeling of urban areas*, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XXXIX-B6, 2012, pp. 155-160, XXII ISPRS Congress, 25 August – 01 September 2012, Melbourne, Australia, eISSN 2194-9034.
20. Oniga, E. (2012)– *A new approach for the semi-automatic texture generation of the buildings facades, from terrestrial laser scanner data*, *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XXXIX-B6, 2012, pp. 161-166, XXII ISPRS Congress, 25 August – 01 September 2012, Melbourne, Australia, eISSN 2194-9034.

### Scientific papers (indexed BDI)

21. Breaban, A.-I.; Oniga, V.-E.; Stătescu, F. (2021) – *A machine learning approach for urban area mapping*, *International Multidisciplinary Scientific GeoConference: SGEM Sofia*, Vol. 21, Iss. 2.1, (2021), pp. 391-398. DOI:10.5593/sgem2021/2.1/s11.78.
22. Oniga V.-E., Crenganis L., Diac M., Chirila C. (2020) – *Overview on remote sensing methods and data sources for floods and landslides management*, *Bulletin of the Polytechnic Institute of Iasi-Construction & Architecture Section*, Tomme: 66 (70), Issue 4, pp. 59-70.
23. Chirila C., Oniga V.-E., Diac M., Crenganis L. (2020) – *Overview of Spatial Reference Systems for Hazard Risk Management in the NE Region of Romania*, *Bulletin of the Polytechnic Institute of Iasi-Construction & Architecture Section*, Tomme: 66 (70), Issue 4, pp. 85-98.
24. Moca V., Oniga V.-E., Onu C., Macovei M., Oprea R., Hutanu C. (2020)- *Analysis of the Deformations Recorded in the Extreme Geographical Administrative – Territorial Units of Romania Using the National 1970 Stereographic Projection System*, *American Journal of Engineering Research (AJER)*, Vol 9 (5), pp. 58-70.
25. E., Oniga, A. Breaban, F., Stătescu, (2018) -*Determining the optimum number of ground control points for obtaining high precision results based on UAS images*, *Proceedings*, 2(7) (doi: 10.3390/ecrs-2-05165).
26. A. Loghin, E. Oniga, C-R. Giurma-Handley, (2018) – *3D point cloud classification of natural environments using Airborne Laser S* *Journal of Engineering Research*, Volume-7, Issue-2, pp-191-197, e-ISSN: 2320-0847.

27. Iurist, N.V., **Oniga, V.E.**, Stătescu, F. (2017) - *Tree-crown delineation based on very high resolution satellite images*, Proceedings of the Biennial International Symposium. Forest and sustainable development, Brasov, 7-8th October 2016, pp. 61-67
28. Păun, C. D., **Oniga, V.E.**, Dragomir, P. I. (2017)– *Three-dimensional transformation of coordinate systems using nonlinear analysis-Procustes algorithm*, International Journal of Engineering Sciences & Research Technology, 6(2): February 2017, pp. 355-363, DOI: 10.5281/zenodo.291839, ISSN: 2277-9655, Impact Factor: 4.116.
29. N.V. Iurist (Dumitrașcu), **V.E. Oniga**, F. Stătescu, C. Marcu (2017), *Floods Damage estimation using Sentinel-1 satellite images. Case study-Galati county, Romania*, Journal of Geodesy and Cadastre RevCAD, no. 22, pp. 115-122, Alba Iulia, Romania, ISSN 1583-2279.
30. Păun, C. D., **Oniga, V.E.**, Dragomir, P. I., Diac, M. (2017) – *The remotely piloted aircraft system for 3D modelling of a cultural heritage building*, Journal of Geodesy and Cadastre RevCAD, no. 22, pp. 203-212, Alba Iulia, Romania, ISSN 1583-2279.
31. A. Loghin, I. Giurma, **E. Oniga** (2017) – *Digital Surface Models derivation from Airborne Laser Scanning Data*, Journal of Geodesy and Cadastre RevCAD, no. 22, pp. 141-150, Alba Iulia, Romania, ISSN 1583-2279.
32. **E. Oniga**, A. Savu, A. Negrilă (2016)-*The evaluation of CloudCompare software in the process of TLS point clouds registration*, Journal of Geodesy and Cadastre RevCAD, no. 21, pp. 117-124, Alba Iulia, Romania, ISSN 1583-2279.
33. A. Loghin, **E. Oniga**, Wieser, M. (2016), *Analysing and modelling terrain surface changes using airborne laser scanning data*, World Journal of Engineering Research and Technology WJERT, Vol. 2, Issue 3, pp. 87-95, ISSN 2454-695X.
34. **E. Oniga**, A. Loghin, Păun, C. D. (2016), *Crashed vehicle profile creation based on digital close-range photogrammetry*, World Journal of Engineering Research and Technology WJERT, Vol. 2, Issue 4, pp. 16-29, ISSN 2454-695X.
35. A. Loghin, **E. Oniga** (2015) -*Digital images and total station measurements fusion for 3D buildings models creation*, Journal of Geodesy and Cadastre RevCAD, no. 18, pp. 64-71, Alba Iulia, Romania, ISSN 1583-2279.
36. **E. Oniga**, ONIGA, M.-B. (2015), *Testing the accuracy of different calibration methods*, Journal of Geodesy, Cartography and Cadastre, Bucuresti, Romania, pp.8-17.
37. Păun, C. D., **Oniga, V. E.**, Ciobanu, L. E. (2015), *Testing a new method of digital images acquisition in the process of 3D reconstruction of an object*, Journal of Geodesy, Cartography and Cadastre, Bucuresti, Romania, pp.28-36.
38. A. Loghin, **E. Oniga** (2015) - *A comparative study on camera calibration algorithms*, Journal of Geodesy and Cadastre RevCAD, no. 19, pp. 135-144, Alba Iulia, Romania, ISSN 1583-2279.
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#### Scientific papers (journals unindexed)

56. Moca, V., **Oniga, E.** (2010) – *Studies on deformations in 1970 stereographical projection and calculation of a local stereographic projection for the Radauti-Prut territory, Botosani*, Bul.I.P. Iasi, Tom LVI, Fasc 2, pp. 25-36, Hydrotechnics section.
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#### Scientific papers (Conference proceedings unindexed)

59. Oniga, E. (2011) - *The methodology for 3D model creation based on LiDAR and photogrammetric data-partial results*, Volume of International Symposium "GEOPREVI 2011", 12 to 13 May 2011, Bucharest, Conspress Press, 2011 (ISBN 979-973-100-162-3), page 205-216.
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#### Books

1. Oniga E., Breaban A-I (2020) - *Application using Aerial Laser Scanning point clouds*, ISBN 978-606-25-0613-1, Matrixrom, Bucharest, 2020
2. Oniga E. (2020) - *Photogrammetry. Practical works (Part I)*, ISBN 978-606-68-5749-9, Performantica, Iasi, 2020
3. Oniga E. (2019) - *Advanced photogrammetry*, ISBN: 978-606-25-0476-2, Matrixrom, Bucharest, 2019.
4. Oniga E. (2017) - *Comparative studies on methods for 3D modelling of urban area*, ISBN 978-3-330-87728-3, Editions Universitaires Europeennes.
5. Oniga E., Păun C. (2017) - *Matlab applications for geomatics*, ISBN 978-606-25-0352-9, Matrixrom, Bucharest, 256 pp.
6. Oniga E. (2017) - *Digital photogrammetry. Practical works*, ISBN 978-606-25-0346-8, Matrixrom, Bucharest, 297 pp.
7. Zăvoianu F., Oniga E. (2017) - *Digital photogrammetry*, ISBN 978-606-25-0373-4, Matrixrom, Bucharest, 323 pp., 2017.
8. Oniga E. (2014) - *Buildings 3D modelling by clasical and digital photogrammetry*, ISBN 978-606-687-119-8, Tehnopress, Iasi, Romania, 282 pp.

#### Research contracts

1. CONTRACT Grant - type PN III- Research projects to stimulate young independent teams (TE), financed by contract no. 142TE/2022-project manager (446 430 RON)
2. CONTRACT Intern grant- type PUBLICATION- financed by contract no. GI/P1/01.07.2021 - project manager (45 000 RON)
3. CONTRACT Grant - type PN III-Mobility projects for researchers, financed by contract no. 203/29.10.2019-project manager (7 109.67 RON)
4. CONTRACT Grant - type PN III-Mobility projects for researchers, financed by contract no. 138/05.07.2018-project manager (10 274 RON)
5. CONTRACT Grant - type PN III-Innovation check, with the title "*Innovative calibration and testing field for the non-metric digital cameras mounted on Unmanned Aerial Vehicles*", financed by contract no. 121CI/2017-project manager (44.464 RON)
6. Member in research team: 2020-2022 - "*Integrated Networks for Hazard Risk Management - HAZARM*", (294000 euro)
7. Member in research team: 2014-2015- "*Environmental Research Center for Risk Management/ Acronym GRIM*" POSCCE - A2-O2.2.1.-2013-1; Operation 2.2.1, ID 1942, no. 663/14.08.2014.

#### Research grants with research institutes or companies

1. CONTRACT of providing services, Beneficiary University of Bucharest by contract no. 10209/10.09.2021, project manager (20 000 RON)

#### Participation at symposiums and workshops

- 1 Scientific summer school with international participation "*VOLTA*", 25-28 September, 2018, Vienna, Austria.
- 2 Scientific workshop with international participation "*56th Photogrammetric Week*", 11-15 September, 2017, Stuttgart, Germany.
- 3 Scientific workshop with international participation "*3D Arch -3D Virtual Reconstruction and Visualization of Complex Architectures*" -1-3 March 2017, Nafplio, Greece.
- 4 Scientific symposium with international participation *GEOMAT-2016-2019*, Iasi, Romania.
- 5 Scientific conference with international participation „*The 3rd International Conference ModTech 2015 -Modern Technologies in Industrial Engineering*”, 17-20 June, 2015, Mamaia, Romania.
- 6 Scientific conference with international participation "*Conference of Agriculture and Food Engineering*", 22-24 October 2015, U.S.A.M.V., Iasi, Romania.
- 7 Scientific symposium with international participation „*GeoPreVi-2015*”, 8-9 May 2015, Bucharest, Romania.
- 8 Scientific symposium with international participation "*Horticulture science, quality, variety, harmony*", 24- 26 May 2012, U.S.A.M.V. Iasi.
- 9 Scientific symposium with international participation „*GeoCAD 2012*”, 11-12 May, Alba-Iulia, Romania.
- 10 Scientific symposium with international participation „*Achievements and prospects in hydrotechnical, geodesy and environmental engineering*”, 25-26 Octombrie, 2012, Iasi, Romania.
- 11 Scientific symposium with international participation „*The 3rd Conference of the young researchers*”, Technical University of Constructions Bucharest, 15-16 November, Bucharest, Romania, 2012.
- 12 Scientific conference with international participation „*XXII International Society for Photogrammetry & Remote Sensing Congress*” 25 August - 1 September 2012, Melbourne, Australia.
- 13 Scientific symposium with international participation „*GeoPreVi-2011*”, 12-13 May 2011, Bucharest, Romania.
- 14 Scientific symposium with international participation „*The 2nd Conference of the Young Researchers*” Technical University of Civil Engineering Bucharest, 17-18 November 2011, Bucharest, Romania.
- 15 Conference of the project finalization - „*Online university collaboration network to develop the ability to provide higher skills in geodesy*”, 17 September 2012, Ramada Hotel, Iasi, Romania.

#### Courses and training

1. **Training at 3D Optical Metrology (3DOM) research unit/ Bruno Kessler Foundation (FBK)**, 19-23 June 2023, Trento, Italy
2. **Training at 3D Optical Metrology (3DOM) research unit/ Bruno Kessler Foundation (FBK)**, 24-28 September 2022, Trento, Italy
3. **EU Drone Pilot Training Specific Category - Level 3**, 12-15 June 2022, BCN Drone Center, Barcelona (Moia), Spain
4. **Workshop for "Vulcan" and "Maptek-I Site Studio" software- „Train the trainer”**, 9-11 July 2019, Edinburgh, UK
5. **Training workshop for "3DF ZEPHYR software"**- 30 September-2 October 2019, Verona, Italy
6. **"Tran-Atlantic Training- Integration of Radar and Optical Remote Sensing in Studying Land Cover/Land Use Change"**-7-11 June 2018, Zagreb, Croatia
7. **Remote sensing-from basics to advanced methods-Uwe Sorgel and Norbert Haala-** Stuttgart University, 10 September 2017, Stuttgart, Germany
8. **Training for „Maptek I-Site Studio" software**— Charles Xandri- "Gheorghe Asachi" Technical University of Iasi, 8 -10 April 2016, Iasi, Romania



9. **Training for „Erdas Imagine” software**— Intergraph Computer Services,“Gheorghe Asachi” Technical University of Iasi, 27 June – 1 July 2016, Iasi, Romania
10. **Monitoring Climate from Space** — European Space Agency, 25 July-28 August 2016, FutureLearn- Online
11. **Stereoscopy-An Introduction to Victorian Stereo Photography** — University of Edinburgh, 1 August-14 August 2016, FutureLearn- Online
12. **Earth Observation from Space** — European Space Agency, 12 September-10 October 2016, FutureLearn- Online
13. **Monitoring the Oceans from Space**— Eumetsat, 24 October-21 November 2016, FutureLearn- Online
14. **Training for “Pix4D Mapper Pro” software** — SysCAD Solutions,“Gheorghe Asachi” Technical University of Iasi, 5-6 November 2015, Iasi, Romania
15. **Training for „Maptek I-Site 8820” terrestrial laser scanner**— Comservice company,“Gheorghe Asachi” Technical University of Iasi, 13 November – 15 November 2015, Iasi, Romania
16. **LiDAR Waveform: The potential and benefits for topographic mapping** – CHARLES TOTH - XXII ISPRS Congress, 25 August – 01 September 2012, Melbourne, Australia
17. **Point clouds from ALS and aerial images for vegetation analysis** – Technische Universität Wien, 2012
18. **Training for „E-learning” platform**- “Gheorghe Asachi” Technical University of Iasi, Faculty of Hydrotechnical Engineering, Geodesy and Environmental Engineering, within POS-DRU\_E-learning project, 12.03-16.03 and 26.03.-30.03.2012.

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