

## Curriculum Vitae Europass



### Personal Information

Name / Surname **ZAHARIA, Sebastian-Marian**

E-mail zaharia\_sebastian@unitbv.ro

Nationality Romanian

### WORK EXPERIENCE

Period 15/10/2021 - present

Name and address of employer PhD supervisor in Industrial Engineering  
Obtained his habilitation in Industrial Engineering Domain  
Transilvania University of Braşov

Areas of expertise Industrial Engineering  
professional / areas of Reliability and testing of industrial products  
interest in research Additive manufacturing technologies

Period 01/03/2022 - present

Employment function or position Assoc. prof. PhD

Name and address of employer Manufacturing Engineering Department, Faculty of Technological Engineering and  
Industrial Management, Transilvania University of Brasov

Type of activity or sector of activity Education and Scientific Research

Period 01/10/2012 – 28.02.2022

Employment function or position Lecturer PhD

Name and address of employer Manufacturing Engineering Department, Faculty of Technological Engineering and  
Industrial Management, Transilvania University of Brasov

Type of activity or sector of activity Education and Scientific Research

### EDUCATION AND TRAINING

Period 01/05/2010 – 30.04.2013

Employment function or position Postdoctoral researcher

Name and type of educational institution / training provider Manufacturing Engineering Department, Faculty of Technological Engineering and  
Industrial Management, Transilvania University of Brasov

Type of activity or sector of activity Research

Period 01/10/2006 - 30/09/2009

Employment function or position PhD student

Name and type of educational institution / training provider	Manufacturing Engineering Department, Faculty of Technological Engineering and Industrial Management, Transilvania University of Brasov
Type of activity or sector of activity	Research Industrial Engineering
Period	01/10/2006 - 15/02/2008
Qualification / diploma obtained	Master Specialization: Engineering and quality management
Name and address of employer	Manufacturing Engineering Department, Faculty of Technological Engineering and Industrial Management, Transilvania University of Brasov
Period	01/10/2001 - 15/07/2006
Qualification / diploma obtained	Aerospace engineer
Name and type of educational institution / training provider	Manufacturing Engineering Department, Faculty of Technological Engineering and Industrial Management, Transilvania University of Brasov
Period	15/09/1997 - 15/06/2001
Qualification / diploma obtained	High school diploma
Name and type of educational institution / training provider	Zărnești Industrial School Group (High School)

## PERSONAL SKILLS

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
<b>English</b>	B2	B1	B1	B1	B1
<b>France</b>	A1	A2	A1	A1	A1

*Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user  
Common European Framework of Reference for Languages*

Organizational / managerial skills	Member of the board of the Manufacturing Engineering department (2016 - present). Responsible for the quality management of the study program "Aerospace Engineering", Faculty of Technological Engineering and Industrial Management, "Transylvania" University of Brasov (01.10.2016 ÷ present).
Technical skills and competences	Areas of expertise: reliability and testing of industrial products; finite element method; additive manufacturing technologies, computer aided design.
Computer skills	Good knowledge of using the following software systems: <ul style="list-style-type: none"> <li>- Microsoft Windows Office (Word, Excel, PowerPoint);</li> <li>- design: Autocad, SolidWorks, Catia;</li> <li>- finite elements analysis: Ansys, Nastran;</li> </ul>

- statistical: Minitab, Mathcad;
- additive manufacturing: BCN Cura, Z-Suite;
- Analysis of the reliability and security of the systems: Alta, Weibull, BlockSim.

## More information

### Scientific research projects obtained as a manager

1. **Theoretical and experimental research on reliability tests**, Funding Agency: UEFISCDI, Project type: RU - TD (Young Doctoral Students), no. UEFISCDI registration 142 / 1.10.2007, project value: 33,142 lei (9888 euros), project duration: 2007–2009, web page: [https://uefiscdi.gov.ro/userfiles/file/TD2007\\_DOCUMENTE\\_COMUNE/PROIECTE%20FINALIZATE%20-%20actualizare%20mai%202011.pdf](https://uefiscdi.gov.ro/userfiles/file/TD2007_DOCUMENTE_COMUNE/PROIECTE%20FINALIZATE%20-%20actualizare%20mai%202011.pdf).
2. **Experimental model of unmanned aerial vehicle made of composite materials manufactured by additive technologies**, Funding agency: UEFISCDI, Project type: PED (EXPERIMENTAL DEMONSTRATIVE PROJECT), project value: 600,000 lei, project duration: 2020-2022, 413PED from 01/11/2020, cod: PN-III-P2-2.1-PED-2019-0739.
3. **Behaviour and lifetime prediction of materials for renewable energy systems under accelerated reliability and durability testing**, Agency of finance: European Commission – Seventh Framework Programme (FP7), Tip project: Solar Facilities for the European Research Area – SFERA, No. 228296, no: P12030800040257, project value: 12.832,29 euro, period: 2012, ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) – Italia, web page: [http://sfera.sollab.eu/index.php?page=access\\_selected](http://sfera.sollab.eu/index.php?page=access_selected).

### Synthesis of the main achievements

Doctoral thesis - Theoretical and experimental research on accelerated reliability tests (2010), field Industrial Engineering, Scientific coordinator: Prof. dr. eng. Ionel MARTINESCU

- no. books published in international publishers: 2
- no. books published in national publishing houses: 7
- no. papers in ISI / Clarivate Analytics indexed journals: 37
  - 29 papers published in ISI / Clarivate Analytics indexed journals
  - 8 papers published at indexed conferences ISI/Clarivate Analytics
- no. BDI indexed papers: 30
- no. papers in conference volumes: 18
- no. patents: 1

**Other specializations, qualifications and projects**

- Specialization course Introduction to CREO, organized by INAS SA, 2013;
- Specialization course Introduction to Ansys Workbench, organized by INAS SA, 2013;
- Specialization course Additive Technology - Selective Laser Melting - SLM GMBH, Germany, 2018;
- Specialization course 3D printing - Fused deposition modelling - Brasov, 2018, 2020.

**Member of professional and scientific associations**

- Society of Reliability Engineers (SRE);
- The Polish Safety and Reliability Association (PSRA);
- Association of Computer Science and Information Technology (IACSIT);
- International Association of Engineers (IAENG);
- Romanian Association of Breaking Mechanics;
- Romanian Association of Tribology;
- University Association of Manufacturing Engineering.

**ISI/Clarivate Analytics indexed journal reviewer**

- Reliability Engineering & System Safety;
- Journal Tehnički vjesnik – Technical Gazette (TV-TG);
- Latin American Journal of Solids and Structures;
- Solar Energy;
- Acta Polytechnica Hungarica;
- Additive Manufacturing;
- Materials;
- Metals;
- Coatings;
- Applied Sciences;
- Materials Research - Ibero-american Journal of Materials.

**Scientific conference organizing committees**

- Member of the conference organizing committee: COSME 2008, COSME 2012, COSME 2016, 13th International Conference "STANDARDIZATION, PROTOTYPES AND QUALITY: A MEANS OF BALKAN COUNTRIES' COLLABORATION – 2016, The 3rd China-Romania Science and Technology Seminar - CRSTS 2018.

**Teaching and research activities abroad**

- Visiting Professor (CEEPUS) University of Technology in Bratislava-Trnava, Slovakia in 2017 and 2018.

## List of relevant publications

### A. Books and monographs

1. Zaharia, S.-M., *Reliability and Maintenance Engineering. Theory, simulation techniques and applications*, LAP Lambert Academic, Berlin, 2019, ISBN 978-620-0-28820-2, 140 pages. <https://www.amazon.com/Reliability-Maintenance-Engineering-simulation-applications/dp/6200288208>.
2. Zaharia, S.-M., *Reliability, maintenance and testing of aerospace systems*, LAP Lambert Academic, Berlin, 2019, ISBN 978-620-0-00390-4, 193 pages. <https://www.amazon.com/Reliability-maintenance-testing-aerospace-systems/dp/6200003904>

### B. Papers published in ISI indexed journals

1. Zaharia, S.-M., Enescu, L.A., Pop, M.A., (2020). Mechanical Performances of Lightweight Sandwich Structures Produced by Material Extrusion-Based Additive Manufacturing, *Polymers*, vol. 12, 1740, ISSN: 2073-4360, FI 3,426, WOS:000564679500001.  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=1](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=1)
2. Zaharia, S.-M., Chicoş, L.A., Lancea, C., Pop, M.A., (2020). Effects of Homogenization Heat Treatment on Mechanical Properties of Inconel 718 Sandwich Structures Manufactured by Selective Laser Melting, *Metals*, vol. 10, 645, ISSN: 2075-4701, FI 2,117, WOS:000540220000093  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=5](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=5)
3. Zaharia, S.-M., Pop, M.A., Udrioiu, R., (2020). Reliability and Lifetime Assessment of Glider Wing's Composite Spar through Accelerated Fatigue Life Testing, *Materials*, vol. 13, 2310, ISSN: 1996-1944, FI 3,057, WOS:000539277000102,  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=3](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=3)
4. Pop, M.A., Croitoru, C., Bedo, T., Geaman, V., Radomir, Zaharia, S.M., Chicos, L.A., (2020). Influence of Internal Innovative Architecture on the Mechanical Properties of 3D Polymer Printed Parts, *Polymers*, vol. 12, nr. 5, 1129, ISSN: 2073-4360, FI 3,426, WOS:000541431100134  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=4](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=4)
5. Pascariu, I.S., Zaharia, S.-M., (2020). Design and Testing of an Unmanned Aerial Vehicle Manufactured by Fused Deposition Modeling, *Journal of Aerospace Engineering*, vol. 33, nr.4, 06020002, ISSN: 0893-1321, FI 1,761, WOS:000536130300006  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=2](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=2)
6. Zaharia, S.-M., (2019). The methodology of fatigue lifetime prediction and validation based on accelerated reliability testing of the rotor pitch links, *Eksplotacja i Niezawodność – Maintenance and Reliability*, vol. 21, nr. 4, pp. 638–644, ISSN: 1507-2711, FI 1,525, WOS:000486626700012,  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=8](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=8)
7. Chicoş, L.A., Campbell, IAN, Zaharia, S.-M., Pop, M.A., Lancea, C; Semenescu, A., Florea, B., Chivu, O.R., (2019). Experimental and Finite Element Analysis of the Open-Cells Porous Materials Subjected to Compression Mechanical Loading. *Materiale Plastice*, vol. 56, no. 2, pp. 421-425, ISSN: 0025-5289, FI 1,517, WOS:000476641000026  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=6](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=6)

8. Pop, M.A., Croitoru, C., Bedo, T., Geaman, V., Radomir, I., Cosnita, M., **Zaharia, S.-M.**, Chicos, L.A., Milosan, I., (2019). Structural changes during 3D printing of bioderived and synthetic thermoplastic materials, Journal of Applied Polymer Science, vol. 136, nr. 17, ISSN: 0021-8995, FI 2,52, WOS:000456861100001  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=7](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=7)
9. Lancea, C., Chicoş, L.A., **Zaharia, S.-M.**, Pop, M.A., Semenescu, A., Florea, B., Chivu, O.R., (2018). Accelerated Corrosion Analysis of AlSi10Mg Alloy Manufactured by Selective Laser Melting (SLM), Revista de Chimie, vol. 69, no. 4, pp. 975-981, ISSN: 0034-7752, FI 1,605, WOS:000433223000046  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=10](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=10)
10. **Zaharia, S.-M.**, Morariu, C.O., Pop, M.A. (2018). A comparative study about static and fatigue behaviour on sandwich structures with different types of glass fiber reinforced polymer skins and Nomex honeycomb core. Revista Romana de Materiale-Romanian Journal of Materials, vol. 48, no.1, pag. 91–100, ISSN: 1583-3186, FI 0,628, WOS:000429213900014  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=11](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=11)
11. Chicoş, L.A., **Zaharia, S.-M.**, Lancea, C., Pop, M.A., Canadas, I., Rodriguez, J., Galindo, J., (2018). Concentrated solar energy used for heat treatment of Ti6Al4V alloy manufactured by selective laser melting, Solar Energy, vol.173, pp. 76-88, ISSN: 0038-092X, FI 4,674, WOS:000452940800007  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=9](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=1&doc=9)
12. **Zaharia, S.-M.**, Lancea, C., Chicoş, L.A., Pop, M.A., Caputo, G., Serra, E., (2017) Mechanical properties and corrosion behaviour of 316L stainless steel honeycomb cellular cores manufactured by selective laser melting. Transactions of FAMENA, vol. 41, nr. 4, pp. 11–24, ISSN: 1333-1124, FI 0,797, WOS:000431808800002  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=15](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=15)
13. **Zaharia, S.-M.**, Pop, M.A., Semenescu, A., Florea, B., Chivu, O.R., (2017). Mechanical Properties and Fatigue Performances on Sandwich Structures with CFRP Skin and Nomex Honeycomb Core, Materiale Plastice, vol. 54, nr. 1, pag. 67-72, ISSN: 0025-5289, FI 1,248, WOS:000400629900016  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=14](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=14)
14. **Zaharia, S.-M.**, Morariu, C.O., Nedelcu, A., Pop, M.A., (2017). Experimental Study of Static and Fatigue Behavior of CFRP-Balsa Sandwiches under Three-point Flexural Loading, BioResources, vol. 12, nr. 2, pp. 2673 – 2689, ISSN: 1930-2126, FI 1,202, WOS:000402883700032  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=16](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=16)
15. **Zaharia, S.-M.**, Pop, M.A., Chicoş, L.A., Lancea, C; Semenescu, A., Florea, B., Chivu, O.R., (2017). An Investigation on the Reliability and Degradation of Polycrystalline Silicon Solar Cells Under Accelerated Corrosion Test. Materiale Plastice, vol. 54, nr. 3, pp. 466-472, ISSN: 0025-5289, FI 1,248, WOS:000426412300012  
[http://apps.webofknowledge.com/full\\_record.do?product=WOS&search\\_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=13](http://apps.webofknowledge.com/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=E4WSU2DcolteJD3P5cs&page=2&doc=13)

Data: 12.05.2023

Assoc. prof. ZAHARIA Sebastian – Marian PhD