



# Iulia Eliza Ținca

## WORK EXPERIENCE

01/06/2021 – CURRENT Timișoara, Romania

**PREDICTIVE BOARD-LEVEL RELIABILITY EXPERT** CONTINENTAL AUTOMOTIVE ROMANIA

- Perform structural simulations and provide simulation reports and proved solutions in order to meet product specifications and optimize the reliability of the product
- Communicate with suppliers (incl. test laboratories), external customers and University
- Take part, initiate and moderate brain storming meetings, reviews and meetings of medium to high complexity projects in order to exchange information and improve design
- Initiate and organize trainings and participate to knowledge sharing meetings in order to improve work results
- Offer support to other technical areas, when required (e.g. production, HW, test)
- Estimate, plan and track own and other's work packages
- Handle and process all project related data according to the company procedures using the appropriate tools and methods
- Contribute to improve procedures, methods, guidelines, work instructions

**Occupational skills:** ANSYS (Workbench, Sherlock, SpaceClaim, OptiSlang, APDL)

**Focus:** PCB and electronic parts modeling and simulation, fatigue analysis, calibration and validation with quality and reliability tests

08/05/2017 – 01/06/2021 Timișoara, Romania

**MECHANICAL SIMULATION ENGINEER** CONTINENTAL AUTOMOTIVE ROMANIA

- Perform structural simulations and provide simulation reports and proved solutions in order to meet product specifications

**Occupational skills:** ANSYS (Workbench, Sherlock, SpaceClaim), ABAQUS, CATIA V5

**Focus:** assembly (bolt connections, clips), handling and environmental test simulation (vibration, shock, drop) of ADAS sensor devices (camera, radar, lidar) and plastic brackets

01/06/2013 – 01/04/2017 Timișoara, Romania

**CIVIL ENGINEER** S.C. PHOENIX CONSTRUCȚII S.R.L., TIMIȘOARA

- Prepare technical and economical proposal for bidding
- Facilitate resource supply in order to ensure the project stays within planned timeline
- Make work statements and returns for ongoing projects
- Liaising, networking and maintaining a good relationship with customers, partners and suppliers

**Occupational skills:** AutoCAD, Microsoft Excel, Word, Outlook

**Focus:** resource estimates

## EDUCATION AND TRAINING

2017 – 2023 Timișoara, Romania

**DOCTOR OF ENGINEERING** IOSUD – Universitatea Politehnica Timișoara, Școala Doctorală de Studii Inginerești

This research focuses on improving solder joint reliability in electronics, specifically in the automotive industry, through applied methods such as virtual prototyping, simulation-based reliability assessment, and the development of practical guidelines. The study employs a combination of experimental and theoretical approaches, including board-level

reliability tests, analytical calculations, and finite element analysis. The research contributes enhancing reliability in electronic devices through the implementation of a PCBA low-cycle fatigue assessment workflow.

**Website** <https://www.upt.ro/> | **Field of study** Mechanical Engineering under the supervision of Prof.Ph.D. Arjana Davidescu |

**Level in EQF** EQF level 8 | **Type of credits** ECTS | **Number of credits** 30 |

**Thesis** Research on Solder Joint Lifetime of Surface-Mounted Devices

2014 – 2016 Timișoara, Romania

**MASTER OF ENGINEERING** Universitatea Politehnica Timișoara

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Learning outcomes:

- Building structural design with possibility of assuming the design leadership
- Execution and maintenance activities in building domain
- Research and development activities in the domain of building structures
- Consultancy, technical assistance and project control

Occupational skills:

- FEA (SAP2000, Abaqus)
- 2D and 3D modeling (AutoCAD, Tekla Structures)

**Website** <https://www.upt.ro/> | **Field of study** Advanced Design of Steel and Composite Structures | **Final grade** 8.80 |

**Level in EQF** EQF level 7 | **Type of credits** ECTS | **Number of credits** 120 |

**Thesis** "Numerical Analysis of Connections for Wind Turbines" coordinator: Assoc. Prof. Ph.D. Adrian Dogariu

2010 – 2014 Timișoara, Romania

**BACHELOR OF ENGINEERING** Universitatea Politehnica Timișoara

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Learning outcomes in the field of civil engineering:

- Recognize elements and structures of constructions
- Dimension construction elements
- Technological and economical design for execution, exploitation and maintenance works
- Organization and management of execution, exploitation and maintenance processes
- Comply with requirements for quality and sustainable development

Occupational skills:

- FEA (SAP2000)
- 2D and 3D modeling (AutoCAD, Tekla Structures)

**Website** <https://www.upt.ro/> | **Field of study** Civil Engineering | **Final grade** 9.03 | **Level in EQF** EQF level 6 |

**Type of credits** ECTS | **Number of credits** 240 |

**Thesis** "Structural design of an urban villa (3 storey) composed of thin walled cold formed steel elements" coordinator: Prof. Ph.D. Dan Dubină

2006 – 2010 Satu Mare, Romania

**BACCALAUREATE DIPLOMA** Colegiul Național „Mihai Eminescu”

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**Website** <https://www.eminescuscsm.ro/> | **Field of study** Mathematics and Computer Science | **Final grade** 9.28 |

**Level in EQF** EQF level 5

## ● LANGUAGE SKILLS

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Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C2	C2	C2	C2	C2
<b>GERMAN</b>	B1	B2	B1	B1	B2

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*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## ● DIGITAL SKILLS

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Microsoft Outlook, Microsoft OneDrive | ANSYS Mechanical | ABAQUS | Microsoft Office

## ● ADDITIONAL INFORMATION

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### PUBLICATIONS

**Analytical Fatigue Life Prediction of Ball Grid Array Solder Joints** – 2023

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Journal of Electronic Materials

[Printed Circuit Board Orthotropic Material Calibration for Static and Dynamic Loading](#) – 2022

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DOI: 10.1109/ESTC55720.2022.9939509

[Printed Circuit Board Assembly Modeling for Predictive Reliability Assessment](#) – 2022

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DOI: 10.1109/SIITME56728.2022.9988304

[Evaluation of Finite Element Modelling Techniques of Printed Circuit Boards under Dynamic and Static Loading and Validation with Experimental Data](#)

– 2021

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DOI: 10.1109/SIITME53254.2021.9663724

[Optimized FE Model for System-Level Solder Joint Reliability Analysis of a Flip-Chip Ball Grid Array Package](#) – 2020

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DOI: 10.1007/978-3-030-60076-1\_26

[System-Level Flip-Chip Ball Grid Array Solder Joint Reliability Assessment Under Different Methodologies and Correlation with Accelerated Thermal Cycling Experimental Data](#)

– 2020

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DOI: 10.1109/ESTC48849.2020.9229748

### NETWORKS AND MEMBERSHIPS

16/07/2023 – CURRENT <https://eps.ieee.org/>  
**IEEE Electronics Packaging Society Membership**

### CONFERENCES AND SEMINARS

16/04/2023 – 19/04/2023 – Graz, Austria  
**2023 24th International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE)**

Link <https://www.eurosime.org/>

26/10/2022 – 29/10/2022 – Bucharest, Romania  
**2022 IEEE 28th International Symposium for Design and Technology in Electronic Packaging (SIITME)**

Link <https://ieeexplore.ieee.org/xpl/conhome/9987716/proceeding?isnumber=9987742>

13/09/2022 – 16/09/2022 – Sibiu, Romania  
**2022 IEEE 9th Electronics System-Integration Technology Conference (ESTC)**

Link <https://www.estc-conference.net/home>

25/04/2022 – 27/04/2022 – St. Julien, Malta  
**2022 23rd International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems (EuroSimE)**

Link <https://www.eurosime.org/index.php/2022-malta/>

27/10/2021 – 30/10/2021 – Timișoara, Romania (online)  
**2021 IEEE 27th International Symposium for Design and Technology in Electronic Packaging (SIITME)**

15/09/2020 – 18/09/2020 – Vestfold, Norway (online)  
**2020 IEEE 8th Electronics System-Integration Technology Conference (ESTC)**

Link <https://www.estc-conference.net/about-estc/previous-conferences/estc-2020>

## CERTIFICATES

15/04/2023

**Reliability Testing and Design for Reliability of Packaging Interconnects by John Lau - Unimicron**

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Link <https://www.credential.net/ddc1d735-629e-475a-b4c0-9f7155081fc6>

15/04/2023

**Reliability of Heterogeneously Integrated Systems - Reliability Challenges and Needs by Application Segments by SB Park - Binghamton University**

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Link <https://www.credential.net/8293b6c6-88aa-488c-8400-65c7d93c2aae>

12/09/2022

**Additive Printed Flexible Hybrid Electronics by Pradeep Lall - Auburn University**

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Link <https://www.credential.net/f700ca63-7eaf-44b9-9901-f8b1bf6964b1#gs.02vvu4>

12/09/2022

**Fan-Out Packaging and Chiplet Heterogeneous Integration by John Lau - Unimicron**

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Link <https://www.credential.net/f700ca63-7eaf-44b9-9901-f8b1bf6964b1#gs.02vvu4>

25/04/2022

**Application of Statistics by Ross Wilcoxon - Rockwell Collins**

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Link <https://www.credential.net/6790fb53-091a-40dd-9394-bf847c5c0d30>

25/04/2022

**Chiplet Design and Heterogeneous Integration Packaging by John Lau - Unimicron**

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Link <https://www.credential.net/62c586f0-9153-4f7c-886c-87cd0b8f8998>

## HOBBIES AND INTERESTS

**Sports** I very much enjoy running a couple times a week and training for a race once or twice a year. I practice some activity daily - running, cycling or strength training. In the summertime I can't wait for the ski season and by the end of winter I look forward to paddle boarding and hiking.

**Travel** I enjoy being on the road, be it vacation time, city break, conferences or business. I enjoy sightseeing, discovering new places, traditions and foods.

**Reading** I find reading to be one of the best past time activities and also one of my favourite vacation activities.