

PERSONAL INFORMATION **Mihaela-Andreea Iftimiciuc****PROFESSIONAL EXPERIENCE**

- 03/02/2020–Present Research associate
Katholieke Universiteit Leuven
 -Finite Element Analysis and experimental testing on hierarchical sandwich core.
- 03/10/2018–03/10/2019 Design Engineer
Advanced Mechatronik Technologies SRL, Braşov (Romania)
 -Design and drafting for components used in manufacturing heat pumps.
- 01/04/2013–28/10/2016 Design Engineer
Schaelffler Romania S.R.L, Braşov (Romania)
 -Design and drafting of cylindrical roller bearings for different production stages (forging, heat treatment, final machining);
 -Creating bills of materials (list of components) for the designed assemblies;
 -Layup design for components made from composite materials (carbon fiber based);
 -FE analysis (stiffness and deformation) for designed components.

EDUCATION

- 01/10/2015–Present Doctoral Studies – Mechanical Engineering
Transilvania University of Braşov, Braşov (Romania)
 PhD thesis with the title “**Pyramidal Cellular Structures Obtained Through a Mechanical Expansion Process for Construction of Sandwich**”
 -Research on determining behavior and mechanical properties of a novel cellular structure used as core in designing and constructing sandwich panels.
- *Personal publications
 M.A. Ciolan, S. Lache, M.N. Velea, **Cellular Cores With Negative Poisson’s Ratio For Sandwich Panels**, Bulletin of the Transilvania University of Braşov, Vol. 10 (59) No. 2 – 2017, Series I: Engineering Sciences.
 Mihaela A. Ciolan, **The Auxetic Behavior of an Expanded Periodic Cellular Structure**, AIP Conference Proceedings 1932, February 2018.
 M A Iftimiciuc, **Topologic Study of a Novel Periodic Cellular Core for Sandwich Panels**, IOP Conference Series Materials Science and Engineering 416:012087, October 2018.
 Iftimiciuc, M.A., Lache, S., Wennhage, P., Velea, M.N., **Structural Performance Analysis of a Novel Pyramidal Cellular Core Obtained through a Mechanical Expansion Process**, Materials 2020, 13(19)
- 01/04/2018–30/06/2018 Research Stage
KUL Katholieke Universiteit Leuven, Leuven (Belgium)
 - Developing a numerical model of a sandwich panel beam designed using the novel cellular core studied within the PhD thesis consisting in four point bending (4PB) simulations in order to determine the structure’s behavior and stiffness;
 -Conducting four point bending (4PB) experimental testing on sandwich panel beams for future validation of the numerical model, and assessing the structure’s mechanical performance.
- 01/09/2017–30/11/2017 Research Stage

KTH Royal Institute of Technology, Stockholm (Sweden)

- Developing the analytical model for the novel cellular core studied within the PhD thesis in order to determine the elastic moduli on its corrugation directions;
- Conducting experimental testing on a unit cell of the designer core (compression, traction, shear) in order to validate the analytical model previously developed;
- Draw-up conclusions on the behavior of the cellular core with an emphasis on the buckling modes encountered during the experimental testing.

10/2012–07/2014 Master's Degree – Mechatronic Systems for Industry and Medicine

Transilvania University of Braşov, Braşov, Romania

Master's thesis **Design and Analysis of Advanced Structures for the Automotive Industry** – developed during a practical placement at LMS International, Leuven, Belgium.

The study consisted in a preliminary static FE analysis on a B-pillar, made from carbon fiber composite material, in order to assess the behavior of the structure while applying compression loads.

10/2012–07/2014 Master's Degree – Vehicles and Technologies for the Future

Transilvania University of Braşov, Braşov, Romania

Master's thesis – **Second Order Hierarchical Structure Made from Reinforced Thermoplastic Materials – Compression Mechanism.**

The study consisted in conducting a series of experimental testing (compression) on a sandwich structure made from reinforced thermoplastic materials and determining the elastic moduli.

*Related publication

M.N. Velea, C. Schneider, S. Lache, **Second order hierarchical sandwich structure made of self-reinforced polymers by means of a continuous folding process**, Materials and Design 102. pp 313-320, 2016.

03/03/2014–31/05/2014 Practical Placement

LMS International, Leuven (Belgium)

- Layup design for components made from composite materials (carbon fiber based) – material choice, layup sequence/angle orientation;
- Static FE analysis on the obtained components.

*Related publication

Alessandra Treviso, Laszlo Farkas, Domenico Mundo, Michel Tournour, **On the sensitivity of Mechanical Properties of Woven-Fabrics to the Draping Process: Static and Dynamic Assessment Through a CAE-Based Approach**, Applied Composite Materials 23, Issue 4, pp 899-911, August 2016.

10/2008–06/2012 Bachelor's Degree – Applied Engineering Sciences (Medical Engineering)

Transilvania University of Braşov, Braşov, Romania

Bachelor's Thesis – **Design of an Osteosynthesis Element for Femoral Fractures.**

The study consisted in designing an intramedullary Kuntscher rod for medial femoral fractures and analyzing its compression behavior in order to determine the most suitable material for manufacturing (having to choose from a variety of bio-inert materials).

SKILLS

Mother Tongue	Romanian
Languages	English (advanced) German (beginner)
Software	Creo (Pro/Engineer) Catia Abaqus Ansys

Matlab

Certifications Cambridge English: Advanced, 2007
Personal skills Punctual, well organized, team working skills, ability to work under pressure
Driver's license B