



Dana Luca MOTOC

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Nationality: Romanian

WORK EXPERIENCE

Transilvania University of Brasov/Department of Automotive and Transport Engineering

City: Brasov | **Country:** Romania

[01/10/2017 – Current] **Professor**

Academic Interests:

Manufacturing and assembly technologies for the automotive industry, modeling and simulation, control systems engineering

Research Focus:

Automotive materials—processing techniques, property identification, and performance optimization

Administrative and Supervisory Roles:

Student mentoring and academic supervision at undergraduate, master's, and PhD levels; guidance of dissertations and theses; monitoring academic progress and coordinating research activities

Transilvania University of Brasov/Department of Material Science

City: Brasov | **Country:** Romania

[01/03/2017 – 30/09/2017] **Professor**

Academic Interests:

Composite materials, materials selection methodologies, operations research

Research Focus:

Manufacturing processes of composite materials, experimental testing, and materials characterization

Administrative and Supervisory Roles:

Student mentoring and academic advising across undergraduate, master's, and PhD levels; supervision of theses and dissertations; coordination and oversight of academic progress; Erasmus+ Faculty Coordinator

Transilvania University of Brasov/Department of Material Science

City: Brasov | **Country:** Romania

[01/10/2013 – 27/02/2017] **Associate Professor**

Academic Interests:

Composite materials, materials selection methodologies, operations research

Research Focus:

Manufacturing processes of composite materials, experimental testing, and materials characterization

Administrative and Supervisory Roles:

Student mentoring and academic advising across undergraduate and master's levels; supervision of license theses and dissertations; coordination and oversight of academic progress; Erasmus+ Faculty Coordinator

Transilvania University of Brasov/Department of Mechanics

City: Brasov | **Country:** Romania

[01/10/2012 – 30/09/2013] **Associate Professor**

Academic Interests

High-level programming languages and computational mechanics

Research Focus

Manufacturing, mechanical testing, and characterization of composite materials

Administrative and Supervisory Roles

Mentoring and academic supervision of undergraduate students; coordination and oversight of academic progress

Transilvania University of Brasov/Department of Precision Mechanics and Mechatronics

City: Brasov

[01/10/2003 – 30/09/2012] **Associate Professor**

Academic Interests:

High-level programming languages, virtual instrumentation, technical and geometrical optics, optoelectronics, computerized optical systems, computational mechanics

Research Focus:

Manufacturing, testing, and characterization of composite materials

Administrative and Supervisory Roles:

Student tutoring and academic supervision at undergraduate level; coordination and oversight of academic progress

Transilvania University of Brasov/Department of Precision Mechanics and Mechatronics

City: Brasov | **Country:** Romania

[01/10/1999 – 30/09/2003] **Lecturer**

Academic Interests

High-level programming languages, virtual instrumentation, technical optics, geometrical optics, optoelectronics, computerized optical systems, and computational mechanics

Research Focus

Manufacturing, mechanical testing, and characterization of composite materials

Administrative and Supervisory Roles

Student tutoring and academic supervision at undergraduate level; coordination and oversight of academic progress

Transilvania University of Brasov/Department of Precision Mechanics and Mechatronics

City: Brasov | **Country:** Romania

[01/10/1995 – 30/09/1999] **Assistant professor**

Academic Interests

High-level programming languages, technical optics, optoelectronics, geometrical optics, and physical optics

Research Focus

Development and application of optical systems for mechanical devices

Transilvania University of Brasov/Department of Precision Mechanics

City: Brasov | **Country:** Romania

[01/10/1992 – 30/09/1995] **Junior Lecturer**

Academic Interests

High-level programming languages, technical optics, optoelectronics, geometrical optics, and physical optics

Research Focus

Development and application of optical systems for mechanical devices

EDUCATION AND TRAINING

[14/06/2021]

Habilitation Degree in Automotive Engineering

University of Pitesti www.upit.ro

City: Pitesti | **Country:** Romania | | **Level in EQF:** EQF level 8 | **Thesis:** Designing thermosets composites for automotive engineering applications

[29/09/2015]

Habilitation Degree in Mechanical Engineering

Transilvania University of Brasov www.unitbv.ro

City: Brasov | **Country:** Romania | | **Level in EQF:** EQF level 8 | **Thesis:** Tailoring the effective properties of hybrid polymer based composite materials

[01/09/2012 – 01/09/2017]

PhD Degree in Industrial Production and Engineering

Polytechnic University of Valencia www.upv.es

City: Valencia | **Country:** Spain | **Field(s) of study:** Material Science - Polymers and Composite Materials | **Final grade:** Cum Laude | **Level in EQF:** EQF level 8 | **Thesis:** Development of green composites based on epoxidized vegetable oils (EVOs) with hybrid reinforcements: natural and inorganic fibers

[01/10/1996 – 01/10/2002]

PhD Degree in Mechanical Engineering

Transilvania University of Brasov www.unitbv.ro

City: Brasov | **Country:** Romania | **Field(s) of study:** Strength of Materials, Elasticity and Plasticity | **Final grade:** Cum Laude | **Level in EQF:** EQF level 8 | **Thesis:** Contributions to analyzing the correlations between the tension level and the physical properties characteristic to certain materials by using non destructive testing methods (sound,

[01/10/2007 – 01/10/2009]

Master's Degree in Finance and Banking

Transilvania University of Brasov www.unitbv.ro

City: Brasov | **Country:** Romania | | **Level in EQF:** EQF level 7

Financial analysis and management, public financial policy, financial accounting, economic statistics, simulation and modeling of economic processes

[01/10/1993 – 01/10/1995]

Master's Degree in Mechanical Engineering and Energy Management

Transilvania University of Brasov/Technical University of Cluj-Napoca/Free University of Brussels

City: Brasov/Cluj-Napoca | **Country:** Romania | | **Level in EQF:** EQF level 7

Advanced design, robotics, finite element method, energy management, materials science

[01/10/1987 – 01/10/1992]

Bachelor's Degree in Mechanical Engineering

Transilvania University of Brasov/Technical University of Cluj-Napoca/Free University of Brussels www.unitbv.ro

City: Brasov | **Country:** Romania | | **Level in EQF:** EQF level 6

LANGUAGE SKILLS

Mother tongue(s): Hungarian

Other language(s):

English

LISTENING C2 **READING** C2 **WRITING** C2

SPOKEN PRODUCTION C2 **SPOKEN INTERACTION** C2

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

SKILLS

Communication Skills

Academic Communication: Ability to explain complex technical and scientific concepts clearly to undergraduate, master's, and PhD students

Research Communication: Preparation and presentation of research findings at peer-review journals, conferences, seminars, and within research teams

Cross-cultural Communication: Coordination and collaboration with international students and faculty members (e.g., through Erasmus+ programs)

Technical Writing: Authoring academic papers, dissertations, research reports, and educational materials

Supervision and Mentoring: Providing guidance, feedback, and structured communication to students across various educational levels

Team Collaboration: Effective communication within interdisciplinary research and teaching teams

Presentation Skills: Delivering lectures, seminars, and public presentations on specialized engineering, optics, and materials science topics

Project Coordination: Leading and coordinating educational and research activities, ensuring clear communication among stakeholders

PROJECTS

- [2007 – 2010]

Advanced research aiming the development of multiphase polymeric composite materials with improved mechanical and physical properties

Exploratory research project funded by CNCISIS through the PN II IDEI program
- [2004 – 2005]

2005 CNCISIS, AT 172, Title: Analysis, manufacturing, modelling and non destructive ultrasonic testing of particle reinforced polymeric composite materials for development a concurrent engineering environment

Research project funded by CNCISIS through the AT program (no. 172/2004)

GRANTS AND FELLOWSHIPS

- [15/11/2018 – 30/11/2018]

Visiting Researcher

Fraunhofer PYCO – Research Institution for Polymeric Materials and Composites, Teltow Campus, Berlin, Germany
- [01/09/2013 – 01/11/2013]

Visiting Researcher

Fraunhofer PYCO – Research Institution for Polymeric Materials and Composites, Teltow Campus, Berlin, Germany

Funded by DAAD Scholarship
- [01/02/1999 – 01/05/1999]

Visiting Researcher

Mechanical and Physics Laboratory, Université Bordeaux I, France






Supported by the European Commission (Socrates Program)
- [01/01/1995 – 30/08/1995]

Visiting Researcher

Astrophysics Laboratory, Queen’s University Belfast, Northern Ireland

Funded by the European Commission (TEMPUS Project JEP 237/1993)

DIGITAL SKILLS TEST RESULTS

	Information and data literacy	ADVANCED	Level 6 / 6
	Communication and collaboration	ADVANCED	Level 6 / 6
	Digital content creation	ADVANCED	Level 5 / 6
	Safety	ADVANCED	Level 6 / 6
	Problem solving	ADVANCED	Level 6 / 6

Results from a [self-assessment](#) based on [The Digital Competence Framework 2.1](#)

[UV LED Curable Perfluoropolyether \(PFPE\)-Urethane Methacrylate Transparent Coatings for Photonic Applications: Synthesis and Characterization](#)

Reference: Dreyer, C., Motoc, D.L., Koehler, M., Goldenberg, L. (2023), *Polymers*. 15(14): 2983-98.

[2022] **[Mechanical, Dynamic-Mechanical, Thermal and Decomposition Behavior of 3D-Printed PLA Reinforced with CaCO₃ Fillers from Natural Resources](#)**

Reference: Pavon, C., Aldas, M., Samper, M.D., Motoc, D.L., Ferrandiz, S., Lopez-martinez, J. (2022), *Polymers*. 14(13):2646-60.

[Gum Rosin as a Size Control Agent of Poly\(Butylene Adipate-Co-Terephthalate\) \(PBAT\) Domains to Increase the Toughness of Packaging Formulations Based on Polylactic Acid \(PLA\)](#)

Reference: Aldas M, Ferri JM, Motoc DL, Peponi L, Arrieta MP, López-Martínez J. (2021), *Polymers*. 13(12):1913

[2021] **[Dynamic-Mechanical and Decomposition Properties of Flax/Basalt Hybrid Laminates Based on an Epoxidized Linseed Oil Polymer](#)**

Reference: Motoc, D.L., Ferri, J.M, Ferrandiz-Bou, S., Garcia-Garcia, D., Balart, R. (2021), *Polymers*, 13(4): 479