


PERSONAL INFORMATION



Motoc Dana

 Transilvania University of Brasov

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 Skype Dana Luca Motoc

Sex Female | Date of birth 08/07/1969 | Nationality Romanian

POSITION PHD COORDINATOR
IOSUD UTBV

PhD coordinator in the doctoral studies domain: **Mechanical Engineering**

Since: 2015/October

Expertise fields and research interest topics within the coordinated PhD domain

- Composite materials – synthesis, manufacturing, characterization
- Micromechanical prediction and FEM simulation
- Advanced materials for a wide range of engineering applications

WORK EXPERIENCE

October 1st, 2017 - present

Professor

Transilvania University of Brasov, Faculty of Mechanical Engineering, Department of Automotive and Transport Engineering, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: manufacturing and assembling technologies, computer programming, numerical methods, applied informatics
- Research activities: composite materials manufacturing, testing and characterizing
- Management activities: students tutoring, undergraduate/master dissertation/PhD paper advising, monitoring and coordinating.

March 1st, 2017
October 1st, 2017

Professor

Transilvania University of Brasov, Faculty of Material Science and Engineering, Material Science Department, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: composite materials, materials selection, operation research, robotics
- Research activities: composite materials manufacturing, testing and characterizing

Management activities: students tutoring, Erasmus + faculty coordinator, undergraduate/master dissertation/PhD paper advising, monitoring and coordinating.

October 1st, 2012
March 1st, 2017

Associate professor

Transilvania University of Brasov, Faculty of Material Science and Engineering, Material Science Department, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: composite materials, materials selection, operation research, robotics
- Research activities: composite materials manufacturing, testing and characterizing
- Management activities: students tutoring, Erasmus + faculty coordinator, undergraduate/master dissertation/PhD paper advising, monitoring and coordinating.

October 1st, 2013 - 2012

Associate professor

Transilvania University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics and Mechatronics Department, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: high level computer language, virtual instrumentation, technical optics, optoelectronics, geometrical optics, computerized optical systems, computational mechanics
- Research activities: composite materials manufacturing, testing and characterizing
- Management activities: students tutoring, undergraduate/master dissertation paper advising, monitoring and coordinating.

October 1st, 1999 - 2003

Lecturer

Transilvania University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics and Mechatronics Department, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: high level computer language, virtual instrumentation, technical optics, optoelectronics, geometrical and physical, optics, computerized optical systems, clinical diagnosis, equipment for optical information processing
- Research activities: optical systems for material testing and characterization
- Management activities: students tutoring, undergraduate/master dissertation paper advising, monitoring and coordinating.

October 1st, 1995 - 1999

Assistant professor

Transilvania University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics and Mechatronics Department, 29 Eroilor Av., 500036, Brasov, Romania

- Academic activities: high level computer language, technical optics, optoelectronics, geometrical and physical, optics
- Research activities: optical systems for mechanical devices

EDUCATION AND TRAINING

September 1st, 2012-2017

PhD in Industrial Production and Engineering

Polytechnic University of Valencia, Spain

- Associated rights and privileges – Cum laudae
- PhD thesis delivered – *Development of green composites based on epoxidized vegetable oils (EVOs) with hybrid reinforcements: natural and inorganic fibers*
- Specialization – Material Science -polymers and composite materials

September 29th, 2015

Habilitation degree

Transilvania University of Brasov, Interdisciplinary Doctoral School, Mechanical Engineering domain

- Habilitation thesis delivered – *Tailoring the effective properties of hybrid polymer based composite materials*

October 1st, 2007-2009

Master of Science in Finance and Banks

Transilvania University of Brasov, Faculty of Economical Sciences and Business Administration

- Finance analysis and management, public financial policies, finance accountancy, economics statistics, economical processes simulation and modelling

October 1st, 1996-2002

PhD in Mechanical Engineering

Transilvania University of Brasov, Interdisciplinary Doctoral School, Mechanical Engineering domain

- Associated rights and privileges – Cum laudae
- PhD thesis delivered – *Contributions to analyzing the correlations between the tension level and the physical properties characteristic to certain materials by using non-destructive testing methods (sound, visual)*
- Specialization – strength of materials, elasticity and plasticity

October 1st, 1993-1995

European Master of Science in Mechanical Engineering and Energy Management

Transilvania University of Brasov, Technical University of Cluj-Napoca, International Technological University, The Free University of Brussels

October 1st, 1987-1992

License degree in Mechanical Engineering

Transilvania University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics

- General assignments – computer aided design, manufacturing technologies, optoelectronics, optics, vibrations, modelling and simulation of mechanical devices, electronics, and quality assurance

PERSONAL SKILLS

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Cambridge First certificate, IELTS, TOEFL.					

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- Team spirit and good communication skills acquired through experience as manager or member of 16 research projects (manager – 3 research grants; member – 13 research grants).
- Communication skills and competences concerning the knowledge transmission and continuing education gained through experience in the teaching activities within the “Transilvania” University of Brasov, since 1992.
- Good ability to adapt multicultural environments.

Organizational/managerial skills

- Project and team management developed skills through experience and project manager positions:
- 2007-2010 PNII-CNCSIS, IDEI Program, Title: Advanced research aiming the development of multiphase polymeric composite materials with improved mechanical and physical properties
 - 2004-2005 CNCSIS, AT 172, Title: Analysis, manufacturing, modelling and non-destructive ultrasonic testing of particle reinforced polymeric composite materials for development a concurrent engineering environment

Job-related skills

- Experimental characterization/identification/evaluation of the behavior/(mechanical, thermal, electrical) properties/aging of mechanical structures and advanced materials
- Optical methods for advanced materials characterization (stress/strain states evaluation; mechanical properties identification-based laser ultrasonic; surface parameter identification) – set-up, monitoring, use and tailoring
- Mechanical and dynamic mechanical methods for advanced/multi-layered polymer based composite materials characterization
- Mechanical methods for engineering structures behavior under extreme environmental conditions
- Electrical measures for advanced materials/composite materials characterization

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

Programming in high level computer languages – C/C++, graphical programming in LabVIEW (2018), linear and non-linear multi-scale material modelling, and structural analysis and simulation in FEM based environments, statistical data processing, numerical methods.

ANNEXES

- Fellowship**
- 1st Jan. – 30th Aug. 1995 Queens University of Belfast, Astrophysics Laboratory, Northern Ireland, financial support of European Commission, Project Tempus, JEP 237/1993
 - 1st Feb. – 1st May 1999 Universite Bordeaux I, Mechanical and Physics Laboratory, France, financial support of European Commission, Socrates Program
 - 1st Sept. – 30th Oct. 2013 PYCO Fraunhofer Research Institution for Polymeric Materials and Composites, Berlin, Teltow Campus, Germany, financial support DAAD scholarship
 - 15th Nov. – 30th Nov. 2018 PYCO Fraunhofer Research Institution for Polymeric Materials and Composites, Berlin, Teltow Campus, Germany

Publications

Author and co-author of more than 180 scientific articles (18 articles in ISI journals, 25 articles in ISI proceedings, 75 in proceedings of international conferences world-wide)
 Author and co-author of 11 books (4 – unique author, 4 – first author)
 Author and co-author of 2 patens
Pressure-force transducer embedded in concrete pillars
Adjusting resistor made of a piezo-resistive based effect composite material

Papers (selected)**ISI journals**

- Motoc Luca, D.**, S. Ferrandiz Bou, R. Balart - Thermal properties comparison of hybrid CF/FF and BF/FF cyanate ester-based composites, Journal of Thermal Analysis and Calorimetry, ISSN 1388-6150, 2018, doi: 10.1007/s10973-018-7222-y (IF 1,953), vol. 133 (1), 509-518.
- Motoc Luca D.**, Ferrandiz S., Balart R. – Effects of fiber orientation and content on the mechanical, dynamic mechanical and thermal expansion properties of multi-layered glass/carbon fiber-reinforced polymer composites, Journal of Composite Materials, 2015, p. 1211-1221.
- Motoc Luca D.**, Ivens, J., Dadirlat, N. – Coefficient of thermal expansion evolution for cryogenic preconditioned hybrid carbon fiber/glass fiber reinforced polymeric materials, Journal of Thermal Analysis and Calorimetry, 2012
- Motoc Luca D.**, Curtu I., Soica A., Semenescu A. – Multiphase polymeric composite materials CTE variation with extreme environmental conditions, Materiale Plastice, vol. 47, no. 2, 2010, pp. 236-240, ISSN 0025-5289
- Motoc Luca D.**, Olteanu I., Luca V. – Tailoring the multiphase composite materials' electrical properties, Journal of Optoelectronics and Advanced materials, Vol. 12, no. 2, Aug. 2010, ISSN 1454-4164
- Motoc Luca D.**, Curtu I. – Dynamic mechanical analysis of multiphase polymeric composite materials, Materiale Plastice, vol. 46, no. 4, 2009, pp. 462-466, ISSN 0025-5289
- Curtu I., **Motoc Luca D.** – Theoretical-experimental comparisons of multi-phase composite materials elastic coefficients retrieved from tensile, compressive and bending tests. Influencing factors, Materiale Plastice, ISSN 0025-5289, vol. 45, nr. 4, 2008, pp. 366-371
- Olteanu, D. I., **Motoc Luca D.**, Luca V., Roşu D. – Electrical properties of metallic iron particle reinforced polymeric composite materials, Journal of Optoelectronics and Advanced Materials, Vol. 10, no. 12, 2008, pp. 3328-3331, ISSN 1454-4164

ISI proceedings

- Motoc Luca D.** - Dynamic mechanical characterization of CF/GF hybrid reinforced polymeric composite structures, ESDA 2012 – Proceedings of the 11th Biennial Conference on Engineering Systems, Design and Analysis, July 2-4, Nantes, France, <http://www.asme.org/>
- Motoc Luca D.**, Vlase S. - Micromechanical based simulation and experimental approaches in the thermal conductivities assessment of hybrid polymeric composite materials, ESDA 2012 – Proceedings of the 11th Biennial Conference on Engineering Systems, Design and Analysis, July 2-4, Nantes, France, <http://www.asme.org/>
- Motoc Luca D.**, Pop, P. A., Ferrandiz Bou, S., Dadirlat, N. - Tailoring thermal properties of hybrid glass fibers/carbon fibers reinforced polymeric composites, IMECE2011 - Proceedings of the 2011 ASME International Mechanical Engineering Congress & Exposition, Nov. 11-17, Denver, Colorado, USA, <http://www.asme.org/>
- Motoc Luca D.**, Curtu I., Campean M. – Environmental effects on multiphase polymeric composite materials thermal properties, ECCM14- Proceedings to The 14th European Conference on Composite Materials, June 7-10 2010, Budapest, Hungary, ISBN 978-963-313-008-7, <http://eccm14.pt.bme.hu>
- Motoc Luca D.**, Pop A. P., Bejinaru Gh. - Sizing the cryogenic conditioning on the CTE and Young modulus in case of polymeric multiphase composites, MSEC 2010 – International Manufacturing Science and Engineering Conference, ASME 2010, Oct. 12-15, Erie, USA, ISBN 978-0-7918-3887-7, <http://www.asme.org/>

Books (selected)

Szava I., Ciofoaia V., **Motoc Luca D.**, Curtu I.-Metode experimentale în dinamica structurilor mecanice (en. Experimental methods in mechanical structures dynamics), Ed. Universităţii "Transilvania" din Braşov, 2001, ISBN 973-9474-40-3

Motoc Luca D. – Materiale compozite cu pulberi: analiză, modelare, fabricare și testare ultrasonică nedistructivă (en. Particle reinforced composite materials: analysis, modelling, manufacturing and non-destructive ultrasonic testing), Ed. Universităţii „Transilvania” din Braşov, 2005, ISBN 973-635-527-6

Curtu I., **Motoc Luca D.** – Micromecanica materialelor compozite. Modele teoretice (en. Composite materials micromechanics. Theoretical models) , Ed. Universităţii „Transilvania” din Braşov, 2009, ISBN 978-973-598-469

Chapters in international books

Motoc Luca D. – Temperature dependent properties of CF/FF and BF/FF reinforced hybrid epoxy composites, Advances in Material Science Research, Nova Science Publishers Inc., 2017, ISBN: 978-1-53612-769-0, vol. 31

Motoc Luca D., Oltean I. D. - Conductive polymeric composite material's behaviour under various loading conditions, DAAAM International Scientific Book 2008, ISBN 3-901509-69-0, ISSN 1726-9687, Ed. B. Katalinic, Publisher DAAAM International Viena.

Șoica A., **Motoc Luca D.**, Lache S., Țârulescu S. - Aspects concerning of the automotive-pedestrian collision, DAAAM International Scientific Book 2008, ISBN 3-901509-69-0, ISSN 1726-9687, Ed. B. Katalinic, Publisher DAAAM International Viena.

Curtu I., **Motoc Luca D.** –Theoretical and experimental approach of multi-phase composite materials, DAAAM International Scientific Book 2009, ISBN 978-3-901509-71-1, ISSN 1726-9687, Ed. B. Katalinic, Publisher DAAAM International Viena.

Motoc Luca D., Ciofoaia V. – Predicting, measuring and tailoring thermal properties of morphological and structural modified polymeric composite materials, Engineering the future, Ed. L. Dudas, ISBN 978-953-307-210-4, Sciyo, <http://www.sciyo.com>, 2010.

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