

### PERSONAL INFORMATION

Angel HUMINIC



📍 Transilvania University of Brasov, faculty of Mechanical Engineering  
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### WORK EXPERIENCE

2014 – present  
2000 - 2014

**Professor Dr. habil**

Associate Professor and Assistant Professor

Transilvania University of Brasov, Mechanical Engineering department  
29 Bulevardul Eroilor, Brasov 500036, RO, [www.unitbv.ro](http://www.unitbv.ro)

- charged with Fluid Mechanics and Aerodynamics courses and practical works, charged with the Aerodynamics laboratory of Transilvania University of Brasov
- research activity: coordinator/team member in research projects with industry and Romanian Ministry of Education and Research

2012 - present

**Engineer**

INAS (Institutul pentru Analiza Sistemelor) SA  
37C Bulevardul N. Romanescu, Craiova 200738, RO, [www.inas.ro/ro](http://www.inas.ro/ro)

- charged with research activity in the field of mechanical structures design and CFD analyses (ANSYS CFX, ANSYS FLUENT)  
coordinator/team member in research projects
- charged with courses of Fluid Mechanics and Introduction to CFD (Computational Fluid Dynamics)

1996 - 2000

**Engineer**

SC IAR (Intreprinderea Aeronautică Română – Romanian Aeronautical Company) SA, dept. of R&D  
1 Aeroportului street, Ghimbav 507075, RO, [www.iar.ro](http://www.iar.ro)

- charged with design of aircraft structures and mechanical components,

### EDUCATION

2016

**Habilitation Thesis**

Transilvania University of Brasov

- Mechanical Engineering: *Road Vehicles Aerodynamic Design*

2005

**PhD Thesis**

Transilvania University of Brasov

- Mechanical Engineering: *Ground effect in Road Vehicle Aerodynamics*

1996

**Aerospace Engineer**

Transilvania University of Brasov

### PERSONAL SKILLS

Mother tongue

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Reading	Listening	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C1

Communication skills	Communication skills based on the experience during teaching activity, dissemination of research and participation in international programmes and projects <ul style="list-style-type: none"> <li>▪ Participation and speaker in international conferences/programmes (England, Belgium, France, Germany, Greece, Italy, Spain, Portugal, the USA)</li> </ul>
Organisational and managerial skills	Organisational and managerial skills based on the experience during research activity <ul style="list-style-type: none"> <li>▪ Coordinator of research projects with industry and Romanian Ministry of Education and Research</li> <li>▪ Organizer (team member) of scientific events: national and international conferences</li> </ul>
Job-related technical skills	Fluid dynamics simulation (CFD) and CAD design <ul style="list-style-type: none"> <li>▪ ANSYS CFD, Matlab</li> </ul>
Licenses and certifications	<ul style="list-style-type: none"> <li>▪ ANSYS Certified Professional, Fluids - Technical V1, ANSYS Certification Program (R17/2016, R19/2018)</li> <li>▪ Fundamentals of Aerodynamics Applied to Race Cars, SAE International Professional Development Program (Society of Automotive Engineers, USA), 2008.</li> <li>▪ Aircraft Design and Mechanical Structures, SC IAR SA Brasov (Romanian Aeronautical Company) professional certificate no. 1767/01/1999</li> </ul>

### ADDITIONAL INFORMATION

#### Publications

##### Books/Book chapters (selection)

- Huminic G., Huminic A., Entropy Generation Analysis of Hybrid Nanofluids Flow in Ducts with Various Shapes, chapter 5 in Nanofluids and Their Engineering Applications, Taylor & Francis, CRC Press, ISBN 9780429468223, 2019
- Huminic G., Huminic A., Dumitrache F., Fleacă C., Carbon-Based Nanofluids Characteristics - Basics and Applications on Heat Pipes, chapter 4 in Advances in New Heat Transfer Fluids From Numerical to Experimental Techniques, Taylor & Francis, CRC Press, ISBN 978-1-4987-5185-8, 2017
- Huminic A., *Mecanica Fluidelor (Fluid Mechanics)*, Transilvania University Press, 2014, ISBN 978-606-19-0380-1
- Soica A., Chiru A., Ispas N., Huminic A., *Caroserii și Sisteme de Siguranță Pasivă (Cars Bodies and Passive systems of Safety)*, Transilvania University Press, ISBN 973-635-461-X, 2005

##### Articles in international journals (selection)

- Huminic A., Huminic G., 2020, Aerodynamics of curved underbody diffusers using CFD, Journal of Wind Engineering and Industrial Aerodynamics, 205, 104300
- Huminic A., Huminic G., Fleaca C., Dumitrache F., Morjan I., Thermo-physical properties of water based lanthanum oxide nanofluid. An experimental study, 2019, Journal of Molecular Liquids 287, 111013
- Huminic A., Huminic G., Aerodynamic study of a generic car model with wheels and underbody diffuser, 2017, International Journal of Automotive Technology, 18(3), 397-404
- Huminic A., Huminic G., Fleaca C., Dumitrache F., Morjan I., Thermal conductivity, viscosity and surface tension of nanofluids based on FeC nanoparticles, 2015, Powder Technology, 284, 78-84
- Huminic A., Huminic G., Soica A., 2012, Study of aerodynamics for a simplified car model with the underbody shaped as a Venturi nozzle, Int. J. of Vehicle Design, 58, 15-32
- Huminic G., Huminic A., Numerical analysis of laminar flow heat transfer of nanofluids in a flattened tube, 2013, International Communications in Heat and Mass Transfer, 44, 52-57

*Included in Top 25 Hottest Articles, Science Direct, Engineering, International Communications in Heat and Mass Transfer, January to March 2013*

- Huminic G., Huminic A., Application of nanofluids in heat exchangers: A review, 2012, Renewable and Sustainable Energy Reviews, 16(8), 5625-5638
- Huminic G., Huminic A., Heat transfer characteristics in double tube helical heat exchangers using nanofluids, 2011, International Journal of Heat and Mass Transfer, 54(19-20), 4280-4287

*Included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, International Journal of Heat and Mass Transfer July to September 2011.*

- Huminic G., Huminic A., Heat transfer characteristics of a two-phase closed thermosyphons using nanofluids, 2010, Experimental Thermal and Fluid Science, 35(3), 550-557

*Included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, Experimental Thermal and Fluid Science, January to March 2011.*

- Huminic G., Huminic A., I. Morjan I., F. Dumitrache F., Experimental study of the thermal performance of thermosyphon heat pipe using iron oxide nanoparticles, 2010, International Journal of Heat and Mass Transfer, 54(1-3), 656–661

*Included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, International Journal of Heat and Mass Transfer, October to December 2010.*

### Participation in international programmes

- 2016-2020, COST Action, Nanouptake – Overcoming Barriers to Nanofluids Market Uptake, CA-15119 (member of Management Committee)
- 2015, Îmbunătățirea capacității de udare a unui fluid termic, research contract 14533/05.11.2015, Institut fur Solartechnik SPF, Elveția- Transilvania University of Brasov (coordinator)
- 2007, ERASMUS, teaching staff mobility to Fh. Konstanz, Germany
- 2007, Leonardo da Vinci, Exchange of Competencies On Renewable Energy Sources and Environment Management, project RO/2003/PL 91183
- 2004, HPC EUROPA (High Performance Computing), Ground Effect in Design of Vehicles - CFD Study Concerning the Behaviour of Clark-Y Airfoil in Ground Effect (project coordinator)
- 2001-2002, TEMPUS, Retraining the Administrators from Education Field, project IB\_JEP 14397-1999

### Professional Affiliations

- Member of SAE International (Society of Automotive Engineers, USA) no 6111203020, 2004-2019
- Associate member of SAE Road Vehicle Aerodynamics Committee, since 2009

## PROFESSIONAL RECOGNITION

### Reviewer for international journals, > 45 (selection)

*Advances in Mechanical Engineering (SAGE), Applied Thermal Engineering (ELSEVIER), Colloids and Surfaces A (ELSEVIER), Energy (ELSEVIER), Energy Conversion and Management (ELSEVIER), Heat Transfer Engineering (Taylor&Francis), International Journal of Energy Research (Wiley), International Journal of Aerospace (SAE), International Journal of Heat and Mass Transfer (ELSEVIER), International Journal of Passenger Cars: Mechanical Systems (SAE), International Journal of Thermal Science (ELSEVIER), Journal of Automobile Engineering (SAGE), Journal of Heat Transfer (ASME), Journal of Molecular Liquids (ELSEVIER), Journal of Thermal Analysis and Calorimetry (SPRINGER), Journal of Wind Engineering & Industrial Aerodynamics (ELSEVIER), Measurement (ELSEVIER), Microfluidics and Nanofluidics (SPRINGER), Powder Technology (ELSEVIER), Vehicle Aerodynamics (SAE).*

### Awards

Member Service Award, 2008, SAE International  
 Outstanding contributions in reviewing,

- 2017, Energy, IJHMT, IJTS, JOES
- 2016, ECM, PT,

### WoS/Scopus citations

> 1500/1800

- **1 ISI WoS Hot Paper in the Field** (paper published in the past two years and received enough citations to place it in the top 0.1% of papers in its academic field)

Huminic G., Huminic A., Hybrid nanofluids for heat transfer applications - A state-of-the-art review, 2018, International Journal of Heat And Mass Transfer, 125, 82-103

- **3 ISI WoS Highly Cited in the Field** (papers published in the past two years and received enough citations to place them in the top 1% of their academic field)

Huminic G., Huminic A., Entropy generation of nanofluid and hybrid nanofluid flow in thermal systems: A review, 2020, Journal Of Molecular Liquids, 302, 112533

Huminic G., Huminic A., Hybrid nanofluids for heat transfer applications - A state-of-the-art review, 2018, International Journal of Heat And Mass Transfer, 125, 82-103

Huminic G., Huminic A., Application of nanofluids in heat exchangers: A review, 2012, Renewable & Sustainable Energy Reviews, 16(8), 5625-5638

### h index WoS/Scopus

19/19

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