

## INFORMAȚII PERSONALE

**Gabriela HUMINIC**✉ [gabi.p@unitbv.ro](mailto:gabi.p@unitbv.ro)

## LOCUL DE MUNCA

Universitatea Transilvania din Brașov  
Conducător de doctorat – Domeniul: Inginerie Mecanică

DOMENII DE COMPETENȚĂ  
PROFESIONALĂ / ARII DE  
INTERES ÎN CERCETARE

Termodinamică  
Transfer de căldură și masă  
Nanofluide

EXPERIENȚA  
PROFESIONALĂ

- 
- 2000-prezent **Profesor, conferențiar, șef de lucrări, asistent, preparator, cadru didactic asociat**  
Universitatea Transilvania din Brașov, Facultatea de Inginerie Mecanică, unitbv.ro  
Activități didactice și de cercetare
- 2016-2020 **Membru CNATDCU, comisia de Inginerie Mecanică, mecatronică și robotică**
- 2008-2011 **Secretar științific, catedra de Termotehnică și Mecanica Fluidelor, Facultatea de Inginerie Mecanică**

## EDUCAȚIE ȘI FORMARE

- 
- 2015 **Doctor habilitat**  
Universitatea Transilvania din Brasov
- 2006 **Diploma cursuri postuniversitare**  
Auditul energetic al cadrelor și instalațiilor aferente  
Universitatea Tehnică de Construcții București, Facultatea de Instalații
- 2001- 2005 **Diploma doctor**  
Domeniul: Inginerie Mecanică  
Universitatea Transilvania din Brașov
- 2000- 2001 **Diploma studii aprofundate**  
Specializarea: Energia și protecția mediului  
Universitatea Transilvania din Brașov, Facultatea de Mecanică
- 1995-2000 **Diploma de licență – inginer**  
Specializarea: Construcții aerospațiale  
Universitatea Transilvania din Brasov, Facultatea de Inginerie Tehnologică

## COMPETENTE PERSONALE

Limba(i) maternă(e)	Limba română				
Alte limbi străine cunoscute	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
	Engleză	C1	C1	B2	B2
Franceză	B2	B2	A2	A2	A2
Competențe organizaționale/manageriale	Coordonare echipe de cercetare în cadrul proiectelor obținute prin competiție, ca director de proiect. Membru în comisia de specialitate "Inginerie Mecanică, Mecatronică și Robotică" - CNATDCU Secretar științific al catedrei de Termotehnică și Mecanica Fluidelor Membru în comitetele de organizare a conferințelor				
Competențe informatice	Programe CAD: AutoCAD Programe CAE, CFD (transfer de căldură): ANSYS CFX, ANSYS-FLUENT, Grid generation in ANSYS Workbench				

## INFORMAȚII SUPLIMENTARE

Publicații	Articole publicate în <b>reviste cotate ISI: 34</b> (dintre care <b>26</b> de articole publicate în <b>zona roșie (Q1)</b> ) Capitole de cărți publicate în <b>edituri internaționale</b> (Elsevier; CRC Press): <b>4</b> Cărți publicate în edituri naționale: <b>8</b> Articole în reviste și volume indexate BDI/ISI: <b>39</b> Articole publicate în conferințe internaționale (din străinătate): <b>15</b> Articole publicate în conferințe naționale: <b>30</b>
Proiecte	Proiecte câștigate prin competiție în calitate de director de proiect: <b>4</b> Proiecte/ contracte de cercetare în calitate de membru: <b>12</b>
Brevete	Brevete de invenție: <b>1</b>
Participări în programe/contracte internaționale	COST Action, Nanouptake – Overcoming Barriers to Nanofluids Market Uptake, CA-15119 (membru supleant al Management Committee), 2016-2020 Istitut fur Solartechnik SPF, Elveția, Îmbunătățirea capacității de udare a unui fluid termic, contract de cercetare nr. 14533/05.11.2015, Universitatea Transilvania Brașov, 2015 ERASMUS, program de mobilități academice, Fh. Konstanz, Germania, 2007 TEMPUS, Retraining the Administrators from Education Field, proiect nr. IB_JEP 14397-1999, 2001-2000
Premii/ recunoașterea contribuțiilor științifice	<b>Diplomă de excelență pentru rezultate deosebite în activitatea de cercetare științifică</b> , acordată de către Consiliul Județean Brașov, 2013.  <b>Premierea rezultatelor cercetării</b> , 2009-2021, UEFISCDI, Romania

“Certificate of Outstanding Contribution in Reviewing”, acordat de editorii revistelor:

“Energy Conversion and Management Journal”, Noiembrie 2014

“International Journal of Thermal Sciences”, Aprilie 2016

“European Journal of Mechanics - B/Fluids”, Octombrie 2016

“Renewable and Sustainable Review”, Iulie 2017.

“Experimental Thermal and Fluid Science”, Septembrie 2018.

“Applied Energy”, Iunie 2018.

“Journal of Molecular Liquids”, Mai, 2018.

#### Membru in colectivul editorial al jurnalelor internaționale:

Fundamental Journal of Thermal Science and Engineering

[http://www.frdint.com/fundamental\\_journal\\_thermal\\_science\\_engineering\\_edit.html](http://www.frdint.com/fundamental_journal_thermal_science_engineering_edit.html)

International Journal of Thermofluid Science and Technology (SCOPUS).

<http://ajhmt.uscip.us/EditorialBoard.aspx>

Energies (ISI), [https://www.mdpi.com/journal/energies/sectioneditors/thermal\\_management](https://www.mdpi.com/journal/energies/sectioneditors/thermal_management)

**Membru in** Comisia științifică “Inginerie mecanică, mecatronică și robotică” pentru verificarea îndeplinirii standardelor minimale de performanță științifică

**Membru in** comitetul internațional de selecție al programului “Serra Húnter Programme”, 2021- Spania

**Expert evaluator** pentru proiectele de cercetare inițiate de CNCISIS/CNCS/UEFISCDI 2008-2020

**Expert evaluator international** pentru BIENVENÛE programme, 2021 - Franța

**Referent** in comisia de susținere a tezelor de doctorat/abilitare;

**Referet** în comisia de ocupare a posturilor didactice;

**Referent la peste 50 de reviste cotate ISI (selecție):** International Journal Heat and Mass Transfer, Experimental Thermal and Fluid Science, Experimental Heat Transfer, International Journal of Thermal Sciences, Chemical Engineering Communications, Chemical Engineering Science, Industrial & Engineering Chemical Research, International Journal Physical Sciences, Heat Transfer Engineering, Materials Science and Engineering B, Energy Conversion and Management, European Journal of Mechanics - B/Fluids, Energy Technology, Fuel, International Journal of Multiphase Flow, Journal of Heat Transfer, Renewable & Sustainable Energy Reviews, Thermal Science, Applied Thermal Engineering, Chemical Engineering Research and Design, Engineering International Journal of Exergy, Cryogenics, Applied Energy, Int J Refrigeration, International Journal of Refrigeration, The Canadian Journal of Chemical Engineering, Journal of Molecular Liquids, Industrial and Engineering Chemistry, Energy, Chemical Engineering & Processing: Process Intensification, Current Nanoscience, Nanomaterials, Heat Transfer Research, Powder Technology, International Journal of Thermophysics.

#### Membru în asociații profesionale și științifice:

Societatea Română a Termotehnicienilor, Romania – vicepresedinte

American Nano Society – USA - membru.

> **1600** (Scopus – fără autocitări)

Citări > **1400** (Web of Science - fără autocitări )

> **2100** (Google Scholar)

**19** (Scopus-- fără autocitări )

h-index **19** (Web of Science -- fără autocitări )

**23** (Google Scholar)

## ANEXE

## Articole publicate în zona roșie (Q1)

1. Huminic G, Huminic A, Dumitrache F, Fleaca C., Morjan I., Experimental study on contact angle of water based Si-C nanofluid, *Journal of Molecular Liquids* 332 (2021) 115833
2. Huminic G, Huminic A, Fleaca C., Dumitrache F, Morjan I., "Experimental study on viscosity of water based Fe-Si hybrid nanofluids", *Journal of Molecular Liquids* 321 (2021) 114938.
3. Huminic G, Huminic A, Dumitrache F, Fleaca C., Morjan I., "Study of the thermal conductivity of hybrid nanofluids: recent research and experimental study", *Powder Technology* 367 (2020) 347-357
4. Huminic G, Huminic A., "Entropy generation of nanofluid and hybrid nanofluid flow in thermal systems: A review", *Journal of Molecular Liquids* 302(2020), Article number 112533.
5. Huminic A., Huminic, G., "Aerodynamics of curved underbody diffusers using CFD", *Journal of Wind Engineering and Industrial Aerodynamics* 205 (2020) 104300.
6. Minea, A.A, Buonomo, B., Burggraf, J., Ercole, D., Karpaiya, K.R, Di Pasqua, A., Sekrani, G, Steffens, J, Tibaut, J, Wichmann, N, Farber, P, Huminic, A, Huminic, G, Mahu, R, Manca, O, Oprea, C., Poncet, S., Ravnik, J., "NanoRound: A benchmark study on the numerical approach in nanofluids' simulation" 108(2019) 104292.
7. Huminic A, Huminic G, Fleaca C., Dumitrache F, Morjan I., "Thermo-physical properties of water based lanthanum oxide nanofluid. An experimental study", *Journal of Molecular Liquids* 287 (2019) 111013.
8. Hernaiz, M., Abnso, V, Estellé, P, Wu, Z., Sundén, B, Doretti, L, Mancin, S., Çobanoğlu, N., Karadeniz, Z.H., Garmendia, N., Lasheras-Zubiate, M., Hernández López, L, Mondragón, R, Martínez-Cuenca, R, Barison, S, Kujawska, A., Turgut, A, Amigo, A., Huminic, G, Huminic, A., Kalus, M.-R., Schroth, K.-G, Buschmann, M.H., "The contact angle of nanofluids as thermophysical property", *Journal of Colloid and Interface Science* 547 (2019) 393-406.
9. Huminic G, Huminic A., "The influence of hybrid nanofluids on the performances of elliptical tube: Recent research and numerical study", *International Journal of Heat and Mass Transfer* 129 (2019) 132-143.
10. Huminic G, Huminic A., "Heat transfer capability of the hybrid nanofluids for heat transfer applications", *Journal of Molecular Liquids* 272 (2018) 857-870.
11. Moldoveanu, G. M., Huminic, G, Minea, A. A., Huminic, A., "Experimental study on thermal conductivity of stabilized Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> nanofluids and their hybrid", *International Journal of Heat and Mass Transfer* 127 (2018) 450-457.
12. Huminic, G, Huminic, A., "The heat transfer performances and entropy generation analysis of hybrid nanofluids in a flattened tube", *International Journal of Heat and Mass Transfer* 119 (2018) 813-827.
13. Huminic, G, Huminic, A., "Hybrid nanofluids for heat transfer applications – A state-of-the-art review", *International Journal of Heat and Mass Transfer* 125 (2018) 82-103.

*Article is classified as Hot Paper and Highly Cited Paper by Essential Science Indicators*

14. Sova D, Porojan M, Bedeleian B, Huminc G, "Effective thermal conductivity models applied to wood briquettes", *International Journal of Thermal Sciences* 124(2018) 1-12.
15. Huminic G, Huminic A, Fleaca C, Dumitrache F, Morjan I., "Thermo-physical properties of water based SiC nanofluids for heat transfer applications", *International Communications in Heat and Mass Transfer* 84(2017) 94-101, ISSN: 0735-1933, doi: 10.1016/j.icheatmasstransfer.2017.04.006
16. Huminic G, Huminic A., "Heat transfer and flow characteristics of conventional fluids and nanofluids in curved tubes: A review", *Renewable and Sustainable Energy Reviews* 58 (2016) 1327-1347, ISSN: 1364-0321, doi: 10.1016/j.rser.2015.12.230

*Article is classified as a Highly Cited Paper by Essential Science Indicators*

17. Huminic G, Huminic A., "Heat transfer and entropy generation analyses of nanofluids in helically coiled tube-in-tube heat exchangers", *International Communications in Heat Mass Transfer* 71 (2016) 118-125, ISSN: 0735-1933, doi: 10.1016/j.icheatmasstransfer.2015.12.031

18. Huminic A., Huminic G\*, Fleaca C., Dumitrache F., Morjan I., "Thermal conductivity, viscosity and surface tension of nanofluids based on FeC nanoparticles", Powder Technology 284 (2015) 78–84, ISSN: 0032-5910, doi: 10.1016/j.powtec.2015.06.040  
*Articol included in Top 25 Hottest Articles, Science Direct, Chemical Engineering, Powder Technology, July to September 2015, October to December 2015*
19. Dumitrache F., Morjan I., Fleaca C., Badoi A., Manda G., Pop S., Marta D.S., Huminic G., Huminic A., Vekas L., Daia C., Marinica O., Luculescu C., Niculescu A.M., „Highly magnetic Fe<sub>2</sub>O<sub>3</sub>nanoparticles synthesized by laser pyrolysis used for biological and heat transfer applications”, Applied Surface Science 336 (2015) 297–303, ISSN: 0169-4332, doi: 10.1016/j.apsusc.2014.12.098
20. Huminic G., Huminic A., "Numerical study on heat transfer characteristics of thermosyphon heat pipes using nanofluids", Energy Conversion and Management 76 (2013) 393-399, ISSN: 0196-8904, doi: 10.1016/j.enconman.2013.07.026
21. Huminic G., Huminic A., "Numerical analysis of laminar flow heat transfer of nanofluids in a flattened tube", International Communications in Heat and Mass Transfer, 44 (2013) 52-57, ISSN: 0735-1933, doi: 10.1016/j.icheatmasstransfer.2013.03.003  
*Articol included in Top 25 Hottest Articles, Science Direct, Engineering, International Communications in Heat and Mass Transfer, January to March 2013*
22. Huminic G., Huminic A., "Application of nanofluids in heat exchangers: A review", Renewable and Sustainable Energy Reviews, 16 (8) (2012) 5625-5638, ISSN: 136403212, doi: 10.1016/j.rser.2012.05.023  
*Article is classified as a Highly Cited Paper by Essential Science Indicators*
23. Huminic G., Huminic A., "Heat transfer characteristics in double tube helical heat exchangers using nanofluids", International Journal of Heat and Mass Transfer 54 (19-20) (2011) 4280-4287, ISSN: 0017-9310, doi: 10.1016/j.ijheatmasstransfer.2011.05.017  
*Articol included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, International Journal of Heat and Mass Transfer July to September 2011.*
24. Huminic G., Huminic A., "Heat transfer characteristics of a two-phase closed thermosyphons using nanofluids", Experimental Thermal and Fluid Science 35 (3) (2011) 550–557, doi: 10.1016/j.expthermflusci.2010.12.009  
*Articol included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, Experimental Thermal and Fluid Science, January to March 2011 și în „Most Cited Experimental Thermal and Fluid Science Articles” Published Since 2010.*
25. Huminic G., Huminic A., I. Morjan I., F. Dumitrache F., "Experimental study of the thermal performance of thermosyphon heat pipe using iron oxide nanoparticles", International Journal of Heat and Mass Transfer, 54 (1-3) (2011) 656–661, ISSN: 0017-9310, doi: 10.1016/j.ijheatmasstransfer.2010.09.005  
*Articol included in Top 25 Hottest Articles, Science Direct, Engineering-Energy, International Journal of Heat and Mass Transfer, October to December 2010.*

#### Capitole de cărți:

26. Huminic G., Huminic A., Minea A.A., "Heat and mass transfer characteristics of magnetic nanofluids", chapter in the book "Nanofluids and Mass Transfer", edited by Mohammad Reza Rahimpour et. al pp. 133-184, 2022, Elsevier, ISBN: 978-0-12-823996-4.
27. Minea A.A., Huminic A., Huminic G., "Conjugate heat and mass transfer in nanofluids", chapter in the book "Nanofluids and Mass Transfer", edited by Mohammad Reza Rahimpour et. al pp. 189-209, 2022, Elsevier, ISBN: 978-0-12-823996-4.
28. Huminic G., Huminic A., "Entropy Generation Analysis of Hybrid Nanofluids Flow in Ducts with Various Shapes", chapter in the book "Nanofluids and their engineering applications" edited by K.R.V. Subramanian, Tubati Nageswara Rao and Avinash Balakrishnan, pp. 77-104, 2019, CRC Press Taylor & Francis, doi.org/10.1201/9780429468223
29. Huminic G., Huminic A., Dumitrache F., Fleaca C., "Carbon-Based Nanofluids Characteristics - Basics and Applications on Heat Pipes", chapter in the book „Advances in New Heat Transfer Fluids”, pp. 75-112, 2017, CRC Press Taylor & Francis, doi: 10.1201/9781315368184-3

#### Proiecte de cercetare câștigate prin competiție în calitate de director:

1. "Noi fluide de lucru pentru creșterea eficienței colectoarelor solare cu absorbție directă", PN-III-P4-ID-PCE-2020-0353, no. 241/ 2021, Transilvania University of Brașov, 2021- 2024.
2. „Application of nanofluids to heat pipes for high performances in cooling systems”, PNII-IDEAS 2011-2016, no. 122/5.10.2011, Transilvania University of Brașov, 2011- 2016.

3. "Heat transfer optimization by devices based on phase change of the magnetic liquids", PNII-IDEAS 2007-2010, no. 216/1.10.2007, Transilvania University of Braşov, 2007-2010.
4. "Synergetic analysis of the vaporisation processes", CNCSIS TD, no. 33369/29.06.2004, Transilvania University of Braşov, 2004.

Proiecte de cercetare câştigate prin competiție/contracte de cercetare în calitate de membru:

5. "Aerodynamic optimization of the automotive spoilers and wings", PNII – IDEAS, no. 758/2008, Transilvania University of Braşov, 2009-2011.
6. "Study of the Aerodynamic Interaction between Cars and Road", CEEX-ET CNCSIS, no. 5885/18.09.2006, Transilvania University of Braşov, 2006-2008.
7. "CFD Analysis of Ground Effect Influence on Aerodynamic Characteristics of a Land Vehicle – Stage II: Experimental Study" - Contract no. 33.253/25.06.2003 CNCSIS At - Universitatea Transilvania Brasov, CNCSIS code 151, 2003.
8. "CFD Analysis of Ground Effect Influence on Aerodynamic Characteristics of a Land Vehicle – Stage I: Study in virtual Environment" - Contract no. 33.45917.07/2002 CNCSIS At - Transilvania University of Brasov, CNCSIS code 306, 2002.
9. „Determinarea caracteristicilor funcționale pentru ventilatoarele eoliene Smoky, contract 13050/17.10.2016, UniTBV, SC ENERCO BV- Transilvania University of Brasov, 2016.
10. „Increasing the wetting power of a thermal fluid” contract no. 14533/05.11.2015 - Insitut fur Solartechnik SPF, Elvetia - Transilvania University of Brasov, 2015.
11. „Experimental determination of the functional characteristics of wind turbines 1 and Windy 2”, contract no. 7862/15.06.2010, COTA PFA - Transilvania University of Brasov, 2010.
12. „Realisation of the experimental installation for determination the working parameters of the prototype of a reduction gear - pressure regulator for nitrogen”, contract no. 18/31.07.2008, S.C. Cambric Consulting SRL Brasov - Transilvania University of Brasov, 2008.
13. „Experimental determination of the working parameters of the prototype of a reduction gear - pressure regulator for nitrogen”, contract no. 19/31.07.2008, S.C. Cambric Consulting SRL Brasov - Transilvania University of Brasov, 2008.
14. Establishing of the working parameters of the Smoky wind turbine, contract no. 1/09.02.2004 SC Smoky SRL Harman, Brasov - Transilvania University of Brasov, 2004.
15. „Study of heat balance for boilers CAF 100 Gcal/h and CR 16/1” – Contract no. 06/09/2002, SC ROMAN - ENERGETIC SA and Transilvania University of Brasov, 2002.
16. „Study of heat balance for steam boilers of SC Rulmentul SA Brasov”– Contract no. 07/09/2002, SC RULMENTUL SA and Transilvania University of Brasov, 2002.
17. Study of heat balance for high-power boiler - Contract no. 08/09/2002, SC METROM SA Brasov and Transilvania University of Brasov, 2002.

Proiecte internaționale

1. COST-Horizon 2020, "Overcoming Barriers to Nanofluids Market Uptake (NANO-UPTAKE)" – membru supleant în Comitetul de Management al Acțiunii, 2016-2020
2. SOCRATES – profesor invitat la HOCHSCHULE KONSTANZ Technic, Wirtschaft und Gestaltung, Germania, 16– 27 iulie 2007.
3. TEMPUS, Nr. IB\_JEP 14397-1999, *Retraining the Administrators from Education Field*, coordonat de Universitatea Dunărea de Jos, Galați, director program prof. Dr. Ing. Adrian LUNGU; cursuri de management academic și profesor invitat la Oficina de Cooperation Universitaria, Madrid, Spania, 13 – 20 octombrie 2001.

Brevet de invenție:

1. Huminic G., Huminic A., *Working fluid for a heat pipe*, Universitatea Transilvania din Brasov, RO126060/30.09.14

Septembrie, 2021