

PERSONAL INFORMATION

BURNETE NICOLAE VLAD



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LOCUL DE MUNCĂ PENTRU CARE SE CANDIDEAZĂ

Associate professor, no. 16 in the List of posts for the academic year 2021-2022 of the Department of Automotive Engineering and Transports, Faculty of Automotive, Mechatronics and Mechanical Engineering, Technical University of Cluj-Napoca

WORK EXPERIENCE

01.10.2020 – Present day

**Responsible for the MSc program *Automotive Management and Control Systems* (in partnership with Robert Bosch Romania)**

Technical University of Cluj-Napoca, Faculty of Mechanics, Department of Automotive Engineering and Transports, Muncii Blvd., Nr. 103-105, Cluj-Napoca, Romania, [www.utcluj.ro](http://www.utcluj.ro)

Business or sector Higher education

27.02.2018 – Present day

**Lecturer**

Technical University of Cluj-Napoca, Faculty of Mechanics, Department of Automotive Engineering and Transports, Muncii Blvd., Nr. 103-105, Cluj-Napoca, Romania, [www.utcluj.ro](http://www.utcluj.ro)

- Teaching activities – „Processes and characteristic diagrams of internal combustion engines”, “Modern auxiliary systems for internal combustion engines”, “Advanced systems and equipment for internal combustion engines”, “Internal combustion engines and thermodynamics”
- Research

Business or sector Higher education

27.02.2017 - 27.02.2018

**Assistant lecturer**

Technical University of Cluj-Napoca, Faculty of Mechanics, Department of Automotive Engineering and Transports, Muncii Blvd., Nr. 103-105, Cluj-Napoca, Romania, [www.utcluj.ro](http://www.utcluj.ro)

- Teaching activities – „Processes and characteristic diagrams of internal combustion engines”
- Research

Business or sector Higher education

27.09.2015 – 27.02.2017

**Assistant lecturer**

Technical University of Cluj-Napoca, Faculty of Machine Building, Department of Mechanical Systems Engineering, Muncii Blvd., Nr. 103-105, Cluj-Napoca, Romania, [www.utcluj.ro](http://www.utcluj.ro)

- Teaching activities – „Machine elements I and II”
- Research

Business or sector Higher education

01.11.2011 – 09.09.2014

**Diagnostic engineer**

RMB Inter-Auto Cluj (Mercedes-Benz Dealer), Calea Turzii Str., Nr. 172, Cluj-Napoca, Cluj county, Romania, <http://www.inter-auto.ro/>

- Specific vehicle diagnostic and customer reception activities

Business or sector Automotive repair workshop

11.07.2011 - 11.10.2011

**Parts sales advisor**

Eurial Invest Cluj, Calea Turzii Str., Nr. 251, Cluj-Napoca, Cluj, <http://site.eurialcluj.ro/>

- Specific parts sales and customer reception activities

**Business or sector** Automotive repair workshop

**EDUCATION AND TRAINING**

July 2020 – Present day

**Postdoctoral researcher**

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

- Thesis: "Research into the possibility to increase internal combustion engine efficiency by recouping waste thermal energy using thermoelectric generators"

Oct. 2013 – Sept. 2016

**PhD in engineering sciences**

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

- PhD Thesis: "Studies and researches regarding the influence of fuel injection on pollutant emissions in compression ignition engines", <http://doctorat.utcluj.ro:8080/Doctoranzi/?1>

Oct. 2014 – July 2015

**German Academic Exchange Service (DAAD) fellow**

Steinbeis University Berlin, Steinbeis Transfer Institute Dynamic Systems, Theodor-Heuss-Straße, Nr. 1, Konstanz, Germany

- System and process simulation of internal combustion engines, Matlab & Simulink, Solid Dynamics, Autodesk Inventor

Oct. 2011 – July 2013

**Master of science studies**

Technical University of Cluj-Napoca, Cluj-Napoca, Romania

Specialization: Automotive engineering and environment

- The interaction between the environment and automobiles: recycling, production, biofuels, environmentally friendly technologies

Oct. 2007 – July 2011

**Bachelor studies**

Technical University of Cluj-Napoca, Faculty of Mechanics, Specialization: Automotive Engineering, Cluj-Napoca, Romania

Specialization: Automotive engineering

- Operation and development of the internal combustion engines; Vehicle dynamics; Operation and development of automobiles

**PERSONAL SKILLS**

**Mother tongue(s)**

Romanian

**Other language(s)**

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
German	B2	B2	B1	B1	B1
	Deutsches Sprachdiplom				
English	B2	B2	B2	B2	B2

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

**Communication skills**

- good communication skills acquired through collaboration in research/consultancy projects, teaching activities and scientific events.

**Organizational / managerial skills**

- good management competencies acquired during the managed research projects;
- creative thinking for solving organizational and management problems;
- organizational competencies acquired as a masters program director.

- Job-related skills**
- proactivity acquired while working on research projects and as a member in various teams;
  - responsibility acquired as a masters program director;
  - adaptability and flexibility acquired as intern for a software development company;
  - good team work competencies acquired while working in research groups and in various teams.

**Digital competence**

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

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

- good knowledge of office suite (Microsoft Office 365, Microsoft Windows, Mac OS)
- good knowledge of simulation and computer assisted design software ( AVL Boost, AVL Fire, Lotus Engine Simulation, AmeSIM, Matlab-Simulink, Autodesk Inventor, SolidWorks, Mathcad )
- programming skills (HTML, CSS, JavaScript, C#, .NET technologies)

**Driving license** A, BE, CE, DE

**ADDITIONAL INFORMATION**

**Publications**

- Papers published in ISI indexed journals: 5
- Papers presented and published in ISI Proceedings volumes: 7
- Papers published in other BDI indexed publications: 3
- Other papers (published in journals / presented at conferences): 3
- Book chapters: 1
- Books / monographies: 2
- Application guides: 2

**Certification**

- AVL Fire
- .NET Development
- Content Marketing

**Contracts**

- Director**
- 2020 - 2021 VAT contract – Evaluation of project proposal for electric vehicle public transport, value 17 500 RON, Beneficiary SC SERVELECT SRL  
Results: Report according to contract.
  - 2020 VAT contract – Evaluation of project proposal for electric vehicle public transport, value 12 095 RON, Beneficiary SC SERVELECT SRL  
Results: Report according to contract.
  - 2019 VAT contract – Analysis of the influences of various fuels on ICE operation, value 72 186 RON, Beneficiary PETROTEL-LUKOIL SA  
Results: Report according to contract.
  - 2018 VAT contract – Testing of fuel consumption reduction devices, value 5 474 RON, Beneficiary SC IRON & STEEL IMPEX SRL  
Results: Report according to contract.
  - 2018 - 2019 eGUTS – Electric, Electronic and Green Urban Transport Systems, value 42750 RON, Beneficiary UNIVERSITATEA POLITEHNICA TIMIȘOARA  
Results: Report according to contract.
  - 2017 - 2018 C.I. 2014/12.07.2017 (UTC-N), value 20000 RON, Beneficiary UNIVERSITATEA TEHNICĂ DIN CLUJ-NAPOCA  
Results:
    - 1) Burnete, N., V., Șerdean, F., M., Burnete, N., Moldovanu, D., Combustion Analysis for Single Cylinder Engine Running on Various Types of Diesel, Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018), pp. 593–600, Springer, Cham, DOI: 10.1007/978-3-319-94409-8\_69
    - 2) Burnete, N., V., Burnete, N., Jurchiș, B., Iclodean, C., Influences of diesel pilot injection on ethanol autoignition - a numerical analysis. IOP Conference Series: Materials Science and Engineering 252: 012066, 2017, doi: 10.1088/1757-899X/252/1/012066

**Member**

- 2020 - 2021 Innovative system for extending the autonomy of electric vehicles and improving thermal comfort – XTREME, value 150 780 RON
- 2019 VAT contract – Testing of gasoline fuel, value 76 779 RON
- 2019 VAT contract – Testing of diesel fuel, value 102 040,29 RON
- 2018 VAT contract – Testing of internal combustion engines to evaluate deposits, value 109 899 RON
- 2018 - 2020 Technologies for intelligent urban electrical vehicles (URBIVEL), Action: POC-A1-A1.2.3-G-2-15 Partnerships for knowledge transfer, value 15 682 673,75 RON
- 2017 VAT contract – Testing of various fuels, value 173 996 RON

**Awards**

- UEFISCDI - Premiarea rezultatelor cercetării – Articole Competiția 2020 - PN-III-P1-1.1-PRECISI
- UEFISCDI - Premiarea rezultatelor cercetării – Articole Competiția 2016 - PN-III-P1-1.1-PRECISI

**Affiliations**

- Romanian Automotive Society – since 2011
- SIA- Société des Ingénieurs de l'Automobile – since 2016
- SAE – Society of Automotive Engineers – since 2017

Cluj-Napoca, 05.01.2022