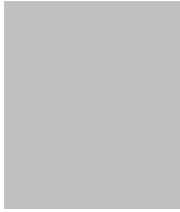


## PERSONAL INFORMATION

## COSTEL HUMELNICU



 Str. Domnească nr.111, Galați, 800201, Romania

 [costel.humelnicu@ugal.ro](mailto:costel.humelnicu@ugal.ro)

Sex M

Nationality Romana

## WORK EXPERIENCE

## Assistant Professor

2022 - present

"Dunarea de Jos" University of Galati, Faculty of Engineering, Romania, <http://www.ing.ugal.ro/>

- **Research areas:** Modelling and experimental simulation: 1. Fatigue behaviour of epoxy polymer materials and polymer composite materials. 2. Wear of epoxy polymer materials and polymer composite materials. 3. Methods of reducing pollution with polymeric materials
- **Teaching experience** - Laboratories, Seminars, Projects on the following subjects: Computer-aided graphics, Calculation and construction of motor vehicles 1, Technical drawing and infographics, Composite structures, Static stability and dynamics of structures, Machine parts.

**Business or sector** Higher Education and Research

## Teaching Assistant and PhD Student

2017 - 2022

"Dunarea de Jos" University of Galati, Faculty of Engineering, Romania, <http://www.ing.ugal.ro/>

- **Research** – PhD awarded in Mechanical Engineering. Research areas - Modelling and experimental simulation: 1. Fatigue behaviour of epoxy polymer materials and polymer composite materials. 2. Wear of epoxy polymer materials and polymer composite materials. 3. Cumulative effect of wear and fatigue processes on degradation of materials.
- **Teaching experience** – supported Lecturers on Laboratories, Seminars, Projects and occasionally have led own teaching on the following: Computer-aided graphics, Calculation and construction of motor vehicles 1, Technical drawing and infographics, Composite structures, Statics, stability and dynamics of structures, Machine parts.

**Business or sector** Higher Education and Research

03.2017 - 09.2017

## Mechanical Engineer

"S.C. MAR-INA Prodprest", Galati, Romania, [www.mar-ina.ro](http://www.mar-ina.ro)

- Responsible for ensuring the maintenance and repair of machines and equipment according to technical standards.
- Establishing procedures for maintenance and quality check to technical standards.

**Business or sector** Design, Technical Services

## EDUCATION AND TRAINING

2017 - 2021

## PhD in Mechanical Engineering

EQF,9

"Dunarea de Jos" University of Galati, Romania, Faculty of Engineering.

- Doctoral Thesis "Synergetic Effect of Wear And Fatigue on the Degradation of Polymeric Materials"

2019 - 2021

## Participant in " Scholarships for entrepreneurship education among PhD students and postdoctoral researchers (Be Entrepreneur!)"

EQF,8

POCU/380/6/13/ "Support for doctoral students and post-doctoral researchers", financed by the European Social Fund through the Human Capital Operational Program.

2015 – 2017

## Master, Modelling and Simulation in Mechanical Engineering

EQF,7

"Dunarea de Jos" University of Galati, Romania, Faculty of Engineering

- Modelling and simulation techniques of thermo-mechanical and hydrodynamic phenomena (Matlab);
- Advanced finite element analysis methods (Ansys);
- Advanced methods of designing mechanical systems (Inventor, SolidWorks);
- Tensometric analysis;

- Complex modelling in vibration mechanics (Mathcad);
  - Diagnosis and maintenance of mechanical systems;
  - Modelling in machine dynamics;
  - Optimization of process equipment (MathConnex);
  - Numerical modelling of structures made of composite materials (Ansys).
- 2011 - 2015 **Bsc Mechanical Engineering, specialised in Road Vehicles** EQF,6  
 "Dunarea de Jos" University of Galati, Romania, Faculty of Engineering
- Material resistance;
  - Technical drawing (AutoCAD, Catia, Inventor)
  - Mechanics, Electronics and Applied Informatics;
  - Machine bodies;
  - Marketing and Management;
- 2008 - 2011 **High School** EQF,6  
 "MARIN COMAN" High School from Galati
- Graduate

**PERSONAL SKILLS**

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
	ENGLISH LANGUAGE	A2	A2	A1	
Baccalaureate diploma - language skills - English					
FRENCH LANGUAGE	A1	A1	-	-	-

**Communication skills**

- good communication and teamwork skills acquired through professional experience working in various team (in the academic and private sectors), as well as through teaching experience;
- problem solving;

**Organisational / managerial skills**

- Working with people across various academic stages, including students;
- Completed marketing and management courses within the University;
- Good time-management skills, I have managed to complete my bachelor's and master's courses while working full-time.
- Ability to work under pressure to complete deadlines from previous experience drafting and completed academic papers and research.

**Job-related skills**

- A good knowledge of teaching processes, good organizational skills of through keeping the academic schedule.
- Ability to think outside the box to deliver innovation in research.

**Digital competence**

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

- Mechanical Engineer - Specialization: Road Vehicles, Master - Specialization: Modelling and Simulation in Mechanical Engineering
- Data processing and design skills in Mathcad, MathConnex, MATLAB, Catia, Autocad, Inventor, SolidWorks software - programs used during the university degree, the Bachelor degree and disseration focused on research using Mathcad and MathConnex programs, and the Masters degree and research, using software SolidWorks; further experience obtained during PhD research and now as a Lecturer.
  - Use of Microsoft Office

- Other skills**
- Completed the postgraduate training and continuous professional development program: Educational mentoring in the academic environment, in the field of Educational Sciences;
  - Completed the post-graduate training and continuous professional development program Innovative didactic strategies, in the field of Educational Sciences;
  - Completed the postgraduate training and continuous professional development program Bibliographic Reference Management, in the field of Educational Sciences;
  - Completed the postgraduate training and continuous professional development program Writing and publishing scientific articles, in the field of Management;
  - Completed the entrepreneurial skills program "Development of entrepreneurial skills of doctoral students and postdoctoral researchers";
  - Completed the course "Equality of opportunities";
  - Research internships, with a practical component, for collaborators from the private sector and/or relevant actors in the CDI field In order to develop theoretical and experimental research. as well as the work-based learning system;
  - Completed the course "Ethics in research and copyright";
  - Completed the course "Valorisation of research results"

Driving licence B, C

## ADDITIONAL INFORMATION

Publications  
Presentations  
Projects  
Conferences  
Seminars  
Honours and awards  
Memberships  
References  
Citations  
Courses  
Certifications

### Articles published in ISI rated journals

- "Artificial Neural Network-Based Analysis of the Tribological Behavior of Vegetable Oil–Diesel Fuel Mixtures", C Humelnicu, S Ciortan, V Amortila, Lubricants 7 (4), 32, 2019.
- "FATIGUE LIFE INVESTIGATION ON A MAC ENGINE PISTON", Costel Humelnicu, Valentin Amortila, Elena Mereuță, MATEC Web of Conferences (178), 06-013, EDP Sciences eISSN: 2261-236X, 2018.
- "POSITIONING STUDY OF DRIVER'S HANDS IN CERTAIN AREAS OF THE STEERING WHEEL", Valentin Amortila, Elena Mereuță, Silvia Vereșiu, Mădălina Rus, Costel Humelnicu, MATEC Web of Conferences (178), 06-014, eISSN: 2261-236X, 2018 .

### Articles published in ISI Proceedings

- "ASSESSMENT OF WIND TURBINE BLADES RESISTANCE IN ABRASIVE WEAR", Marin C Romeo; Humelnicu Costel; Buciumeanu Mihaela; Muntenita Cristian; Ciortan Sorin. International Multidisciplinary Scientific GeoConference: SGEM; Sofia, Vol. 22, Iss. 6.2, (2022). DOI:10.5593/sgem2022V/6.2/s26.51
- "REDUCTION OF POLYMERIC WASTE BY APPLYING HEAT TREATMENTS DURING THE POLYMERIZATION PERIOD", Costel Humelnicu, Elena Mereuță, Valentin Amortila, Mihai Gingărașu, Monica Novetschi, International Multidisciplinary Scientific GeoConference: SGEM 2020 (4.1), 475-481, 2020.
- "THE IMPORTANCE OF VEHICLE STEERING SYSTEM DIAGNOSIS IN REDUCING ENVIRONMENTAL IMPACT", Mihai Gingarasu, Elena Mereuta, Valentin Amortila, Costel Humelnicu, Monica Novetschi, International Multidisciplinary Scientific GeoConference: SGEM 2020 (4.1), 523-530, 2020.
- "THE EFFECTS OF AUTO POLLUTION ON THE POPULATION", Monica Novetschi, Elena Mereuta, Mihai Gingarasu, Costel Humelnicu, Valentin Amortila, International Multidisciplinary Scientific GeoConference: SGEM 2020 (4.1), 499-506, 2020.
- "FATIGUE POLYMERIC MATERIALS-AIR POLLUTION FACTOR", Costel Humelnicu, Elena Mereuta, Valentin Amortila, Mihai Gingarasu, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.2), 221-228, 2019.
- "REDUCING THE AIR POLLUTION IMPACT OF THE RECYCLED AUTO VEHICLES", C Humelnicu, E Mereuta, V Amortila, M Gingarasu, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.1), 1053-1060, 2019.
- "CONTROVERSY ABOUT CAR POLLUTION: THE ELECTRIC VEHICLE OR THE CLASSIC VEHICLE?", V Amortila, E Mereuta, C Humelnicu, M Gingarasu, N Monica, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.2), 193-200, 2019.
- "THE INFLUENCE OF THE VEHICLE STEERING SYSTEM MISSALIGNMENT ON THE ENVIRONMENT", M Gingarasu, E Mereuta, V Amortila, C Humelnicu, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.2), 295-302, 2019.
- "The vibration and noise pollution's impact on the driver", V Amortila, E Mereuta, C Humelnicu, M Gingarasu, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.1), 1143-1150, 2019.

- "THE INFLUENCE OF VEHICLE DIAGNOSIS ON REDUCING GAS EMISSIONS THAT AFFECTS THE EARTH'S CLIMATE SYSTEM", M Gingarasu, E Mereuta, V Amortila, C Humelnicu, International Multidisciplinary Scientific GeoConference: SGEM 19 (4.1), 1109-1115, 2019.
- "NEURAL NETWORKS AS OPTIMIZATION TOOLS FOR FUEL CONSUMPTION", Costel Humelnicu, Valentin Amortila, Elena Mereuță, International Multidisciplinary Scientific GeoConference: SGEM 18 (4.2), 531-537, ISSN 1314-2704, 2018.
- "DAMAGING BY TRIBO-FATIGUE AND TEST RIG DESIGN", Costel Humelnicu, Valentin Amortila, Mihai Gingarasu, Elena Mereuță, 18th International Multidisciplinary Scientific GeoConference SGEM 2018 (4.3), 235-242, ISBN: 978-619-7408-70-6, 3 - 6 December, 2018.
- "AUTO TRANSPORTATION - AN IMPORTANT FACTOR IN POLLUTION GROWTH AND IN ATMOSPHERIC CHANGES", Valentin Amortila, Elena Mereuță, Daniel Ganea, Costel Humelnicu and Sorin Ciortan, International Multidisciplinary Scientific GeoConference: SGEM 18 (4.2), 349-356, ISSN 1314- 2704, 2018,
- "DRIVER'S BIOMECHANICS INFLUENCE ON AIR POLLUTION", Valentin Amortila, Elena Mereuță, Costel Humelnicu, Mihai Gingarasu, 18th International Multidisciplinary Scientific GeoConference SGEM 2018 (4.3), 251-258, ISBN: 978-619-7408-70-6, 3 - December 6, 2018.

**BDI indexed articles**

- „MODELING AND SIMULATION OF A SIMPLE LINEAR SUSPENSION WITH SIMCENTER AMESIM SOFTWARE”, Valentin Amortila, Elena Mereuta, George Balasoiu, Costel Humelnicu, Mihai Gingarasu, EuroEconomica, 40 (2), 2021.
- „ASPECTS REFERRING TO FATIGUE TESTING OF EPOXY POLYMERIC MATERIALS”, C Humelnicu, V Amortila, M Novetschi, M Gingarasu, Mechanical Testing and Diagnosis 10 (3), 21-25, ISSN 2247 – 9635, 2020.
- „WEAR OF SPHERICAL JOINTS OF THE VEHICLES STEERING SYSTEMS. VIBRATIONS AND THEIR ROLE IN DIAGNOSIS”, M Gingarasu, E Mereuta, V Amortila, C Humelnicu, M Novetschi, Mechanical Testing and Diagnosis 10 (3), 16-20, ISSN 2247 – 9635, 2020.
- „RE-ENGINEERING OF A PLANETARY SHAFT BASED ON LIFE EXPECTATION”, C Humelnicu, Mechanical Testing and Diagnosis 7 (3), 14-23
- „AUTOMOTIVE TRANSMISSION LINE DESIGN WITH VISUAL ENVIRONMENT SOFTWARE”, C Humelnicu, Annals of the University Dunarea de Jos of Galati: Fascicle II, Mathematics, Physics, Theoretical Mechanics, 2017, Vol. 40 Issue 2, p191-194. 4p
- „Modeling and Simulation of a Simple Linear Suspension with Simcenter Amesim Software”, Valentin Amortila, Elena Mereuta, George Balasoiu, Costel Humelnicu, Mihai Gingarasu, EuroEconomica, 2021, Volumul 40-2