Ministerul Educației

Universitatea POLITEHNICA din București

Formular de publicare a posturilor didactice în platforma *Euraxess*

HR EXCELLENCE IN RESEARCH

I. Basic information

Title	**Conferențiar universitar, poziția 9**
Offer description	The MET Department (Machine Elements and Tribology) belongs to the Faculty of Mechanical Engineering and Mechatronics and has its origins in 1950. The founding of this Department and specialization laid the foundations for the training of future specialists and future production centers in the field of machine elements and tribology. Through a sustained work, Prof. Gheorghe MANEA realized an educational curriculum that included the main directions of university research in the field of machine elements. In 1972, prof. Dan PAVELESCU was the first founder of Romanian school of Tribology. Over time, along with many of the Department's benchmark achievements, the educational curricula have been continually modernized. The Department of Machine Elements and Tribology ensures the training of students by specialization in the field of Industrial Engineering (starting with 2010) and in the field of Economic Engineering in Mechanical Fields (active from 1996). These two specializations offer the possibility in forming a master degree by choosing Industrial Entrepreneurship (2008) and Product Design and Innovative Engineering (2018). Research is one of the key points of the department. Research grants are underway in Romania but also internationally, through cooperation with industrial partners. The graduates of these specializations are integrated in professions such as industrial engineering, designer, consultant or economic engineer in mechanical field, manager to national and international companies. INUDUSTRIAL DESIGN The main feature of this specialization: the link between functional, ergonomic, aesthetic, economic. Industrial design – conception and method that ensures each product a functional efficiency. The design of industrial products is made both in terms of mechanical strength and in terms of shape and aesthetics. New technologies are learned regarding the realization of the designed surfaces and volumes (such as the technology of material addition-3D printing) Specific competences 1.Knows and uses a maximum of technical engineering possibilities to realize the structure of a new product or re-engineering techniques for existing products 2.Demonstrates skills in the graphic design of a new industrial product, from geometric description to computer-aided graphic design (Desktop, 3D MAX, MAYA). 3.Demonstrates skills in using the concept of "engineering modelling", from hand drawing to the use of specific software (CATIA, Pro-Engineering, SolidWorks, Inventor). 4.The student has the knowledge and ability to work and to create a "virtual prototype", to simulate the operation of a product, to use experimental and laboratory tools to test the product ECONOMIC ENGINEENERIG IN MECHANICAL FIELDS Specific competences - engineering sciences: 1. Learning of basic knowledge in mechanical engineering (theories, methods, techniques).

	2. Ability to carry out a technical project. 3. Skills development to perform a computation with specialized software. Specific competences - economical engineering: 1. Ability to perform economic and technical studies (feasibility, business plan, market research). 2. Knowledge of the scientific practice in economic engineering area (scientific research system, customer relations, publication system, the importance of integrity in work). 3. The capacity to analyze the consequences of economic thought and corresponding activities on the environment. Research internships are provided in multidisciplinary teams through the Erasmus + program. Through the European Project Semester program, work is done in teams formed by students from different EU and international countries (e.g. USA, Brazil, China, Turkey, Norway, Holland, France). The vision of the Machine Elements and Tribology Department is the quality in education, which we systematically pursue, through the continuous improvement of all activities in the didactic and research mission for which we are responsible. The position implies performing didactic activities in the below mentioned courses, participating in research and development projects, advising students, developing the laboratories' infrastructure, performing administrative tasks related to the department' s activities. THIS POSITION includes teaching disciplines: 1. Human Resources Management; 2. Mechanism and machine elements III; 3. E-commerce; 4. Numerical Methods; 5. Parameterized Computer-Aided Design.
Research field	Engineering

Is the job funded through a EU Research Framework Programme?*
Click pentru a selecta o opțiune.
No ☒

Where to apply
floarea.dragomir@upb.ro

II. Hiring information and work location

Faculty	**Inginerie Mecanică și Mecatronică**
Department	Machine Elements ant Tribology

Department/Centre website	www.omtr.pub.ro
Contact person e-mail	sorin.cananau@upb.ro
Contact person phone number	+40 214 029 411, +40 754 203 293.

III. Requirements

Această secțiune este opțională. Recomandăm includerea unor informații pentru a completa anunțul de angajare.

Required education level	**Engineering** **Ph.D. or equivalent**
Skills/Qualifications	*Qualifications:* . – specialization in the field of industrial engineering, in accordance with the structure of the disciplines in the position – specialization in Economic Studies – Specialization in assistive manufacturing, subtractive and additive – Development of new research directions in the field of machine elements application in industrial engineering. – Development of numerical methods and parameterized 3D models. – Increasing research portfolio in Industrial Engineering *Skills:* – Good communication skill, both written and verbal communication skills – Patience and understanding. – Providing maintenance for machine elements, manufacturing machine elements – Solid computer skills with the Math software for engineering calculations – Providing evidence of collaborative working – Attracting external research funding and producing research outputs – Ability to conduct a new laboratory – Deliver research project results and effective learning programs with quality publications. – Leadership. – Teamwork – Creativity

Specific requirements	– Advanced knowledge on machine elements design software – Solid knowledge in machine elements design
Required languages	Romanian language, excelent.
Required research experience	**Engineering** **mai mult de 10**

IV. Additional information

Această secțiune este opțională.

Additional comments	All academic staff at UPB enjoy several benefits, such as training and professional development opportunities, holiday leave, accommodation in UPB residences, banking facilities, access to research infrastructure, and software for remote working.

V. ANEXA: Lista subdomeniilor de cercetare.

Recomandăm selectarea a cât mai multe subdomenii. Cel puțin unul este obligatoriu.

Biological sciences	☐	**Communication science**	☐
Biodiversity	☐	Graphic communication	☐
Biological engineering	☐	Science communication	☐
Biology	☐		
		Computer science	☐
Agricultural sciences	☐	3D Modelling	☒
Soil science	☐	Automatic computing	☐
Agronomics	☐	Computer architecture	☐
Agricultural products	☐	Computer hardware	☐
		Computer systems	☐
Arts	☐	Cybernetics	☐
Visual arts	☐	Database management	☐
		Digital systems	☐
Astronomy	☐	Informatics	☐
Astrophysics	☐	Modelling tools	☐
Cosmology	☐	Programming	☐
Other			
		Systems design	☐
Chemistry	☐		
Analytical chemistry	☐	**Economics**	☐
Applied chemistry	☐	Applied economics	☐
Biochemistry	☐	Business economics	☐

Combinatorial chemistry	☐	Commercia economics	☐
Computational chemistry	☐	Consumer economics	☐
Heterogenous chemistry	☐	Econometrics	☐
Homogeneous chemistry	☐	Industrial economics	☒
Inorganic chemistry	☐	Market economics	☐
Instrumental analyses	☐	Marketing	☐
Instrumental techniques	☐	Management studies	☐
Molecular chemistry	☐	Production economics	☐
Organic chemistry	☐	Transport economics	☐
Physical chemistry	☐		
Other	☐	Other	☐
Reaction mechanisms and dynamics	☐		
Solar chemistry	☐	**Engineering**	☐
Structural chemistry	☐	Airspace engineering	☐
		Agriculture engineering	☐
		Biomaterial engineering	☐
Education	☐	Biomedical engineering	☐
Learning studies	☐	Chemical engineering	☐
Research methodology	☐	Civil engineering	☐
Teaching methods	☐	Communication engineering	☐
		Computer engineering	☐
Information science	☐	Control engineering	☐
Information management	☐	Design engineering	☒
		Electrical engineering	☐
Management	☐	Electronic engineering	☐
		Industrial engineering	☒
Mathematics	☐	Knowledge engineering	☐
Combinatorial analysis	☐	Materials engineering	☒
Computation mathematics	☐	Mechanical engineering	☒
Discrete mathematics	☐	Microengineering	☐
Chaos theory	☐	Nuclear engineering	☐
Applied mathematics	☐	Precision engineering	☐
Algebra	☐	Process engineering	☐
Algorithms	☐	Projects engineering	☐
Geometrics	☐	Simulation engineering	☒
Mathematical analysis	☐	Sound engineering	☐
Probability	☐	Surveying engineering	☐
Statistics	☐	Systems engineering	☐
Mathematical logic	☐		
Number theory	☐	**Physics**	☐
		Quantum mechanics	☐
Technology	☐	Relativity	☐
Chemical technology	☐	Solid state physics	☐
Energy technology	☐	Neutron physics	☐
Environmental technology	☐	Electronic physics	☐
Future technology	☐	Mathematical physics	☐
Electrical technology	☐	Metrology	☐
Dating techniques	☐	Statics	☐

Communication technology	☐	Statistical physics	☐
Computer technology	☐	Surface physics	☐
Construction technology	☐	Thermodynamics	☐
Graphic techniques	☐	Electromagnetism	☐
High vacuum technology	☐	Optics	☐
Space technology	☐	Condensed matter properties	☐
Standardization of technologies	☐	Acoustics	☐
Telecommunications technology	☐	Classical mechanics	☐
Sound technology	☐	Computational physics	☐
Safety technology	☐	Chemical physics	☐
Production technology	☐	Biophysics	☐
Quantum technology	☐	Applied physics	☐
Remote sensing	☐		
Transport technology	☐	**Medical sciences**	☐
Vacuum technology	☐		
Water technology	☐	**Political sciences**	☐
Knowledge technology	☐	Science and society	☐
Laboratory technology	☐	Policy studies	☐
Marine technology	☐	Public awareness of science	☐
Internet technology	☐	Public policy	☐
Interface technology	☐		
Industrial technology	☐	**Sociology**	☐
Information technology	☐	Sociology of enterprise	☐
Instrumentation technology	☐	Social shaping of technology	☐
Materials technology	☐		
Measurement technology	☐		
Nanotechnology	☐		
Nuclear technology	☐		
Optronics	☐		
Mining	☐		
Military technology	☐		
Medical technology	☐		
Micro-technology	☐		