



Ministerul Educației  
Universitatea POLITEHNICA din București

## Formular de publicare a posturilor didactice și de cercetare în platforma *Euraxess*

Contact: [euraxess@upb.ro](mailto:euraxess@upb.ro)



HR EXCELLENCE IN RESEARCH

## I. Basic information\*<sup>1</sup>

Title*	Sef de lucrari, pozitia 16
Offer description*	<p>The Department of Machine Elements and Tribology ensures the training of students by specialization in the field of Industrial Engineering and in the field of Economic Engineering in Mechanical Fields. Research is one of the key points of the department. Research grants are underway in Romania but also internationally, through cooperation with industrial partners.</p> <p>The graduates of theses specializations are integrated in professions such as industrial engineering, designer, consultant or economic engineer in mechanical field, manager etalt. to national and international companies</p> <p><b>INUDUSTRIAL DESIGN</b></p> <p>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.</p> <p>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)</p> <p><b>Specific competences</b></p> <ol style="list-style-type: none"> <li>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</li> <li>2.Demonstrates skills in the graphic design of a new industrial product, from geometric description to computer-aided graphic design (Desktop, 3D MAX, MAYA).</li> <li>3.Demonstrates skills in using the concept of "engineering modeling", from hand drawing to the use of specific software (CATIA, Pro-Engineering, SolidWorks, Inventor).</li> <li>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</li> </ol> <p><b>ECONOMIC ENGINEENERIG IN MECHANICAL FIELDS</b></p> <p><b>Specific competences - engineering sciences:</b></p> <ol style="list-style-type: none"> <li>1. Learning of basic knowledge in mechanical engineering (theories, methods, techniques).</li> <li>2. Ability to carry out a technical project.</li> <li>3. Skills development to perform a computation with specialized software.</li> </ol> <p><b>Specific competences - economical engineering:</b></p> <ol style="list-style-type: none"> <li>1. Ability to perform economic and technical studies (feasibility, business plan, market research).</li> <li>2. Knowledge of the scientific practice in economic engineering area</li> </ol>

<sup>1</sup>Cămpurile marcate cu \* sunt obligatorii.

	<p>(scientific research system, customer relations, publication system, the importance of integrity in work).</p> <p>3. The capacity to analyze the consequences of economic thought and corresponding activities on the environment.</p> <p>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).</p> <p>THIS POSITION includes teaching disciplines :</p> <p><b>Sustainable product development</b>  <b>Computer programming and programming languages II</b>  <b>Design and innovation in medical engineering</b>  <b>Virtual reality</b>  <b>Imaging design and modeling</b>  <b>E-commerce</b>  <b>Product design for sustainable development</b>  <b>Object design</b>  <b>Design I</b>  <b>Human resources management</b></p>
Research field*	Engineering

Type of contract*	Permanent	Job status	Full-time
-------------------	-----------	------------	-----------

<b>Is the job funded through a EU Research Framework Programme?*</b>
<b>Click pentru a selecta o opțiune.</b>
No <input type="checkbox"/>

## II. Hiring information and work location<sup>2</sup>

Faculty*	Inginerie Mecanică și Mecatronică		
Department*	Machine Elements and Tribology		
No. of positions available	1		
Website	www.omtr.pub.ro	sorin.cananau@upb.ro	
Phone	+40 21 4029411	+40 754 203 293	

<sup>2</sup>Câmpurile marcate cu \* sunt obligatorii.

### III. Requirements

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

Required education level	<b>Ph.D. or equivalent</b>
Skills/Qualifications	The successful candidate will be a good communicator who is able to teach and undergraduate students. You will have demonstrate skills on Computer Programming in design software, virtual reality imaging design. Also, have to demonstrate skills in Product Design and Object Design. You will have demonstrated skills in supporting and motivating people (students and colleagues) and be innovative. Also, the successful candidate will have an active research portfolio in Industrial Engineering providing evidence of collaborative working, attracting external research funding and producing research outputs. You will have demonstrated the ability to deliver research project results and effective learning programmes with quality publications.
Required languages	<b>Romanian language</b>

### IV. Additional information

*Această secțiune este opțională.*

Additional comments	<i>Orice alte informații, în limita a 3000 de caractere</i>
---------------------	---

### V. ANEXA: Lista subdomeniilor de cercetare

<b>Biology</b>	<input type="checkbox"/>	<b>Communication science</b>	<input type="checkbox"/>
Biological sciences	<input type="checkbox"/>	Graphic communication	<input type="checkbox"/>
Biodiversity	<input type="checkbox"/>	Science communication	<input type="checkbox"/>
Biological engineering	<input type="checkbox"/>		
		<b>Computer science</b>	<input type="checkbox"/>
<b>Agricultural sciences</b>	<input type="checkbox"/>	3D Modelling	<input type="checkbox"/>

Soil science	<input type="checkbox"/>	Automatic computing	<input type="checkbox"/>
Agronomics	<input type="checkbox"/>	Computer architecture	<input type="checkbox"/>
Agricultural products	<input type="checkbox"/>	Computer hardware	<input type="checkbox"/>
		Computer systems	<input type="checkbox"/>
<b>Arts</b>	<input type="checkbox"/>	Cybernetics	<input type="checkbox"/>
Visual arts	<input type="checkbox"/>	Database management	<input type="checkbox"/>
		Digital systems	<input type="checkbox"/>
<b>Astronomy</b>	<input type="checkbox"/>	Informatics	<input type="checkbox"/>
Astrophysics	<input type="checkbox"/>	Modelling tools	<input type="checkbox"/>
Cosmology	<input type="checkbox"/>	Programming	<input type="checkbox"/>
		Systems design	<input type="checkbox"/>
<b>Chemistry</b>	<input type="checkbox"/>		
Analytical chemistry	<input type="checkbox"/>	<b>Economics</b>	<input type="checkbox"/>
Applied chemistry	<input type="checkbox"/>	Applied economics	<input type="checkbox"/>
Biological chemistry	<input type="checkbox"/>	Business economics	<input type="checkbox"/>
Catalysis chemistry	<input type="checkbox"/>	Commercial economics	<input type="checkbox"/>
Combinatorial chemistry	<input type="checkbox"/>	Consumer economics	<input type="checkbox"/>
Computational chemistry	<input type="checkbox"/>	Econometrics	<input type="checkbox"/>
Heterogeneous chemistry	<input type="checkbox"/>	Industrial economics	<input type="checkbox"/>
Homogeneous chemistry	<input type="checkbox"/>	Market economics	<input type="checkbox"/>
Inorganic chemistry	<input type="checkbox"/>	Marketing	<input type="checkbox"/>
Instrumental analyses	<input type="checkbox"/>	Management studies	<input type="checkbox"/>
Instrumental techniques	<input type="checkbox"/>	Production economics	<input type="checkbox"/>
Molecular chemistry	<input type="checkbox"/>	Transport economics	<input type="checkbox"/>
Physical chemistry	<input type="checkbox"/>	Other	<input type="checkbox"/>
Other	<input type="checkbox"/>		
Reaction mechanisms and dynamics	<input type="checkbox"/>	<b>Engineering</b>	<input type="checkbox"/>
Solar chemistry	<input type="checkbox"/>	Airspace engineering	<input type="checkbox"/>
Structural chemistry	<input type="checkbox"/>	Agriculture engineering	<input type="checkbox"/>
		Biomaterial engineering	<input type="checkbox"/>
<b>Education</b>	<input type="checkbox"/>	Biomedical engineering	<input type="checkbox"/>
Learning studies	<input type="checkbox"/>	Chemical engineering	<input type="checkbox"/>
Research methodology	<input type="checkbox"/>	Civil engineering	<input type="checkbox"/>
Teaching methods	<input type="checkbox"/>	Communication engineering	<input type="checkbox"/>
		Computer engineering	<input type="checkbox"/>
<b>Information science</b>	<input type="checkbox"/>	Control engineering	<input type="checkbox"/>
Information management	<input type="checkbox"/>	Design engineering	<b>X</b>
		Electrical engineering	<input type="checkbox"/>
<b>Management</b>	<input type="checkbox"/>	Electronical engineering	<input type="checkbox"/>
		Industrial engineering	<input type="checkbox"/>
<b>Mathematics</b>	<input type="checkbox"/>	Knowledge engineering	<input type="checkbox"/>
Combinatorial analysis	<input type="checkbox"/>	Materials engineering	<input type="checkbox"/>
Computation mathematics	<input type="checkbox"/>	Mechanical engineering	<input type="checkbox"/>
Discrete mathematics	<input type="checkbox"/>	Microengineering	<input type="checkbox"/>
Chaos theory	<input type="checkbox"/>	Nuclear engineering	<input type="checkbox"/>
Applied mathematics	<input type="checkbox"/>	Precision engineering	<input type="checkbox"/>
Algebra	<input type="checkbox"/>	Process engineering	<input type="checkbox"/>
Algorithms	<input type="checkbox"/>	Projects engineering	<input type="checkbox"/>

Geometrics	<input type="checkbox"/>	Simulation engineering	<input type="checkbox"/>
Mathematical analysis	<input type="checkbox"/>	Sound engineering	<input type="checkbox"/>
Probability	<input type="checkbox"/>	Surveying engineering	<input type="checkbox"/>
Statistics	<input type="checkbox"/>	System engineering	<input type="checkbox"/>
Mathematical logic	<input type="checkbox"/>		
Number theory	<input type="checkbox"/>	<b>Physics</b>	<input type="checkbox"/>
		Quantum mechanics	<input type="checkbox"/>
<b>Technology</b>	<input type="checkbox"/>	Relativity	<input type="checkbox"/>
Chemical technology	<input type="checkbox"/>	Solid state physics	<input type="checkbox"/>
Energy technology	<input type="checkbox"/>	Neutron physics	<input type="checkbox"/>
Environmental technology	<input type="checkbox"/>	Electronic physics	<input type="checkbox"/>
Future technology	<input type="checkbox"/>	Mathematical physics	<input type="checkbox"/>
Electrical technology	<input type="checkbox"/>	Metrology	<input type="checkbox"/>
Dating techniques	<input type="checkbox"/>	Statics	<input type="checkbox"/>
Communication technology	<input type="checkbox"/>	Statistical physics	<input type="checkbox"/>
Computer technology	<input type="checkbox"/>	Surface physics	<input type="checkbox"/>
Construction technology	<input type="checkbox"/>	Thermodynamics	<input type="checkbox"/>
Graphic techniques	<input type="checkbox"/>	Electromagnetism	<input type="checkbox"/>
High vacuum technology	<input type="checkbox"/>	Optics	<input type="checkbox"/>
Space technology	<input type="checkbox"/>	Condensed matter properties	<input type="checkbox"/>
Standardisation of technologies	<input type="checkbox"/>	Acoustics	<input type="checkbox"/>
Telecommunications technology	<input type="checkbox"/>	Classical mechanics	<input type="checkbox"/>
Sound technology	<input type="checkbox"/>	Computational physics	<input type="checkbox"/>
Safety technology	<input type="checkbox"/>	Chemical physics	<input type="checkbox"/>
Production technology	<input type="checkbox"/>	Biophysics	<input type="checkbox"/>
Quantum technology	<input type="checkbox"/>	Applied physics	<input type="checkbox"/>
Remote sensing	<input type="checkbox"/>		
Transport technology	<input type="checkbox"/>	<b>Medical sciences</b>	<input type="checkbox"/>
Vacuum technology	<input type="checkbox"/>		
Water technology	<input type="checkbox"/>	<b>Political sciences</b>	<input type="checkbox"/>
Knowledge technology	<input type="checkbox"/>	Science and society	<input type="checkbox"/>
Laboratory technology	<input type="checkbox"/>	Policy studies	<input type="checkbox"/>
Marine technology	<input type="checkbox"/>	Public awareness of science	<input type="checkbox"/>
Internet technology	<input type="checkbox"/>	Public policy	<input type="checkbox"/>
Interface technology	<input type="checkbox"/>		
Industrial technology	<input type="checkbox"/>	<b>Sociology</b>	<input type="checkbox"/>
Information technology	<input type="checkbox"/>	Sociology of enterprise	<input type="checkbox"/>
Instrumentation technology	<input type="checkbox"/>	Social shaping of technology	<input type="checkbox"/>
Materials technology	<input type="checkbox"/>		
Measurement technology	<input type="checkbox"/>		
Nanotechnology	<input type="checkbox"/>		
Nuclear technology	<input type="checkbox"/>		
Optronics	<input type="checkbox"/>		
Mining	<input type="checkbox"/>		
Military technology	<input type="checkbox"/>		
Medical technology	<input type="checkbox"/>		
Micro-technology	<input type="checkbox"/>		

