

SCIENTIFIC CULTURE OPENED TO THE TECHNICAL UNIVERSITY OF MOLDOVA



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Sustainable collaboration since 1997



**Technical University of Moldova
was founded in 1962**

In the 55 years, the University has prepared more than **80,000 engineers**

At present, at UTM, **9640 students** study at:

license - 64 study programs;
master - 43 study programs;
doctorate - 36 study programs.



Sustainable collaboration since 1997



Technical University of Moldova was founded in 1962

The first cycle studies - the Bachelor's and the II-st master classes are organized in 9 faculties:

- Power Engineering and Electrical Engineering;
- Mechanical Engineering, Industrial and Transportation Engineering;
- Computers, Informatics and Microelectronics;
- Electronics and Telecommunications;
- Food Technology;
- Textiles and Polygraphy;
- Construction, Geodesy and Cadastre;
- Urbanism and Architecture;
- Economic and Business Engineering.



Sustainable collaboration since 1997



Technical University of Moldova was founded in 1962

PhD studies are organized in **3 doctoral** schools:

- Computer Science, Electronics and Energy;
- Mechanical and Civil Engineering;
- Food Science, Economics and Management.



Human potential involved in didactic and research activity



Scientific-Didactic Staff - 732 of which:

Academicians of the ASM - 3

Corresponding members of the ASM - 3

Doctors habilitated - 39

Doctors - 285

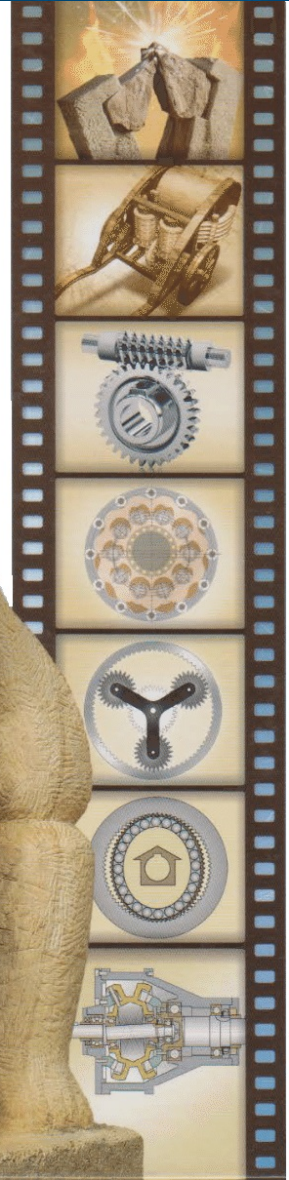
Priority research directions at UTM



Strategic Direction 1. Materials, technologies and innovative products

Strategic Direction 2. Energy Efficiency and Valuation of Renewable Energy Sources

Strategic Direction 3. Biotechnology



PREMISES FOR CREATION OF SCIENTIFIC CENTERS



The emergence of social problems requiring scientific approach;

Continuous development and perfecting new technologies to maintain competitiveness performance of local products on the world market;

Development and implementation of ideas, new performances, of international value;

Creating an academic environment and a material base for developing the scientific potential by domains;

Creating the necessary conditions for the training of young cadres in research, etc.



Depending on the tasks submitted to the research centres' collectives and the issues that solve them, they are divided into:

- **Centers of excellence under self-management but within UTM;**
- **Research centers / laboratories subordinated to UTM;**
- **Research centers / laboratories subordinated to UTM faculties;**
- **Research centers / laboratories subordinated to departments.**



At present, within UTM, there are 31 research centers / laboratories:

- Autonomous centres of excellence but within UTM:
- Centre for Excellence in ICT - Tekwill;
- Centre of Exception and Acceleration in Design and Technologies for light industry "ZIPHouse";
- Platform for digital manufacturing, industrial design and engineering, "FabLab Chisinau";
- Research Centres / Laboratories under TUM:
- National Centre for Material Study and Testing;
- National Centre for Spatial Technologies
- Micro-Optoelectronics Laboratory
- 25 Centres / research laboratories subordinated to faculties and departments of UTM



CENTER OF EXCELLENCE OF THE TECHNICAL UNIVERSITY OF MOLDOVA



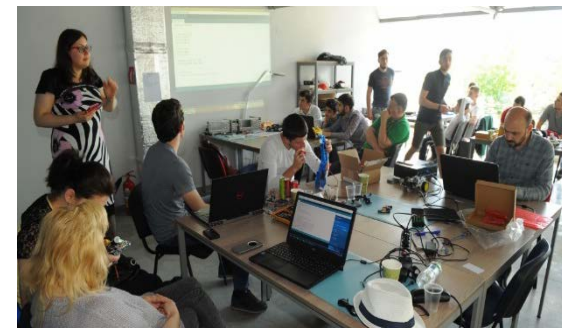
Centre of Excellence in ICT TEKWill



Centre of Excellence and Acceleration in Design and Technologies in Light Industry "ZIPHouse"



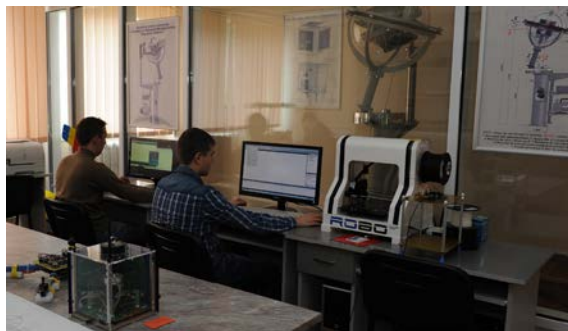
Digital manufacturing platform, industrial design and engineering "FabLab - Chişinău"



RESEARCH CENTERS of the TECHNICAL UNIVERSITY OF MOLDOVA



National Center for Spatial Technologies



National Center for Material Study and Testing



Oenological Research Center



Policies of the UTM regarding the promotion of science



- Institutional Policy of the University on Open Access to Information, approved on January 26, 2016
- objectives:
- Ensuring the long-term management and conservation of the digital scientific works produced by the university community.
- Ensuring the widest possible access to the scientific work produced by the university community.

Strategy of the Technical University of Moldova in the field of Research-Development-Innovation for the period 2019 - 2023, approved on 25.09.2018

Priority 5. Increasing the national and international RDI visibility objectives:

- 5.1. Promoting scientific publications of academic staff
- 5.2. Enhance the visibility of RDI activities by presenting results in national and international scientific events
- 5.3. Continuous advancement of UTM ratings in international rankings of Universities
- 5.4. Popularizing RDI results

Promoting and disseminating research results through reporting



- The results of the research activity of the scientific-didactic staff at TUM annual report are hierarchically:
 - At the Department Meeting - the report of each collaborator and of the department as a whole;
 - At the Faculty Council - the report of the departments and the faculty as a whole;
 - At the TUM Scientific Council - the faculty report;
 - At the Senate - Tutorial activity at TUM.
- Each year, 2-3 scientific seminars are organized at department and college level.
- The annual reports of the research activity are placed on the UTM web site - <https://utm.md/cercetari-stiintifice/rapoarte-privind-activitatea-stiintifica-si-inovationala/>
- The results of the TMR development research activity reported to the ASM are published on the Academy's website.

Promoting and disseminating research results at conferences



The annual UTM organizes a series of national and international scientific conferences and symposia. As an example in 2018, we organized:

- 6th edition of ICTEI 2018 International Conference on Telecommunications, Electronics and Informatics (24-27 May);
- The 22nd edition of the International Conference "ImanEE 2018" (May 31 - June 2);
- 25th Conference on Applied and Industrial Mathematics - "CAIM 2018" (21-23 September);
- International Symposium "Cucuteni 5000 Redivivus" (18-20 May);
- International Conference, Fourth Edition "Modern Technologies in Food Industry" MTFI - 2018 (October 18-20);
- IX - International Technical and Scientific Conference "Current Problems of Urban Planning and Landscaping" (15-17 November);
- Interuniversity Scientific Conference "Sociomedical Sciences and Technical and Scientific Progress" (April 20);
- Workshop within the project "SMA.RI.GO.2, River contract. Implementation of the Botna river contract for integrated management of river areas "funded by KEP Italia (April-May);

Promoting and disseminating research results at exhibitions



The UTM annually organizes exhibitions to present the results of the

**CREATIVITY OPENS THE
UNIVERSE**
4-5 May 2018



**NIGHT OF EUROPEAN
RESEARCHERS**
September 28, 2018



**INTERNATIONAL DAY OF
SCIENCE**
November 10, 2018

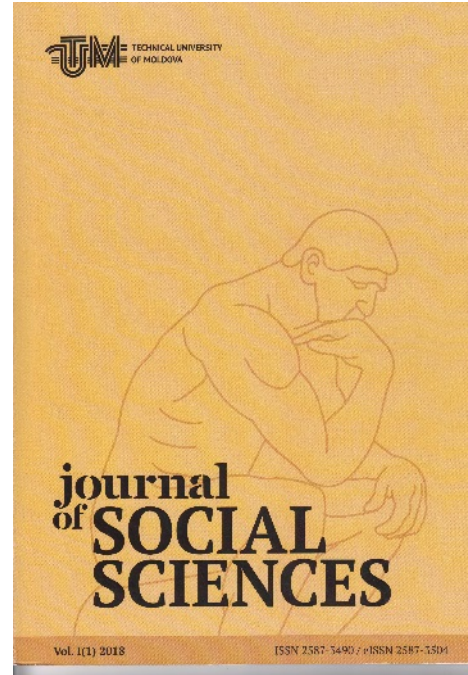


Promoting and disseminating research results through the Technical-Scientific Library of UTM



1. Scientific publications purchased - 1mln. 19 thousand documents from all fields of science and technology (annually about 1.2-1.5 thousand publications are purchased);
2. Lit. Scientific - 282 thousand documents;
3. Lit. Didactics - 720 thousand documents;
4. Lit. Artistic - 19.5 thousand documents.
5. The library is subscribed to 57 scientific journals;
6. The subscription contract to Springer databases with a content of about 2000 magazines and 6000 e-books has been prolonged;
7. Within the project "Modernizing the Services of University Libraries in Moldova", financed by a Norwegian Program, UTM gained access to the Web of Science platform;
8. Teachers, students, master students and PhD students benefited from free access to 10 databases of science offered within the project "Electronic Resources for Moldova";
9. The Institutional Repository of the Technical University of Moldova re-launched.

Open access magazines edited by UTM



Two university journals were launched as a continuation of the magazine "Meridian Ingineresc":

1. Journal of Engineering Science

<https://jes.utm.md>

2. Journal of Social Sciences

<https://jss.utm.md>



- A. Industrial Engineering (8 domains);**
- B. Electronic and Computer Science (5 domenii);**
- C. Arhitecture, Civil and Environmen-tal Engineering (4 domenii);**
- D. Food Engineering (4 domenii).**

Total 21 domains

17 fields of social sciences

Recent Revistele au fost plasate pe platforme digitale externe:

JES – <http://digital-library.ulbsibiu.ro/dspace/handle/123456789/2269>

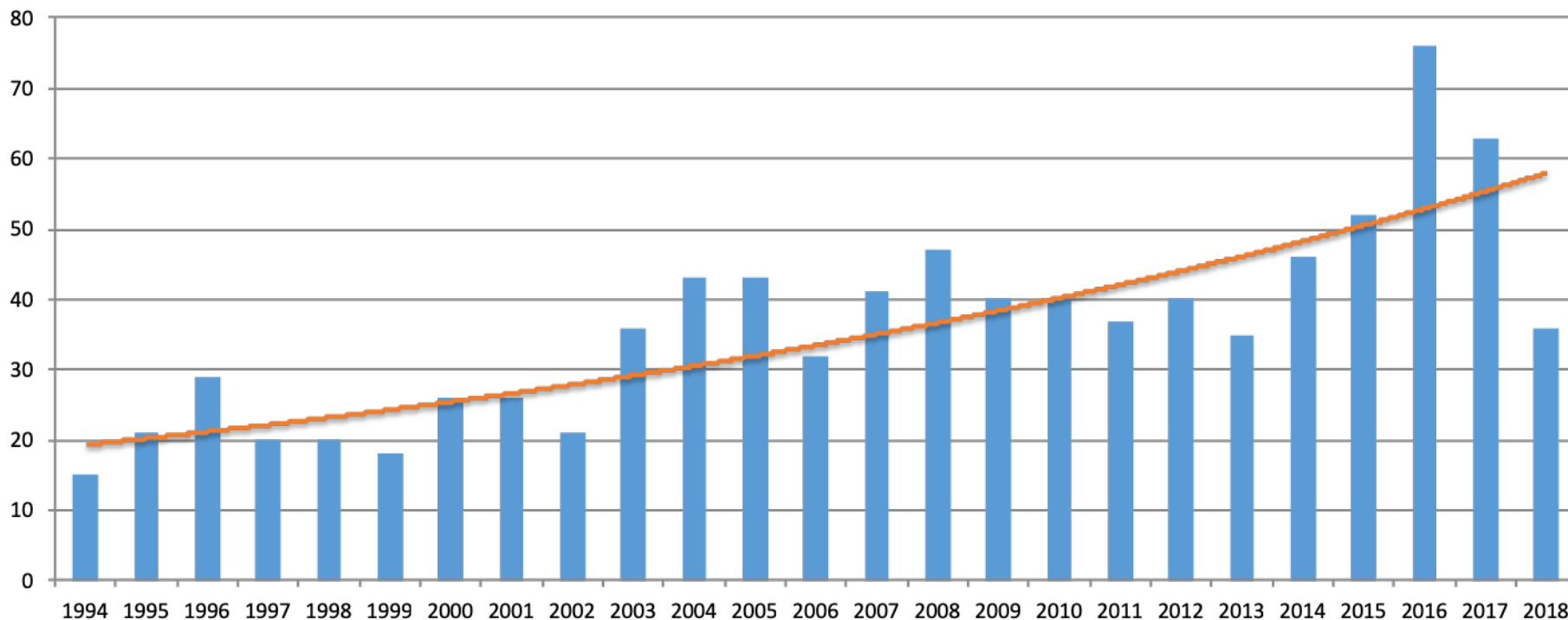
JSS – <http://digital-library.ulbsibiu.ro/dspace/handle/123456789/2268>

JES – https://zenodo.org/communities/jes_utm/

International visibility of UTM researchers



1994-2018 (Web of Science)

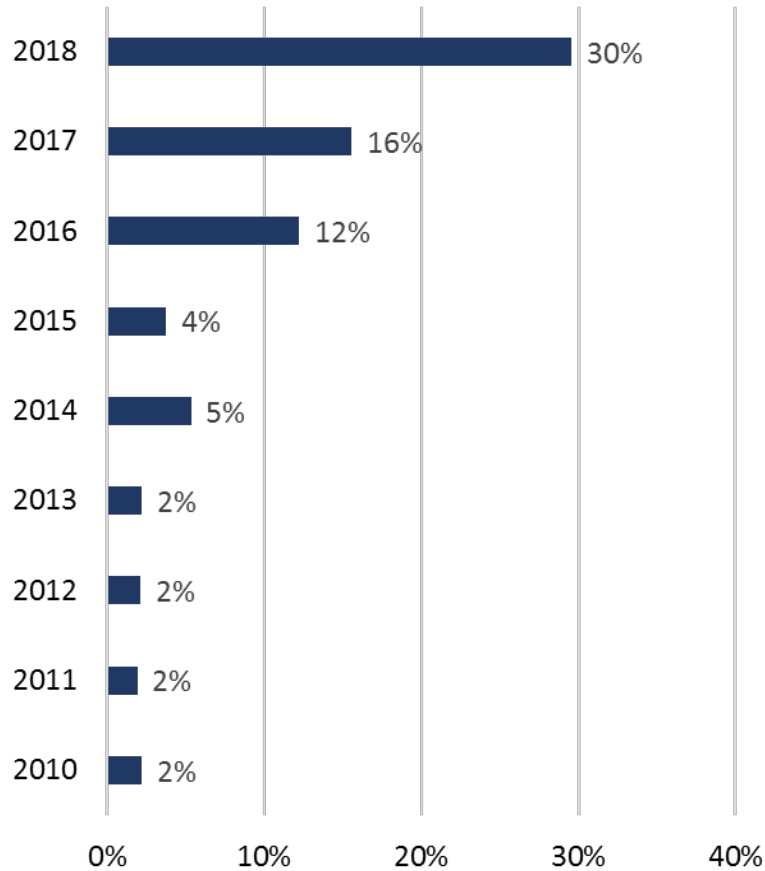


Articole – 903
***h*-index – 58**
Nr. of citations– 13803

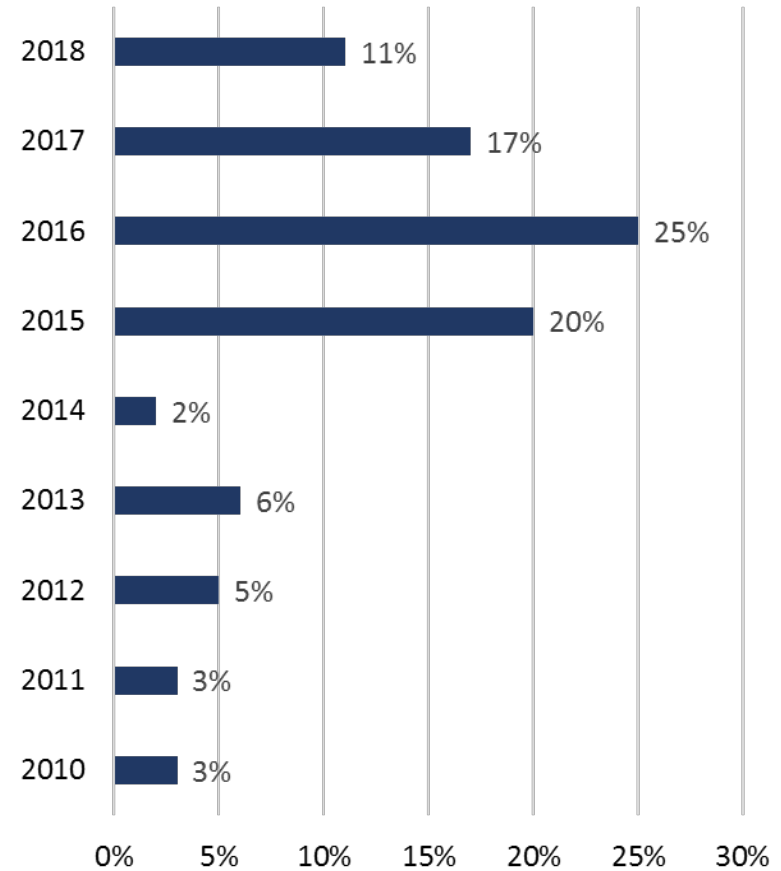
The share of open access articles of UTM in international databases



SCOPUS



Web of Science



The following pages are displayed on the web pages of the UTM research subdivisions:

- equipment of the subdivision.
- services provided by subdivisions.
- subdivisions provide scientific research **services**



Acasă Despre UTM Administrația Procesul de studii Subdiviziuni universitare Admiterea

Infrastructura CNSTM

Sunteți aici: Acasa / Cercetări științifice / Centre și laboratoare științifice / Centru



NR.	ECHIPAMENTE	DETERMINĂRI/ ÎNCERCĂRI/ PROCEDURI	LABORATORUL	LOCAȚIA
1.	<p>Microscop Electronic VEGA TS 5130</p> 	<p>Morfologia suprafeței probelor în baza materialelor solide de dimensiuni mici. Analiza chimică a materialelor solide. Rezoluția de 20 nm. Tensiunea de accelerare până la 30 kV.</p>	<p>Microscopie Electronică</p>	<p>CNSTM, bl. 3, bir. 324, Str. Studenților, 9/7, or. Chișinău, Republica Moldova</p>
2.	<p>Microscop de Forță Atomică (AFM)</p> 	<p>Topologia suprafeței probelor în baza materialelor solide de dimensiuni mici. Modelarea 3D a suprafeței investigate. Rezoluția de 5 nm.</p>	<p>Microscopie de Forță Atomică</p>	<p>CNSTM, bl. 3, bir. 322, Str. Studenților, 9/7, or. Chișinău, Republica Moldova</p>



Acasă Despre UTM Administrația Procesul de studii Subdiviziuni universitare Admiterea

Infrastructura Centrului de Cercetări Oenologice

Sunteți aici: Acasa / Cercetări științifice / Centre și laboratoare științifice / Centru de Cerc

Nr.	Echipment	Parametri principali	Destinație/determinări	Notă
1.	<p>Spectrometru de Absorbție Atomică (Atomic Absorption Spectrometer, AAS)</p> <p>Shimadzu 7000 AA</p> 	<ul style="list-style-type: none"> • Sistemă optică-dublu fascicul, 3D. • Corecția aberațiilor conform Czerny-Turner. • Interval de măsurare 185-900 nm. • 4 bande spectrale (0.2, 0.7, 1.3, 2 nm). • Corecție de fond duală (lampa D2 și metoda autoinversării de mare viteză). • Turleă pentru 6 lămpi cu catod tubular. • Atomizor de titan 10 cm cu poziție regulabilă. • Gestionarea programată a gazelor (acelilenă, aer, oxid de azot). • Diluare automată a probelor cu semnal extra detecție. • Repetare măsurători până la 20 ori. • Autosampler. • Curbe de calibrare liniare și polinomiale. • Calcule finale în soft dedicat WinAAsd. • Dirijare computerizată. 	<p>Elemente chimice, incluziv metale grele în formă de compuși chimici, în diverse matrice lichide</p>	<p>Pot fi determinate concentrațiile și în medii solide, după o extracție prealabilă adecvată de către solicitant conform unor metode recomandate.</p> <p>Fiecare element necesită sursa sa de iradiere-lampă cu catod tubular.</p>
2.	<p>Cromatograf de Lichide de Performanță Înaltă (High Performance Liquid Chromatograph-HPLC)</p> <p>Shimadzu NexeraX LC-20</p> 	<p>Două pistoane hidraulice;</p> <p>Presiune regulabilă până la 60 MPa;</p> <p>Acurateț selectare presiune ±10%;</p> <p>Acurateț viteză flux ±2μl/min;</p> <p>Termostatare Coloane 4-05°C;</p> <p>Volum de injecție 0,1μl-50 μl;</p> <p>Precizie injectare -max RSD 0.3%;</p> <p>Detector refractometric</p> <ul style="list-style-type: none"> • Interval indice refracție 1-1.75. • Linearitate 5·10⁴. • Viteză maximă a fluxului măsurat-20 ml/min 	<p>Determinarea unui gr de substanțe organice în medii lichide (musturi-vinuri-distilate-extracte etc.).</p> <p>Pot fi determinați acizi organici, aminoacizi (după derivare), substanțe fenolice polifenolice ș.a. Separarea analitică și cuantificarea substanțelor chimice, care posedă absorbție optică în domeniul ultraviolet-vizibil.</p>	<p>Pentru diferite grupe de substanțe organice sunt necesare coloanele și precoloanele respective.</p> <p>Sunt obligatorii substanțele-markeri, de referință, pentru construirea curbelor de calibrare și determinarea parametrilor cromatografici, de punctate înaltă (HPLC).</p> <p>De asemenea sunt necesari solvenții</p>

The development within TUM of the institutional management system of research-innovation with data accessible to the general public on:

- Researchers
- Subdivisions of research
- Research projects
- Equipment
- Services
- Results

Thank you for your attention!