CURRICULUM VITAE

Andrei M. TUDOR

A. PERSONAL DATE:

Foreign languages: French, English, Russian

Institutional address: Faculty of Mechanical Engineering and Mechatronics
Science and Technologies National University "Politehnica" Bucharest (UPB), Splaiul Independţei 313, 79590, Bucharest ROMANIA
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B. SCIENTIFIC TITLES

1970- Engineer - Faculty of Agricultural Mechanics, Polytechnic Institute of Bucharest
1979 Dr. Eng. –Mechanical Engineering Field, "Tribology" Specialty, Faculty of Mechanics, Polytechnic Institute of Bucharest with the thesis "Contributions regarding the study of the occurrence of seizure of cylindrical metallic gears with straight teeth".

JOBS

2019-present - retired and leading PhD professor
1992 - 2019 Full Professor at the Faculty of Mechanical Engineering and Mechatronics of the POLITEHNICA University in Bucharest;
PhD supervisor since 1990, Department of Machine Elements and Tribology: PhD theses directed: 26; last (10 year): 16; PhD juries: 28
1990 - 1992 Assistent Professor - Machine Elements and Tribology department
1978 - 1990 Lecture - Machine Elements and Tribology department
1970 - 1978 Assistant - Machine Elements and Tribology department

C. PROFESSIONAL EXPERIENCE

Courses for students: Machine elements, Tribology, Materials engineering, Mechanical structures and systems, Reliability and maintenance, Biotribology
Research areas: Theoretical and experimental approach in the field of tribology of machine elements; fundamental aspects of friction-wear, rheology of lubricants, tribology of rail-wheel contact, biotribology.

Publications:
Author and co-author of ten books, including 6 textbooks for students; the monograph "Real contact of friction surfaces" (unique author) was awarded the "Traian Vuia" prize of the Romanian Academy in 1990.
Author and co-author of over 140 articles published in Wear, Lubrication Science, Tribology International, Revue Roumaine de Science Technique-Serie de Mecanique Applique, Studies and Researches in Applied Mechanics, Bulletin of the Polytechnic Institute of Bucharest, Acta Tribologica, etc.
Bibliographic references (cf Google Academic from 18.10.2023) 469 in total; h-index 10; i10-index 11;
from 2018: 179; h index 7; i10 index- 6.

C1.Some articles

1. The effect of clearance and wear on the contact pressure of metal on polyethylene hip prostheses

A Tudor, T Laurian, VM Popescu; Tribology International 63, 158-168; 2004

2. The sliding friction coefficient—its evolution and usefulness: D Pavelescu, **A Tudor**; Wear 120 (3), 321-336; 1987
3. On the roughness fractal character, the tribological parameters and the error factors: D Pavelescu, **A Tudor**; Proceedings of the Romanian Academy. Ser. A 5 (2); 2004
4. Low friction properties of nano-structured C-Ni films prepared by thermionic vacuum arc method: CP Lungu, AM Lungu, P Chiru, OG Pompilian, **A Tudor**, R Brescia, International Journal of Surface Science and Engineering 4 (2), 191-200; 2010
5. The effect of friction in coulombian damper: HS Wahad, **A Tudor**, M Vlase, N Cerbu, KA Subhi; IOP Conference Series: Materials Science and Engineering 174 (1), 012021; 2017
6. Analysis of heat partitioning in wheel/rail and wheel/brake shoe friction contact: An analytical approach

A Tudor, MM Khonsari; Tribology transactions 49 (4), 635-642; 2006

7. Tribological properties of the disc brake friction couple materials in the range of small and very small speeds: NA Stoica, AM Petrescu, **A Tudor**, A Predescu; IOP Conference Series: Materials Science and Engineering 174 (1), 012019; 2017
8. The squeeze film under boundary lubrication conditions and its effect on the vertical displacement of sliding bodies: **A Tudor**, LC Bo; Wear 80 (1), 115-119; 1982
9. Fractal evaluation aspects in characterizing the roughness of a driving wheel from a locomotive: L Babici, **A Tudor**, JR Garbi, M Stoica; IOP Conference Series: Materials Science and Engineering 724 (1), 012028; 2020
10. Wheel/rail adhesion and analysis by using the Amsler machine: **A Tudor**, N Sandu, E Tountas; Journal of the Balkan Tribological Association 15 (1), 60-65.

C2. Research projects and grants (max 10 items)-total 12
Extras
1997-20-97-3Applications of fractals in tribology. Grant with the Romanian Academy (GAR); 12 000 Euros

1998-1989- Tribological applications of ceramic materials in mechanical construction. Grant with the Romanian Academy (GAR B2); 10 000 Euros
2000-2002; cod D118 The basics of prosthetics of human joints. CNCSIS Grant – World Bank; 40 000 Euros 2000-2001; cod AMSTI B24/2000; The optimal roughness for different mechanical processing and the evaluation of the quality of the surfaces by parametric fractals. Grant CNCSIS type A; 20 000 Euros 2003-2004 – 18 MECT- Modeling the phenomenon of friction and wear in human and artificial joints. International Project -Brancusi- Romania- Franta; 30 000 Euros
C.3. Contracts (max 10 items)-total 36
Extras
1985-20-5-3 Reducing the running-in period of MB engines by improving the quality of the cylinders of medium power Diesel engines. Beneficiary Plant 23 August Bucharest; 40,000 euros
1987-15-7-1 Friction and wear behavior of braking materials in liquid environments. Beneficiary IGFE Ramnicu Sarat; 18,000 euros
1987-15-7-1 Friction and wear behavior of braking materials in liquid environments. Beneficiary IGFE Ramnicu Sarat; 18,000 euros
1991-20-91-5 The theoretical and experimental study of the tribological properties of thin layers obtained by selective transfer; MCT-Bucuresti- 18 000 euros
2009- 32104 Biodegradable cooling and lubricating fluid with multiple functions. (5 partners) CNMP- 120 000 Euro

C.4. Patents (11)
Extras

1. Procedure and plate centrifugal separator for polyphasic mixtures with liquid phase of water-oil emulsion type (co-author) Nr.103859 (1991)
2. Procedure and installation for separating components from water-in-oil emulsion type mixtures (co-author) Nr. 145454 (1991)
3. Procedure and installation for separating components from water-in-oil emulsion type mixtures (co-author) No. 103827 (1991)
4. Procedure for longitudinal and cornering loading of installations in workshops and support for its implementation (co-author) No. 111061 B1 (1996)
5. Procedure for the longitudinal loading and in turns of the installations in the workshops and the picket assembly, for its application (co-author) No. 111058 B1(1996)
6. Process for obtaining methyl esters of sulfurized fatty acids (co-author) No. 127647 B1 (2013
7. Process for obtaining trimethyloprone esters from fatty substances (co-author) No. 127648 B1 (2013

C.5, C.6, C.7… (e. g., Institutional responsibilities, memberships of scientific societies…)
Chairman of the Department of Machine Elements and Tribology 2011-2015; Head of the Laboratory Research Group of Tribology of the UPB;
Founding member of the Center of Excellence in Scientific Research in Mechanical Engineering and Tribology (CESIT); Founding member of the Romanian Tribology Association; Founding member of the Balkan Tribology Association (Bulgaria, Greece,

North Macedonia, Romania, Serbia, Turkey). Vice-president of the Balkan Tribology Association; Member of the Scientific Committees of the International Conferences ROTRIB (8), BALKANTRIB (6) and SERBIATRIB (4). Member of the International Tribology Council (London) (2010-2018 Review of 16 articles for JCR magazine and of 8 research projects for Romanian agencies (ANSTI, GAR)

Participation in congresses:

Participation with articles international conferences (EUROTRIB'81 Warsaw; EUROTRIB'89-Helsinki, EUROTRIB'93-Budapest, SELECTIVE TRANSFER-Sofia, EHD-Lyon 1995, BALKANTRIB 1992, 1996, 2000, 2004, 2008, 2012, THE Coatings, Thessaloniki, 1999, World Tribology Congress 2001, 2005, 2009, 2013, 2017). October

2023