



Curriculum vitae Europass



About me (personal Information)

Name **Sorin CANANAU**
Address Str.Zefirului, nr. 3, Ap. 1, Sector 2, Bucuresti, 024035
Mobil + 40 721330184
E-mail s_cananau@yahoo.com; sorin.cananau@upb.ro
Nationality Romana
Birth data 06.11.1957
Sex M

2012- actual – Head of Machine Parts and Tribology, Mechanical Engineering and Mechatronics Faculty, National University of Science and Technology POLITEHNICA Bucharest, RO
-Phd Supervisor

2012- present Professor

Position currently held Mechanical Engineering and Mechatronics Faculty, National University of Science and Technology POLITEHNICA Bucharest, RO

2025 8 Phd Students in doctoral stage studies

The main activities and responsibilities University professor, Director of the Machine Parts and Tribology Department
PhD supervisor, field of INDUSTRIAL ENGINEERING

Name and address of employer Mechanical Engineering and Mechatronics Faculty, National University of Science and Technology POLITEHNICA Bucharest, RO
Spl.Independentei 313, S6,060042

Type of business or sector Education, research, management

2020-2023 President of the Commission for Research, Innovation and Technological Transfer - UNSTB

2017,2108,2019 Doctorate Jury Member (Jury) University of Poitiers

2009-2023 Research activity in theses co-supervision and projects University of Poitiers- Institut l'Prim - Angouleme (collaboration- Prof.dr.Lucien Dascalescu, Prof. Thami Zegloul, Prof. Aurelian Fatu)

2013-2022 Research activity in co-supervision theses and projects - Institute National de Sciences Appliquées INSA Rennes (Prof. Adinel Gavrus)

2001- 2014 Assoc. Professorr, National University of Science and Technology POLITEHNICA Bucharest, RO
Spl.Independentei 313, S6,060042

2010- prezent Expert -RNE, Comission 11, ARACIS

1992-2001 Lecturer, National University of Science and Technology POLITEHNICA Bucharest, RO

- 1984-1992** Research assistant, National University of Science and Technology POLITEHNICA Bucharest, RO
- 1982-1984** Engineer, Utilaj Greu in Constructii, Bucuresti

Education and Training

Diploma entrepreneurship in education, SAP/ERP – „Informatic system in management of education”

2011-2012

2007, 2011 Autodesk Inventor Expert, Diploma Autodesk, Autodesk „Inventor” 2011

Calificarea / diploma
obținută CAD/CAM/CAE

Numele și tipul instituției
de învățământ /
furnizorului de formare ACC Autodesk –UPB Center,
National University of Science and Technology POLITEHNICA Bucharest,
RO 2

2009 Invited Professor,
Universite de Poitiers, Institut P Prime, Angouleme, Franta

Level in national or
international
classification Research and Education

1994-1999 PhD studies, National University of Science and Technology
POLITEHNICA Bucharest, RO, Universite de Poitiers, FR

1999 Ph Doctor, Engineering Sciences, Machine Parts

1998 PhD studies, Universite de Poitiers, LMS Angouleme

Level in national or
international
classification Research and Education

1983-1984 Master Studies, National University of Science and Technology
POLITEHNICA Bucharest,

1977-1982 Licence studies, , National University of Science and Technology
POLITEHNICA Bucharest,

Foreign language(s).

Autoevaluation <i>European level</i> (*)	Înțelegere				Vorbire				Scriere	
	Listening		Reading		Oral spech		Writing			
French	C1	Experienced user	C1	Experienced user	C1	Experienced user	C1	Experienced user	C1	Experienced user t
English	C2	Experienced user	C2	Experienced user	C2	Experienced user t	C2	Experienced user	C2	Experienced user

Social skills and competences team spirit, good communication, effectiveness in completing tasks

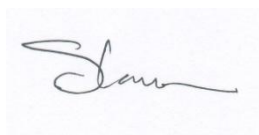
rganisational skills and competences	Head of Machine Parts and Tribology, Mechanical Engineering and Mechatronics Faculty, National University of Science and Tchnology POLITEHNICA Bucharest, RO , 2020-present
Participare activitate stiintifica si de cercetare – PROIECTE 2016-2022	Head of Machine Parts and Tribology, Mechanical Engineering and Mechatronics Faculty, National University of Science and Tchnology POLITEHNICA Bucharest, RO , 2016-, 2020
	Head of Machine Parts and Tribology, Mechanical Engineering and Mechatronics Faculty, National University of Science and Tchnology POLITEHNICA Bucharest, RO , 2012-2016.

Project manager/director in 12 research projects

1. Laser texturing technologies of slider bearings - PN-III-P2-2.1-PTE-2016-0012
2. Harmonic mechanical vibrations mechatronic system for muscle force and resistance improving and bone mineral density increasing effect- PN-III-P2-2.1-BG-2016-0022
3. Protective systems against high energy impact and explosion using porous materials imbibed with liquid PN-II-PT-PCCA-2013-4-1395
4. 3-d mechatronic reality system for rehabilitation learning in real and virtual integrated environment PN-II-PT-PCCA-2011-3.2-005
5. in real and virtual integrated environment PN-II-PT-PCCA-2011-3.2-005
6. Competent Entrepreneurship among Young People - Innovative Education for the Future Antreprenoriat Competent în rândul Tinerilor – Învățământ Inovativ pentru Viitor ACTIV ID124635 (ID: 320191606)
Director proiect: ANDI PUSCA / Responsabil UPB: N/A Program Operational Capital Uman (POCU) / OS 6.7 Creșterea participării la învățământul terțiar universitar și non-universitare organizat în cadrul instituțiilor de învățământ superior acreditate în special pentru cei care provin din grupuri vulnerabile 20 Iunie 2019 -- 19 Iunie 2021
7. Cercetarea comparativa a diferitelor tipuri de proteze de sold, in ceea ce iveste supravietuirea lor, efectele secundare sirezultatele imediate si tardive (2005-2007)- MEC-CEEX - Contract CEEX nr. 182/10.09.2004, Director.Prof.A.Tudor, 281.000 lei
8. Contract RELANSIN (UPB-ICTCM)nr. 2011/15.10.2004- Cercetari privind modernizarea transmisiilor mecanice cu turatii reduse in scopul optimizarii caracteristicilor tehnico-functionale in conformitate cu directivele si standardele europene armonizate.(Director R.Mirica),2004- 2006-7.000 lei
9. Contract RELANSIN (UPB-ICTCM)nr. 2036/2004 Cercetari in scopul realizarii de transmisii mecanice de putere si ruratie ridicata, pentru optimizarea tehnico-economica in raport cu transmisiile de uz general, in contextul alinierii la prevederile UE .(Director G.Dobre), 2004-2006,10100 lei
10. Contract INOVARE nr. 1219/2008, Tehnologie si echipament de prelucrare cu jet hidroabraziv si prin aschiere in 3D asistata CNC , Conducător SC ICTCM SA, (Responsabil UPB - Radulescu Al.)2008-2011, UPB:100.000 lei
11. Contract INOVARE nr. 1219/2007 Fabricatia moderna de la cercetare la aplicatii industriale prin elaborarea de metode, procedee si echipamente noi de prelucrare, multifunctionale si flexibile, necesare in procesele de productie din constructia de masini, 2007-2009, 200.000 le

Technical skills and competences	Specialist in Tribology, Mechanical Transmissions, Industrial Product Development Modeling and simulation research - MEF, Abaqus, Inventor; Research in the field of tribology application for machine parts (tools, bearings, etc.) from some materials; Finite Element Method course for master's students of the Faculties of Mechanics in UPB (2007-2018); Machine Elements course for students of the Faculty of Mechanical and Mechatronics Engineering, UPB (2013-2018).
Computer skills and knowledge	Programming experience : Lahey Fortran 90, MathSoft Application-MathCad14, Matlab 2000r Experienta in CAD: Certified Autodesk Expert, DSS Solidworks, EDS Ideas Experienta in CAE: DSS Cosmosworks, MSC Patran, Abaqus

- Additional Information**
- Good knowledge of institutional evaluation processes at the POLITEHNICA University in Bucharest - program manager, contact person (file maker) for authorization/accreditation visits, 2008, Economic Engineering in the Mechanical Field, 2010, Industrial Design, 2011, Master - Integrated Concept in Mechanical Engineering
 - Author of more than 78 articles published in scientific journals or in national and international conference proceedings, 24 ISI papers, 1 Q1, 4 Q2 in the WOS <http://pcs.isiknowledge.com/>
 - From 1987 until now, I have participated as a team member or project director in 32 national and international research contracts
 - Initiation of links with the industrial environment and the involvement of several companies from the industrial and financial-banking fields in the process of supporting the practical activities carried out by the students of the Faculty of Mechanical and Mechatronics Engineering
 - Didactic and research activities ERASMUS – Universitatea din Poitiers – IUT Angouleme- LMS Angouleme, Franta, 2000,2001,2002, 2004, 2005, 2008,2009, 2011, 2012, 2017, 2018, 2022,2023
 - President of the Romanian Association of Mechanical Transmissions (ROAMET) -2012-present
 - Member of Romanian Association for Tribology, ART (1990);
 - Member of Romanian Association of Mechanical Transmissions Systems and Mechanisms, ARoTMM (1999);
 - Reviewer (Particulate Science and Technology -Taylor and Francis, Scientific Bulletin of UPB, Series D, SciConf2013, 2014, ICTIC 2013-2016



LIST OF WORKS (ISI WEB OF SCIENCE-selection)

1. Udrea, I; **Cananau, S**; Popa, RT., On Energy Efficiency of Night Window Shutters for a Non-Residential Building in Three Major Romanian Cities, Journal BUILDINGS, e ISSN 2075-5309, Jan 2024, Vol.14, Issue 1, Art.No 187, DOI 10.3390/buildings14010187, WOS:001149218900001, JIF 2022 3.8, Q2
2. Moraru, E, Stoica, AM, Dontu, O, Cananau, S, Stoica, NA, Constantin, V, Cioboata, DD, Badita-Voicu, LL., Mechanical and Surface Characteristics of Selective Laser Melting-Manufactured Dental Prostheses in Different Processing Stages, Journal MATERIALS, e-ISSN 1996-1944, sep 2023, Vol.16, Issue 18, DOI 10.3390/ma16186141, WOS:001072682500001, JIF 2022 3.4 , Q3.
3. Gavrus A., Bucur FI., Rotariu A., , **Cananau S.**, *Analysis of metallic materials behavior during severe loadings using a FE modeling of the SHPB test based on a numerical calibration of elastic strains with respect to the raw measurements and on the inverse analysis principle*, Key Engineering Materials 06/2013; 554-557:1133-1146. DOI:10.4028/www.scientific.net/KEM.554-557, pages 1133 -1146, · **IF 0.224** WOS:000322092100128
4. Vasilache, N.; Diacu, E.; **Cananau, S.**; Tenea, A.G.; Vasile, G.G. *Evaluation of the Phytoremediation Potential of the Sinapis alba Plant Using Extractable Metal Concentrations*. Plants 2023, 12, 3123. WOS:001064145200001, JIF 2022 4.5, Q1, <https://doi.org/10.3390/plants12173123>, **IF 4.5**
- 5 Ciucă V.C., Safta V.V, Rusănescu C.O., Paraschiv G. , Deák G. ,Ilie M., **Cănanău S.**, *Rapid Environmental Impact Assessment of Penicillin G in a Veterinary Product Using an Original Software Method and Monitoring by SPE-Online-UHPLC-MS/MS*, 2023, 28(17), MOLECULES, **ISSN: 1420-3049**, WOS:001062689300001, JIF 2022 4.6, Q2
<https://doi.org/10.3390/molecules28176227-24> , **IF 4.6**
6. Zabava, BS, Voicu, G, Constantin, GA, Tudor, P, Cananau, S., Efficiency of a radial primary clarifier for municipal wastewater, SCIENTIFIC PAPERS-SERIES E-LAND RECLAMATION EARTH OBSERVATION & SURVEYING ENVIRONMENTAL ENGINEERING, ISSN 2285-6064, 2023, Vol.12, pp. 275-280, WOS:001112288100016, JIF 2022 0.4, Q4
- 7.M., Fătu A., **Cănanău S.**, Hajjam M., Pascu A., Cristescu C., *A numerical and experimental friction analysis of reciprocating hydraulic 'U' rod seals*, Proceedings of the Institution of Mechanical Engineers, Journal of Engineering Tribology, Sept.2012, Vol.226, no.9, pp. 785-794, **ISI Web of Science, IF 0.916**, WOS:000309205700007
8. Boaca, FI, Cananau, S, Braileanu, I, Calin, A., A simplified fem bending model for corrugated board, ACTA TECHNICA NAPOCENSIS SERIES-APPLIED MATHEMATICS MECHANICS AND ENGINEERING, ISSN 1221-5872, mar 2023, Vol.66, Issue 1, pp 117-122, WOS:000995805400013, JIF 2022 03, Q4
9. Crudu M., Fătu A., Cănanău S., Hajjam M., Pascu A., Cristescu C., A numerical and experimental friction analysis of reciprocating hydraulic 'U' rod seals, Proceedings of the Institution of Mechanical Engineers, Journal of Engineering Tribology, Sept.2012, Vol.226, no.9, pp. 785-794, ISI Web of Science, IF 0.631, WOS:000309205700007
10. Pavaloiu, B., **Cananau S.**, *Numerical generation of a surface using generalised normal distribution*, Journal of the Balkan Tribological Association, **ISI Web of Science**, ISSN 1582-2214, Vol.17, No2, 223-229, 2011, **IF 0.443** (2013), WOS:000294036800006
11. **Cănanău, S**, Zeghloul T. - *Rough surfaces contact analysis*, NORDTRIB2008 13-th Nordic Symposium on Tribology, Finlanda , ISBN 978-973-78-38-49-0 , Proceedings NT 2008-111-31, June 200812. _
12. Dascalescu L., Senouci K., Ploeanu M.C., Rotaru Al., **Cananau S.**, Medles K., *Improving the Surface Electric Potential Measurement Capability for Textile Materials- Quality and Reliability Engineering International*, DOI: 10.1002/qre.1510, **ISI Thomson Reuters**, Volume 30, Issue 4, **June 2014**, Pages: 601–611, WOS:000337294700013, 2014, **IF 1.191, Q2**
13. A. Gavrus, F. Bucur, A. Rotariu, S. Cananau, Mechanical behavior analysis of metallic materials using a Finite Element modeling of the SHPB test, a numerical calibration of the bar's elastic strains and an inverse analysis method, International Journal of Material Forming ISSN 1960-6206, Vol.8, Nr.4, DOI:10.1007/s12289-014-1180-0, May 2015, pages: 567-579 ISI Thomson Reuters, IF 1.081 WOS:000360829700007
14. **Cananau., S.**, *Surface characterization for coated materials using electron microscopy* Metalurgia International, Vol.: 15 , Pag.: 20-23 , Sp. Issue: 1, 2010, **ISI Thomson Reuters**, ISSN: 1582-2214, **IF 0.134**, WOS:000274149700004
15. **Cananau., S.**, *Surface involute gears load capacity for the case carburized and hardened gears transmissions*, Metalurgia International, Vol.: 14 , Pag.: 10-15 , Sp. Issue: 16, 2009, **ISI Thomson Reuters**, ISSN: 1582-2214, **IF 0.134**, WOS:000274149700004
16. Gavrus, A., Andreiu M., Stoica, G., **Cănanău, S.**, – Etudes theoriques et numeriques concernant la diminution du risqué du flambage elastique et plastique des outils et des pieces lors des operations de forgeage, 21-eme Congres Français de Mecanique, Bordeaux 26-31 Aout, 2013 , <http://documents.irevues.inist.fr/handle/2042/52308>
17. Crudu M., Pascu A., **Cananau S.**, Fatu A., Hajjam M. - A numerical model of a U seal for reciprocating piston roads in high pressure hydraulic systems- ISI Proceedings - Proceedings ICMERA 2010, International Conference on Mechanical Engineer, Robotics and Aerospace - 978-1-4244-8867-4, Bucuresti (2.18, <http://olaruadrian.wix.com/icmeras-2010#!page-7>)

18. **Cananau, S.**, Pavaloiu, B.- Characterization Surfaces Algorithm For Used Mechanical Parts, Proceedings of the International Scientific Conference BALTRIB'09, ISI Proceedings, ISSN 1822-881X, pp.265-270, November 2009, Kaunas, Lithuania, WOS:000275404600048
19. **Cananau, S.**, - A 2D Finite Element Analysis for Contact of two cylinders, Annals of DAAAM for 2009 and Proceedings of the 20th International DAAAM Symposium, ISI Proceedings, ISSN 1726-9679, ISBN 978-3-901509-70-4, pp. 109-110, 25-28 nov. 2009, Vienna, Austria, WOS:000282335600109

SHORT CV ENG

Sorin CANANAU (66 years old), Professor Phd. eng. at National University of Science and Tehnology Politehnica of Bucharest, Head of Department of Machine Elements and Tribology, teaches Machine Elements, Finite Element Method, Industrial Design.

In 2009-2010 was Invited Professor at P'Prime Institut, at Poitiers University, L5 Angouleme.

Since 2012, he has been Head of Department of Machine Elements and Tribology, Faculty of Mechanical and Mechatronics Engineering.

Research in the field of Modeling and Simulation – MEF, Abaqus, Inventor, Research in the field of the tribology application for machine elements (gears, bearings etalt.) of some materials. In the field of the Machine Elements and Tribology, Modeling and Simulation he is author of 6 Books, 5 Monographs

Author of more than 78 articles published in scientific journals or in national and international conference proceedings, 24 ISI papers, 1 Q1, 4 Q2 in the WOS.

In the last 10 years he was involved in national and international projects as: Laser texturing technologies of slider bearings - PN-III-P2-2.1-PTE-2016-0012 2. Harmonic mechanical vibrations mechatronic system for muscle force and resistance improving and bone mineral density increasing effect- PN-III-P2-2.1-BG-2016-0022 3. Protective systems against high energy impact and explosion using porous materials imbibed with liquid PN-II-PT-PCCA-2013-4-1395 4. 3-d mechatronic reality system for rehabilitation learning in real and virtual integrated environment PN-II-PT-PCCA-2011-3.2-005

Bucharest, 24.07.2025

Prof.dr.ing. Sorin Cananau

