



Curriculum vitae
Europass



Personal Information

First name / Surname Sorin CANANAU

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Nationality Romanian

Data of birth 06.11.1957

Gender M

Employment / Occupational field University POLITEHNICA of Bucharest/ Faculty f Mechanical and Mechatronics/
Department of Machine Elements and Tribology

Work experience

Dates 2011-present

Occupation or position held Professor, Head of Department of Machine Elements and Tribology

Main activities and responsibilities Teaching (academic), research activities, academic management

Name and address of employer University POLITEHNICA of Bucharest

Type of business or sector Education

Dates 2001-2011

Occupation or position held Assistant Professor

Main activities and responsibilities Teaching (academic) and research activities

Name and address of employer University POLITEHNICA of Bucharest

Type of business or sector Education

Dates 1992-2001

Occupation or position held Lecturer

Main activities and responsibilities Teaching (academic) and research activities

Name and address of employer University POLITEHNICA of Bucharest

Type of business or sector Education

Dates

1984-1992

Occupation or position held Assitant

Main activities and responsibilities Teaching (academic) and research activities

Name and address of employer University POLITEHNICA of Bucharest

Type of business or sector Education

Dates 1982-1984

Occupation or position held Engineer

Main activities and responsibilities Product Development

Name and address of employer Heavy Machines Company, 7Noiembrie Str., Bucharest

Type of business or sector Mechanical Engineering

Education and training

Dates **2011**

Title of qualification awarded Autodesk Inventor Expert

Principal subjects / occupational skills covered CAD

Name and type of organization providing education and training ACC Autodesk –UPB Center, University POLITEHNICA of Bucharest, Spl.Independentei 313, S6,060042

Dates 2010

Title of qualification awarded Autodesk Certification

Principal subjects / occupational skills covered CAD

Name and type of organization providing education and training ACC Autodesk –UPB Center, University POLITEHNICA of Bucharest, Spl.Independentei 313, S6,060042

Dates 2009

Title of qualification awarded Visiting Professor, Researcher

Principal subjects / occupational skills covered Contact mechanics

Name and type of organization providing education and training Universite de Poitiers, P Prime Research Laboratory Poitiers, France

Dates 1998

Title of qualification awarded Education and research for PhD Thesis

Principal subjects / occupational skills covered Contact mechanics

Name and type of organization providing education and training University of Poitiers –LMS Angouleme (TEMPUS Phare Mobility)

Dates 1977-1982

Title of qualification awarded Diplomat Engineer

Principal subjects / occupational skills covered Mechanical engineering/ Thermal machines

Name and type of organization providing education and training University POLITEHNICA of Bucharest, Spl.Independentei 313, S6,060042



Personal skills and competences

Self-assessment European level (*)	Understanding		Speaking		Writing
	Listening	Reading	Spoken Interaction	Spoken production	
	English	C1 Proficient user	C1 Proficient user	C1 Proficient user	
French	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user

(*) [Common European Framework of Reference \(CEF\) level](#)

Social skills and competences	Team spirit, Ability to work with people from all walks, Efficiency in carrying out works Communication skills Analytical capacity
Organizational skills and competences	Leadership in academic field (Responsible for Master Studies-Faculty of Mechanical Engineering and Mechatronics) Management experience as executive secretary of a professional association since 2000 (Romanian Association of Mechanical Transmissions - ROAMET) Member of the staff of Romanian Association of Tribology Experience in project and workteam management
Technical skills and competences	Research experience and competence (machine elements- mechanical transmissions, product development, tribology) CAD/CAE skills
Computer skills and competences	Experience in programming : Lahey Fortran 90, MathSoft Application-MathCad14, Matlab 2000r Experience in CAD: Certified Autodesk Expert, DSS Solidworks, EDS Ideas Experience in CAE: DSS Cosmosworks, MSC Patran, Abaqus



Additional Informations

1. 10 books, in CNCSIS recognized Publishing Houses.
2. 38 articles in professional journals, 19 papers ISI Web of Knowledge
3. 54 papers presented in the proceedings of international scientific events abroad and at home (conferences, congresses, symposia).
4. PhD thesis.
5. participation in 3 international research grants
6. 14 annual national research grants as a the leader (director)
7. participation in 13 national research grants
8. President of ROAMET (Romanian Association of Mechanical Transmissions), www.roamet.pub.ro
9. Member of the International Scientific Committee of the Balkan Journal for Mechanical Transmissions (Online) <http://www.bjmt.pub.ro>.
10. Scientific Evaluator in national journal (UPB Scientific Bull-Mech. Series D) and national and international conferences.
11. Member of scientific committees international conferences.
12. Evaluator (in NRE) of The Romanian Agency for Quality Assurance in Higher Education (ARACIS) – Engineering II Committee, from 2010
13. 19 works are ISI or ISI Indexed. (<http://pcs.isiknowledge.com/>)

Selection of works and papers

- Prisecaru, DA ; Besnea, D; Moraru, E ; **Cananau, S** , *Additive Manufactured Bioplastics for Conceptual Models of Knee Customized Prostheses*, Materiale Plastice, Volume 56 Issue 4, Page,957-963, Published DEC 2019, WOS:000509920700040
- Pirva, E; Tudor, A ; Gavrus, A; Stoica, N; **Cananau, S** , *Some aspects regarding the influence of the anisotropy of an AA2021-T351 rolled thick plate on its tribological behaviour*, MECHANICS & INDUSTRY, Volume 20 Issue 6, Article Number 610, WOS:000538800100001
- Cananau, S**; Mirica, RF, *Tooth Flank Damage and Gears Micropitting Initiation*, JOURNAL OF THE BALKAN TRIBOLOGICAL ASSOCIATION, Volume 22, Issue 1A, Page 936-944, Special Issue SI, Part 2, Published 2016, WOS:000381249200009
- 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
- Cananau S.**, *Surface Involute Gear Load Capacity for the Case Carburized and Hardened Gears Transmissions*, Revista Metalurgia International, ISI Web of Science, ISSN 1582-2214, Edit. Stiintifica FMR, Year (14), Vol.XIV, Special Issue 1, pp. 10-16, 2009
- Cananau S.**, *Surface Characterization for Coated Materials using Electron Microscopy*, Revista Metalurgia International, ISI Web of Science, ISSN 1582-2214, Edit. Stiintifica FMR, Year (15), Vol.XV, Special Issue 15, pp. 20-24, 2010
- Cananau, S.** – *Evaluation of Tribological Gears Behaviour under Load*- BALTTTRIB'07 International Scientific Conference , Lithuania, pag.58-62, ISI Proceedings, Proceedings ISSN 1822-8801, pag. 21-23 November 2007
- Cananau, S.**, Stoica G.- *Pitting modelling of a spur gear in mesh*, Annals of DAAAM for 2008 and Proceedings of the 19th International DAAAM Symposium, ISI Proceedings, ISSN 1726-9679, ISBN 978-3-901509-68-1, pp. 405-406, 22-25 oct. 2008, Trnava, Slovakia;
- Stoica, G. F., Jordan, A., **Cananau, S.** Grigoras, S. – *Use of cross-spectrum measurement technique in finding damping properties of polymers*, Annals of DAAAM for 2008 and Proceedings of the 19th International DAAAM Symposium, ISI Proceedings, ISSN 1726-9679, ISBN 978-3-901509-68-1, pp. 405-406, 22-25 oct. 2008, Trnava, Slovakia
- 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
- Cananau, S.**, - *FEM Analysis of spur gears system with misalignment*, 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. 131-132, 25-28 nov. 2009, Vienna, Austria
- Cananau, S.**, - *A 2D Rough Surfaces Contact Analysis*, 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. 720-721, 25-28 nov. 2009, Vienna, Austria
- Cananau, S.**, Zeghloul T.- *Fractal Analysis Method For Roughness Profiles*, Proceedings of the International Scientific Conference BALTTTRIB'09, ISI Proceedings, ISSN 1822-881X, pp.265-270, November 2009, Kaunas, Lithuania
- Cananau, S.**, Pavaloiu, B.- *Characterization Surfaces Algorithm For Used Mechanical Parts*, Proceedings of the International Scientific Conference BALTTTRIB'09, ISI Proceedings, ISSN 1822-881X, pp.265-270, November 2009, Kaunas, Lithuania



- Cananau, S., - *Contact Analysis for spur gears*, Annals of DAAAM for 2010 and Proceedings of the 21th International DAAAM Symposium, ISI Proceedings, Vol.21, ISSN 1726-9679, ISBN 978-3-901509-73-5, pp. 0411-0412, 20-23 oct. 2010, Zadar, Croatia
- B.Pavaloiu, S.Cananau – *Numerical Generation of a Surface Using Generalised Normal Distribution* – ISI -Journal of Balkan Tribological Association, Vol.17, No.2, 2011, pag. 223-229
- L.Mandrea, G.Baran, S.Cananau, C.A.Babuteanu - *The suspensions dynamics in biogas reactors* – UPB Scientific Bulletin Series D: Mechanical Engineering, Vol.73, Issue 1, 2011, pag.121-130
- M.Crudu, A.Fatu, M.Hajjam, A.Pascu, S.Cananau – *Influence de certaines parametres sur la modelisation des joints hydrauliques en „U”* - U.P.B. Sci. Bull., Series D, Vol. 73, Iss. 4, 2011 ISSN 1454-235, pag.99-109
- Cănanău, S.**, *Contact stresses and deformations for cylindrical gear transmission compared to finite element analyse*. ROTRIB '96 - The 7-th International Tribology Conference, 10-12 sept 1996, Bucuresti, ROMÂNIA, TCMM, VOL.3, P.272-277, ISBN 973-31-0823-5
- Cănanău, S.**, Rădulescu ,Gh., *Influența efectelor de torsiune ale roții dințate asupra rigidității dintelui in angrenare pentru angrenaje cilindrice cu dinți drepți*. The 7-th IFToMM International Symposium on Linkages and Computer Aided Design Methods – Theory and Practice of Machines and Mechanisms, Bucuresti, ROMÂNIA, Vol.3, p.127-134, Bucuresti, 26-30 Aug.1997
- Cănanău, S.**, Zeghloul Th., Villechaise B., *Influence du mesalignement sur le comportement et la repartition de charge dans les contacts hertiens secs –14°* Congres Francais de Mecanique, Toulouse, FRANCE, sept.1999, p.213-218 (pe suport CD).
- Radulescu Al., **Cănanău, S.**, Radulescu I., Dragomiroiu Gh., *Theoretical and experimental methods concerning the stress analysis in the rim of the Cielo car wheel*. International Conference BALTRIB' 99, 21-22 Sept 1999, Kaunas, LITHUANIA, p. 118-123
- Cănanău, S.**, Rădulescu ,Gh., *Load distribution analysis for normal Hertz non-conforming elastic contacts*, The third International Conference of Tribology - BALKANTRIB' 99, 2-4 June 1999, Sinaia, ROMÂNIA, si Journal of “Petroleum – Gas” University Ploiesti, Vol. LI , Nr.5, p.19-24, ISSN 1221 - 9371
- Cănanău, S.**, Rădulescu ,Gh., *Load distribution calculus of involute cylindrical teeth flank line contact*, The third International Conference of Tribology - BALKANTRIB' 99, 2-4 June 1999, Sinaia, ROMÂNIA, , si Journal of “Petroleum – Gas” University Ploiesti, Vol. LI , Nr.5, p.25-31, ISSN 1221 – 9371
- Cănanău, S.**, Dobre G., Mirica R-F., *Load pressure along tooth flank as a function of tooth contact pattern shape and position*, The 8-th Symposium on Mechanisms and Mechanical Transmissions with International participation – MTM'2000, 19-22 Oct. 2000, Timisoara, ROMÂNIA, p.95-102
- Dobre G., Mirica R-F. **Cănanău, S.**, *Criteria for organising the gear material data*, The 8-th Symposium on Mechanisms and Mechanical Transmissions with International participation – MTM'2000, 19-22 Oct. 2000, Timisoara, ROMÂNIA, p.115-121
- Mirica R-F, Dobre G., **Cănanău, S.**, *Sur la modelisation de la famille des courbes de Wohler pour la sollicitation du pied de la dent*, The 8-th Symposium on Mechanisms and Mechanical Transmissions with International participation – MTM'2000, 19-22 Oct. 2000, Timisoara, ROMÂNIA, p.217-222
- Cănanău, S.**, *Load pressure distribution along cylindrical spur gear tooth flank*, A 10-a Conferinta de lubrifiatie si tractiune EHD-VAREHD'10, ISBN 10 973-666-215-2, 20-21 Oct. 2000, Suceava , ROMÂNIA, , p.145-150
- Cănanău, S.**, Dobre G., Mirica R-F, *A study of the effective mesh stiffness*, The 8-th IFToMM International Symposium on Theory of Machines and Mechanisms – SYROM' 2001, 28 August- 1 September , 2001, Bucharest, ROMÂNIA, Vol.III, p.115-120, ISBN 973-8143-1, ISBN 973-8143-6
- Dobre G., Mirica R-F, **Cănanău, S.**, *On dimensioning principles of cylindrical gears*, The 8-th IFToMM International Symposium on Theory of Machines and Mechanisms – SYROM' 2001, 28 August- 1 September . 2001, Bucharest, ROMÂNIA, Vol.III, p.157-162, ISBN 973-8143-1, ISBN 973-8143-6
- Mirica R-F, **Cănanău, S.**, Dobre G., *Aspects concernant la conception des transmissions planetaires*, The 8-th IFToMM International Symposium on Theory of Machines and Mechanisms – SYROM' 2001, 28 August- 1 September, 2001, Bucharest, ROMÂNIA, Vol.III, p.267-272, ISBN 973-8143-1, ISBN 973-8143-6
- Cănanău, S.**, *A study of spur gear dynamic model*, Materials engineering & Baltrib *2001, Materials of the X-th International Baltic Conference, September 27-28, Jurmala, LITUANIA, Vol.I, p.33-36
- Cănanău, S.**, *Contact study for artificial hip joint prosthesis*, Conferința Internațională BALKANTRIB” 2002 – Kayseri, TURCIA
- Cananau, S.** – *Finite Element Analysis and optimum design on planetary gear systems* – The Ninth International Symposium on Theory of Machines and Mechanisms, Bucuresti, Sept. 1-4, 2005, vol. ISBN 973-718-292-8, Ed. Printech, pg.877-881
- Cananau, S.** – *Software integration and optimum design of gear systems* – The Ninth International Symposium on Theory of Machines and Mechanisms, Bucuresti, Sept. 1-4, 2005, vol. ISBN 973-718-292-8, Ed. Printech, pg.873-876
- Cananau, S.**- *Load Presssure Distribution on Spur Gear Tooth Flank for a Mechanical Transmission* -Excellence research as a way to E.R.A. – CEEX Conference 2007, pr 294, Ed. Tehnica, 2007, ISSN 1843- 5904
- Cananau S.**, T.M.Zeghloul, Evaluation of spur gear root stress for thin rimmed gear, 5-th International Conference on Mechanics and Materials in Design, University of Porto, Portugal, ISSN 1726-9679, 24-26 iulie 2006
- 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 2008
- Cănanău, S.**, Zeghloul T. –Elastic contact analysis for a rough fractal surface – smooth plane - Actes du 9ème Congrès de Mécanique -, 21 – 24 Avril 2009, Maroc
- Cănanău, S., Zeghloul T. – Contact model for a rough surface exhibiting fractal behaviour - Actes du 9ème Congrès de Mécanique -, 21 – 24 Avril 2009, Maroc

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