Lista de lucrări în domeniul de ştiinţă
definit de disciplinele din postul
scos la concurs:

conferenţiar poziţia 9 din statul de funcţii

al Departamentului de Inginerie Mecanică,

Fac. de Ştiinţe Tehnice şi Umaniste, Universitatea Sapientia

NUMELE ŞI PRENUMELE: dr. Tolvaly-Roşca Ferenc

I. LISTA PUBLICAŢIILOR RELEVANTE

1. **F. Tolvaly-Rosca**, Z. Forgó, *Computing Algorithm for the Gear Tooth Space Points Cloud Envelope Generated by the Mixed Cad Method*, MACRo 2017, Proceedings of the 5th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, https://doi.org/10.1515/macro-2017-0013.
2. **Tolvaly-Rosca Ferenc**, Máté Márton, Forgó Zoltán, Kakucs András, Development of Helical Teethed Involute Gear Meshed with a Multi-Edge Cutting Tool Using a Mixed Gear Teeth Modeling Method, *Elsevier Procedia Engineering*, Vol. 5, No 2, 2017, ISSN 1877-7058, pp. 153-158 (ScienceDirect)
3. Sütő Szabolcs, Forgó Zoltán, **Tolvaly-Rosca Ferenc**, Simulation Based Human-Robot Co-working, *Elsevier Procedia Enineering*, Vol. 5, No 2, 2017, ISSN 1877-7058, pp. 503-508 (ScienceDirect)
4. **Tolvaly-Rosca F.**, Development of a Mixed CAD Method for Teeth Generation, Based on the Relative Cutting Movements, The 24-th International Conference on Mechanical Engineering, 2016 Deva, Romania, sesiunea plenară. ISSN 2068-1267, pp.12-17.
5. Forgó Zoltán, **Tolvaly-Rosca Ferenc**, Analytical and Numerical Model of Low DOF Manipulators, *Elsevier, Procedia Technology*, No 19, 2015, ISSN 2212-0173, pp. 40-47 (ScienceDirect)
6. **Tolvaly-Rosca F.**, I. Papp, Kinematic Analysis of 2 DoF Spherical Mechanism Applying Constraint Equations, MACRo 2015. Volume 1, Issue 1, Pages 235–244, ISSN (Online) 2247-0948, DOI: 10.1515/macro-2015-0023
7. **Tolvaly-Roşca Ferenc**, Forgó Zoltán, Máté Márton, Evaluation of a Mixed CAD Gear Modeling from Time and Precision Point of View, *Elsevier, Procedia Technology*, No 19, 2015, ISSN 2212-0173, pp. 28-33, (ScienceDirect)
8. **Tolvaly-Roşca Ferenc**, Forgó Zoltán, Mixed CAD Method to Develop Gear Surfaces Using the Relative Cutting Movements and NURBS Surfaces, *Elsevier, Procedia Technology*, No 19, 2015, ISSN 2212-0173, pp. 20-27, (ScienceDirect)
9. **Tolvaly-Rosca F.**, The Cad-Analysis Of The Contact By The Cylindrical Gears Having Archimedic Spiral Shaped Teeth, Inter-Eng 2012, Interdisciplinarity in Engineering, Tg. Mureş, Romania 2012. ISSN 2285-0945,ISSNL2285-0945, pp. 130-135.Ulrich's Periodicals Directory™ (U.S.), German National Library of Science and Technology (TIB).http://jml2012.indexcopernicus.com/passport.php?id=769, Scopus.

II. LISTA COMPLETĂ DE PUBLICAŢII, CREAŢII, INVENŢII

A. Teza de doctorat.

"Studiul preciziei angrenajelor conice prin metoda modelării parametrice solide.", Conducător ştiinţific prof.dr.ing. Hollanda Dionisie, Universitatea Transilvania Braşov, 2006.

B. Cărti publicate

B1. Cărţi (manuale, monografii, tratate, îndrumare etc.) publicate la edituri recunoscute în străinătate.

B2. Cărţi (manuale, monografii, tratate, îndrumare etc.) publicate în ţară, la edituri recunoscute CNCSIS/CNCS.

1. **Tolvaly-Roşca, F.**, *A számítógépes tervezés alapjai. AutoLisp és Autodesk Inventor alapismeretek.* (Bazele proiectării asistate de calculator. Cunoştiiţe de bază din AutoLisp şi Autodesk Inventor), Societatea Muzeului Ardelean. Erdélyi Múzem Egyesület, Cluj Napoca, 2009, 200 pagini, ISBN 978-973-8231-81-8.
2. **Tolvaly-Rosca F.,** *Gépelemek (Oragane de mașini)*, **300 pagini, în format electronic, în curs de publicare la Societatea Muzeului Ardelean.**

B3. Cărţi (manuale, monografii, tratate, îndrumare etc.) publicate la alte edituri sau pe plan local.

1. Hollanda D., **Tolvaly-Roşca F.**, *Forgácsolás és szerszámgépeken generált felületek elmélete. Laboratóriumi gyakorlatok. (Bazele aşchierii şi generării suprafeţelor. Îndrumar de laborator)* Universitatea Sapientia, Facultatea de Ştiinţe Tehnice şi Umaniste, Tg. Mureş, 2006.

B4. Cărţi (manuale, monografii, tratate, îndrumare etc.) publicate pe web.

1. **Tolvaly-Rosca Ferenc**, *Gépelemek. (Organe de mașini),* Intranet .www.ms.sapientia.ro, 2017 (300 p.)
2. **Tolvaly-Rosca Ferenc**, *A Reverse Engineering alapjai, (Bazele Reverse Engineering-ului)* Intranet .www.ms.sapientia.ro, 2017 (30 p.)
3. **Tolvaly-Rosca Ferenc**, *Speciálishajtások a mechatronikában. Laboratóriuni gyakorlatok. (Transmisii speciale în mecatronică. Lucrări de laborator).* Intranet .www.ms.sapientia.ro, 2014 (20 p.)
4. **Tolvaly-Rosca Ferenc**, *CNC vezérlés. Laboratóriumi gyakorlatok. (Conducerea CNC. Lucrări de laborator).* Intranet.www.ms.sapientia.ro, 2009 (30 p.).
5. **Tolvaly-Roşca Ferenc**, *A számítógépes tervezés alapjai. (Bazele proiectării asistate de calculator), 2009.* http://mek.oszk.hu/07300/07399/. (200 p.)
6. **Tolvaly-Roşca Ferenc**, *CNC szerszámgépek programozása, (Programarea maşinilor-unelte cu CNC.).* Intranet .www.ms.sapientia.ro, 2008. (300 p.)
7. **Tolvaly-Rosca Ferenc**, *Gépelemek. Laboratóriumi gyakorlatok. (Organe de mașini. Lucrări de laborator),* Intranet .www.ms.sapientia.ro, 2009 (40 p.)
8. **Tolvaly-Rosca Ferenc**, *Gyártástechnologia. Laboratóriumi gyakorlatok. (Tehnologii de fabricație. Lucrări de laborator),* Intranet .www.ms.sapientia.ro, 2009 (20 p.)

B5. Capitole de cărţi publicate în străinătate

B6. Capitole de cărţi publicate în ţară

C. Lucrări ştiinţifice publicate

C1. Lucrări ştiinţifice publicate în reviste cotate ISI

1. F. Tolvaly-Roşca, M. Máté, Z. Forgó, A. Kakucs, *Development of Helical Teethed Involute Gear Meshed with a Multi-Edge Cutting Tool Using a Mixed Gear Teeth Modeling Method, Procedia Engineering*, Volume 181, 2017, Pages 153-158, https://doi.org/10.1016/j.proeng.2017.02.421

2. F. Tolvaly-Rosca, A. Kakucs, Z. Forgó, M. Máté, *Comparative FEM Analysis of Gears Modeled With Analytical, Solid Subtracting and Mixed CAD Generating Method*, Proceedings of the 5th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, https://doi.org/10.1515/macro-2017-0014.
3. F. Tolvaly-Rosca, Z. Forgó, Computing *Algorithm for the Gear Tooth Space Points Cloud Envelope Generated by the Mixed Cad Method*, MACRo 2017, Proceedings of the 5th International Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, https://doi.org/10.1515/macro-2017-0013.
4. Z. Forgó, **F. Tolvaly-Rosca**, J. Pásztor, *Mathematical and assembly modeling of the mechanism for implementing intermittent rotational motion and speed setting of the metering shaft for seed drill*, DeGruyter Open 2017, **under publication**.
5. Sz. Sütő, Z. Forgó, **F. Tolvaly-Roşca**, *Simulation Based Human-robot Co-working*, Procedia Engineering, Volume 181, 2017, Pages 503-508, https://doi.org/10.1016/j.proeng.2017.02.425

6. F. Tolvaly-Rosca, Z. Forgó, *Mixed CAD Method to Develop Gear Surfaces Using the Relative Cutting Movements and NURBS Surfaces,* Science Direct: http://www.sciencedirect.com/science/article/pii/S2212017315000055, Procedia Technology Volume 19, 2015, Pages 20-27, http://dx.doi.org/10.1016/j.protcy.2015.02.004,
7. F. Tolvaly-Rosca, Z. Forgó., M. Máté, *Evaluation of a Mixed CAD Gear Modeling from Time and Precision Point of View*, http://www.sciencedirect.com/science/article/pii/S2212017315000067, Procedia Technology Volume 19, 2015, Pages 40-47, http://dx.doi.org/10.1016/j.protcy.2015.02.005
8. Z. Forgó, **F. Tolvaly-Rosca**, *Analytical and Numerical Model of Low DOF Manipulators*, http://www.sciencedirect.com/science/article/pii/S2212017315000080, Procedia Technology Volume 19, 2015, Pages 40-47, http://dx.doi.org/10.1016/j.protcy.2015.02.007
9. F. Tolvaly-Rosca, I. Papp, *Kinematic Analysis of 2 DoF Spherical Mechanism Applying Constraint Equations*, MACRo 2015. Volume 1, Issue 1, Pages 235–244, ISSN (Online) 2247-0948, DOI: 10.1515/macro-2015-0023

C2. Lucrări ştiinţifice publicate în reviste indexate în baze de date internaţionale (indicaţi şi baza de date).
1. F. Tolvaly-Roşca, Z. Forgó, *Relatív vágómozgásokkal generált pontfelhők szűrési nehézségei*, XV.MTU_2017, Google Academic, Google Scholar.
2. Z. Forgó, R. Filep, **F. Tolvaly-Roşca**, *Végtagcsonk és protézis nyomáseloszlásának vizsgálata*, XIV.MTU_2016, Google Academic, Google Scholar
3. F. Tolvaly-Roşca, *Modern fogaskerék modellezési eljárások összehasonlító tanulmánya*, http://hdl.handle.net/10598/28546, ISBN: 978-606-8178-80-6, 2016, Google Academic, Google Scholar.

4. A. Kakucs, Z. Forgó, P. Dani, **F. Tolvaly-Rosca**, I.Száva, *Prediction Of Extreme Values Using Artificial Neural Network*, Google Scholar 2015, http://www.researchgate.net/profile/Janos_Ioan_Szava/publication/272943412_Prediction_of_extreme_values_using_artificial_neutral_network/links/54f3a9dc0cf24eb8794c31f6.pdf, Google Academic, Google Scholar.
5. A. Kakucs, I. Papp, **F. Tolvaly-Roşca**, Z. Forgó, *Bolygódugattyús pneumatikus motor*, XIV MűszakiTudományokUlésszaka, Kolozsvár 2013, ISBN 978-606-8178-80-6, pp.81-93.

Google Academic, Google Scholar, http://eda.eme.ro/handle/10598/28175, Google Academic, Google Scholar.
6. N. Máriás, **F. Tolvaly-Roşca**, Stirling motoros naperőmű, XX FMTÜ, Kolozsvár 2015, http://eda.eme.ro/xmlui/bitstream/handle/10598/28660/EME_20_FMTU_2015_Marias-Tolvaly-Rosca_211-214old.pdf?sequence=3, Google Academic, Google Scholar.
7. Á. L. Péter, B. Faludi, **F. Tolvaly-Roşca**, Gantry típusú hobby CNC maró gép tervezése és építése, XX FMTÜ, Kolozsvár 2015, http://eda.eme.ro/xmlui/bitstream/handle/10598/28661/EME_20_FMTU_2015_Peter-Faludi-Tolvaly%20Rosca_255-258old.pdf?sequence=3, Google Academic, Google Scholar.

8. Z. László, H. Suteu, **F. Tolvaly-Roşca**, Sűrített levegővel hajtott jármű tervezése és építése, XX FMTÜ, Kolozsvár 2015, http://eda.eme.ro/xmlui/bitstream/handle/10598/28658/EME_20_FMTU_2015_Laszlo_Suteu_Tolvaly-Rosca_199-202old.pdf?sequence=3, Google Academic, Google Scholar
9. Forgó Z, **Tolvaly-Rosca F.**, Gantry *típusú, párhuzamos hajtású robot modellezéseésvizsgálata*, „A Magyar Tudomány Napja Erdélyben", 2014, Cluj-Napoca Erdélyi MúzeumEgyesület 2014. ISBN: 978-606-8178-80-6. http://hdl.handle.net/10598/28552, Google Academic, Google Scholar.
10. I. Papp, **F. Tolvaly-Roşca**, *Új módszer a karos mechanizmusok dinamikus kiegyensúlyozására*, Kolozsvár 2013, ISBN 978-606-8178-80-6, pp.109-121, Google Academic, Google Scholar, http://eda.eme.ro/bitstream/handle/10598/28087/XIV.MTU_Papp-Tolvaly-Rosca.pdf?sequence=1, Google Academic, Google Scholar.
11. **F. Tolvaly-Rosca**, The Cad-Analysis Of The Contact By The Cylindrical Gears Having Archimedic Spiral Shaped Teeth, Inter-Eng 2012, Interdisciplinarity in Engineering, Tg. Mureş, Romania 2012. ISSN 2285-0945,ISSNL2285-0945, pp. 130-135.Ulrich's Periodicals Directory™ (U.S.), German National Library of Science and Technology (TIB).http://jml2012.indexcopernicus.com/passport.php?id=769, Scopus.

C3. Lucrări ştiinţifice publicate în reviste din străinătate (altele decât cele menţionate anterior).

C4. Lucrări ştiinţifice publicate în reviste din ţară, recunoscute CNCSIS/CNCS (altele decât cele din baze de date internaţionale).
1. Hollanda, D., Máté, M., **Tolvaly-Roşca, F.,** *Kúpfogaskerék fogprofil-mérőkészülék (Aparat pentru măsurarea profilului danturilor conice).* The 17-th International Conference on Mechanical Engineering, Gheorghieni, 2009. Volum de conferinţă editat în cadrul revistei „MűszakiSzemle" (acreditată CNCSIS), ISSN 1454-0746, pag. 161-164.
2. Popa-Müller, I., **Tolvaly-Rosca, F**. *Simularea danturării roţilor dinţate conice cu dantură în arc de cerc pe maşina Gleason cu ajutorul roţii plane*, The 17-th International Conference on Mechanical Engineering, Gheorghieni, 2009. Volum de conferinţă; editat în cadrul revistei MűszakiSzemle (acreditată CNCSIS), ISSN 1454-0746, pp. 331-335.

3. Kakucs A., Dani P., Costantin V., Száva I.,**Tolvaly-Roşca F.**, Popa S.C.. *New Method in Modeling Intumescent Coatings, International Conference on Material Scienceand Engineering*, 22-24 February 2007, Transilvania University of Braşov, Romania, Bulletin of Transilvania University of Brasov, Supliment BRAMAT 2007, pp.27., Transilvania University Press, 2007, ISSN-1223-9631, pp. 27-31.
4. **Tolvaly-Roşca, F.**, *Solutions To Solve Some Data Exchange Problems Between CAD Applications Regarding Surface and Solid Models*, 15 th International Conference in

Mechanical Engineering, Cluj Napoca, Technical Review, 2007, ISSN. 1454-0746, pp.395-398.

5. Kakucs A., Forgó Z., Dani P., **Tolvaly-Roşca F.**, Száva I., Predicting Extreme Values Using Artificial Neural Networks, International Workshop Advanced Resarchesin Computational Mechanics and Virtual Engineering 2006, Braşov, Editura Universităţii Transilvania Braşov, ISBN 973-635-823-2, ISBN 978-973-821-0, pp.323-326.

6. Száva, I., Hodúr, C., Forgács, E., Enache, V., Forgó, Z., Kakucs, A., Hlipcă, P., **Tolvaly-Roşca, F.**, *Elastical Properties of the Cylindert Head Gaskets Materials,* Annals of the Faculty of Engineering Hunedoara, Tome II, Fascicule 2, Editura Mirton Timişoara, 2005. ISSN 1584-2665, pp. 96-100.

7. Kakucs, A; Forgó, Z.; Dani, P.; Száva, I., **Tolvaly-Rosca, F.**, *Theoretical and experimental reserches of a planar mechanism fromvibration's point of view (part two)*, Procedingod CDM Braşov, may 2005, Universitatea Transilvania, Braşov (2005), ISBN 973-635-513-6, Vol II, pp.225-228.

8. Kakucs, A; Forgó, Z.; Dani, P.; Száva, I., **Tolvaly-Rosca, F.**, *Theoreticaland experimental reserches of a planar mechanism fromvibration's point of view (part one)*, Procedingod CDM Braşov, may 2005, Universitatea Transilvania, Braşov (2005), ISBN 973-635-513-6, Vol II, pp.225-228.

C5. Lucrări ştiinţifice publicate în reviste, altele decât cele menţionate anterior

C6. Lucrări ştiinţifice publicate în volumele manifestărilor ştiinţifice

1. F. Tolvaly-Roşca, Z. Forgó, Kakucs A., Máté M., Particularities of Finite Element Analysis of Gear Models Generated in Virtual Environment, The 26-th International Conference on Mechanical Engineering, 2018 Tg. Mureş, Romania, ISSN 2068-1267, pp.102-105.

2. Kakucs, A. Forgó Z., **TolvalyRoşca F.**, *Pneumatic Motor With Planetary Piston*, Proceedings of 1st Agria Conference on Innovative Pneumatic Vehicles ACIPV 2017, May 05, 2017 Eger, Hungary, Óbuda University, Institute of Mechatronics and Vehicle Engineering,ISBN 978-963-449-022-7, pp.47-50.

3. Z. Forgó, F. Tolvaly-Roşca, The Robots as Medical Devices, Conference Book of the 3rd International Interdisciplinary 3D Conference, 5-6 October 2017, University of Pécs, ISBN 978-963-429-165-7, **abstract**.

4. Tolvaly-Rosca F., *Development of a Mixed CAD Method for Teeth Generation, Based on the Relative Cutting Movements*, The 24-th International Conference on Mechanical Engineering, 2016 Deva, Romania, **sesiunea plenară**. ISSN 2068-1267, pp.12-17.

5. J. Pásztor, **F. Tolvaly-Rosca**, Z. *Forgó fogborona modellezése*, OGÉT 2015, Csiksomlyó, ISSN 2068-1267.

6. Tolvaly-Rosca F., Forgó Z., *Precision Study of Speeded Tooth Surface Modelling Procedure. (Gyorsított fogfelület-modellezési eljárás pontosság vizsgálata).* 22nd Internatinal Conference of Mechanical Engineering, Sibiu, Romania 2014, ISSN 2068-1267, pp. 415-418.

7. **Tolvaly-Rosca** F., Forgó Z., *Gearing Precision Study of Cylindrical Gears Having Archimedean Spiral Shaped Teeth in CAD Environment*, The 21-st International Conference on Mechanical Engineering 2013, Arad, Romania. ISSN 2068-1267, pp.415-418.
8. Máté M., Hollanda D., **Tolvaly-Rosca F.,** Popa-Müller I., *The Localization of the Contact Pattern by Spur Gears with Archimedean Tooth Line by Setting of Tangential Displacement*, The 21-st International Conference on Mechanical Engineering 2013, Arad, Romania. ISSN 2068-1267, 265-268.
9. Forgó Z., **Tolvaly-Rosca F.,** *Simulation of Robot Systems Using Automation ML and COLLADA*, The 21-st International Conference on Mechanical Engineering, 2013 Arad, Romania. ISSN 2068-1267, pp.122-124.

10. **Tolvaly-Rosca F.**, *Solid Modeling of a New Internal Combustion Type Engine Mechanism (Új típusú robbanómotor hajtásának a számítógépes testmodellezése)*. The 18-th International Conference on Mechanical Engineering, Kolozsvár, 2012. ISSN 2068-1267, pp. 466-470, pp. 452-456.

11. **Tolvaly-Rosca F.**, *New, precise and fast gear modeling method*, The 18-th International Conference on Mechanical Engineering, Baia Mare, 2010. ISSN 2068-1267, pp.452-455.

12. **Tolvaly-Roşca F.**, Forgó Z., Kakucs A., Száva I., *Some Results Obtained in Kinematic Studies of Bevel Gearing Process Precision, Effectuated in Virtual Environment on Solid Gear Models*, microCAD 2008 International ScientificConference Miskolc. Hungary 2008, ISBN 978-963-661-812-4 Ö, ISBN978-963-661-9, pp. 85-90.
13. Forgó Z., **Tolvaly-Roşca F.**, Kakucs A., Száva I., *Matrix Form Closure Equations for Geometrical Modeling of Mechanisms*, microCAD 2008 International ScientificConference Miskolc, miskólc, Hungary 2008, ISBN 978-963-661-812-4, ISBN978-963-661-9, pp. 25-30.
14. Kakucs A., Száva I., **Tolvaly-Rosca F.**, Forgó Z., *New Method in Numerical Analysis of Hydraulic Circuits*, microCAD 2008 International Scientific Conference Miskolc, Miskólc, Hungary 2008, ISBN 978-963-661-812-4, ISBN978-963-661-9, pp. 21-26.

15. **Tolvaly-Roşca, F.**, Hollanda, D., Száva, J., Kakucs, A., Forgó, Z., *Contact Algorythm in VBA, for Kinematic Studies on Rigid, Solid Gear Models*, microCAD International Scientific Conference, march 2006, Miskolc, Hungary., ISBN 963 661 700 7, ISBN 963 661 706 6, pp. 31-36.
16. **Tolvaly-Roşca, F.**, Hollanda, D., Száva, I., *Processing Kinematical CAD Simulation Measuring Results of a Bevel Gear Drive, Using MathCad*, OGET 2006, 14th International Conference in Mechanical Engineering, Tg. Mures, 2006. ISBN (10) 973-7840-10-0, ISBN (13) 978-973-7840-10-2, pp. 354-357.

17. **Tolvaly-Rosca, F.,**Forgo, Z., *Solid Modeling of Bevel Gears with Spherical Involute, Octoid I and Octoid II type profiles*, Procedings of 13th 11th, International Conference in Mechanical Engineering OGET 2005, Satu Mare, 2005, ISBN 973-7840-03-8, pp. 332-335.
18. Száva, I., V. Enache, E. Forgacs, C. Hodur, A. Kakucs, I. Papp,Forgó, Z., **Tolvaly-Rosca, F.**, *Experimental Investigation of the Main Bearing Zone Elastical Properties from Parametrical Vibrations' point of View Using Holographic Interferometry*, Procedings of the 3rdInternational Conference on Dynamics of Civil Engineering and Transport Structuresand Wind Engineering, Vratna, Sk, 2005, ISBN 80-8070-352-5, pp. 147-150.

19. Száva, I., Hodúr, C., Forgács, E., Enache, V., Forgó, Z., Kakucs, A., Hlipca, P., **Tolvaly-Rosca, F.**, *Elastical Properties Of The Cylinder Head Gaskets Materials*, The 8th International Symposium on Interdisciplinary Regional Research Hungary – Romania – Serbia and Montenegro, ISIRR-8, University of Szeged, 2005, Hungary, Proceedings of the Symposium, pp. 45-48.
20. Száva,J., Hodur, C.,Forgács, E., Enache, V.,Forgó, Z.,Kakucs, A., Hlipca, P.,**Tolvaly-Roşca, F.**, Lőrincz, A., *Elastical Properties of the Cylinder Head Gaskets Materials,*Annals of the Faculty of Engineering Hunedoara, 2005, Tome III, Fascicule 2, ISSN 1584-2665, pp. 97-100.
21. Kakucs A., Forgó, Z., **Tolvaly-Roşca, F.**, Papp, I., Száva, J., Dani, P., Lőrincz, A., *Egy síkmechanizmus sajátfrekvencia szélsőértékei (Valorile extreme ale frecvenţei proprii la un mecanism plan)*, microCAD International Scientific Conference March 2005, Miskolc, 2005, Hungary, ISBN 963 661 646 9 ö, ISBN 963 661 653 1, pp.73-78.
22. Tolvaly-Rosca, F., Hollanda, D., Forgó, Z., Száva, J., *Kinematic studies of straight bevel gears with octoid II, octoid I and exact involute profiles, using solid models*, Procedings of the 7th International Conference Modern Technologies in Manufacturing, Cluj Napoca, 2005, ISBN 973-9087-83-3, pp. 399-402.
23. Tolvaly-Rosca, F., Forgo, Z., *Solid Modeling of Bevel Gears with Spherical Involute, Octoid I and Octoid II typeprofiles*, Procedings of 13th 11th, International Conference in Mechanical Engineering OGET 2005, Satu Mare, 2005, ISBN 973-7840-03-8, pp. 332-335.

24. Hollanda, D., **Tolvaly-Rosca, F.**, *Measuring Dynamic Parameteres of a Gearing Process, on Solid Model of a Straight Bevel Gear Drive,* microCAD, International Scientific Conference, Miskolc, 2004, HU, ISBN 963-661-608-6, 963-661-617-5, pp. 31-36.
25. Száva, I.; Dani, P.; Enache, V.; Forgó, Z.; **Tolvaly-Rosca, F.**, *Térbeli rácstartó modelljének elemzése induktív elmozdulásmérők és holografikus interferometria segítségével (Analiza modelului unei grinzi spaţiale cu zăbrele cu ajutorul senzorilor de deplasare inductivi şi a interferometriei holografice)*, Magyarország földrengésbiztonsága. Modellezés, méretezés, Győr, 2004, HU, ISBN 963-7175-24-5,pp.194-205.

26. Tolvaly-Roşca, F., *Optimal Design of Bended Sheet Metal Forms In Order to Fit on Revolved Surfaces*, microCAD, Miskolc, 2003, ISBN 963 661 547 0, ISBN 963 661 559 4, pp.209-214.
27. Tolvaly-Roşca, F., *Computer aided designing of fixing and supporting elements on revolution surfaces*, BRAMAT, Braşov, 2003, ISBN 973-635-124-6, pp.134-137.
28. Tolvaly-Roşca, F., *About the gearing modelling, with solid parametrical models*, 11th, International Conference in Mechanical Engineering, Cluj Napoca, 2003, ISBN 973-86097-2-0, pp.240-242.
29. Hollanda, D., **Tolvaly-Roşca, F.**, *Solid modelling of a strigh tbevel gear drive*. Inter-Ing 2003,Tg. Mures, 2003, ISBN 973-8084-81-4, pp. c.
30. Száva,I., Dani, P., Hollanda,D., Constantin, V., Forgó Z., **Tolvaly-Rosca,F.**, *Some Experimental Results on Thermoprotecting Coats' Evaluation*, 7th International Conference, Mechanical Engineering, Bratislava SK 2003.

31. Tolvaly-Roşca, F., *Interaktív posztprocesszor számvezérlesű szerszámgépekhez. Postprocesor interactiv pentru maşin-unelte cu comandă numerică*, X OrszágosGépészTalálkozó, Odorheiu Secuiesc, 2002, ISSN 145-0746, pp. 249-251.
32. Hollanda, D., Máté, M., **Tolvaly-Roşca, F.**, *Universal Bevel Gear Tooth Profile ControllingDevice*, Production Processes And Systems, Miskolc, 2002, HU, ISSN1215-0851, 115-120.

D. Traduceri de cărţi, capitole de cărţi, alte lucrări ştiinţifice

E. Editare, coordonare de volume

F. Brevete de invenţii şi alte titluri de proprietate

G. Contracte de cercetare (menţionaţi calitatea de director sau membru)

DIRECTOR

1. Dezvoltarea procedurii de modelare mixtă a roților dințate și evaluarea calitativă de analiză cu element finit a modelelor construite. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, Program de Cercetare al Facultății 2015-2016, Contr. 12/19/2015.04.28, 10.100 RON,

Rezultate:
5 publicații cotate ISI
3 citări independente ISI
1 publicație BDI
3 publicații în volume de conferințe

Membru în colective de cercetare

2. Dezvoltare motor pneumatic cu piston rotativ. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 11.000 RON, **membru.** Conducător: conf.dr.ing. Kakucs András, 2013-2014.
3. Dezvoltare motor pneumatic cu piston rotativ. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 12.000 RON, **membru.** Conducător: conf.dr.ing. Kakucs András, 2011-2012.
4. Dezvoltare motor pneumatic cu piston rotativ. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 12.000 RON, **membru.** Conducător: conf.dr.ing. Kakucs András, 2012-2013.

5. Modelarea şi realizarea practică a unui robot paralel cu patru grade de libertate. , Institutul Programelor de Cercetare, Cluj-Napoca, 2012, 9000 RON, **membru.** Conducător: şef lucrări.dr.ing.Forgó Zoltán.

6. Determinarea acceleraţiilor ale elementelor din mecanisme cu bare articulate cu ajutorul ecuaţiilor de constrângere. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 5.800 RON, **membru.** Conducător: conf.dr.ing. Papp István, 2008-2009.

7. Studiul teoretic (prin M.E.F.) şi practic (experimental) al vopselelor termoizolante termospumante (intumescente). Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 5.746 RON, **membru.** Conducător: şef.lucr.dr.ing. Kakucs András, 2008-2009.
8. Studiul teoretic (prin M.E.F.) şi practic (experimental) al vopselelor termoizolante termospumante (intumescente). Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia. 18.720 RON, **membru.** Conducător: prof.dr.ing. Száva Ioan. 2006-2007.
9. Studiul teoretic (prin M.E.F.) şi practic (experimental) al vopselelor termoizolante termospumante (intumescente). Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, 6.250 RON, **membru.** Conducător: şef.lucr.dr.ing. Kakucs András, 2007-2008.

10. Analiza, modelarea şi realizarea unui nou manipulator de tip SCARA, Institutul Programelor de Cercetare, Cluj-Napoca, 2008-2009, 7.855 RON, **membru**. Conducător: şef lucrări.dr.ing.Forgó Zoltán.

11. Proiectarea şi fabricarea frezei melc fără eroare de profil teoretic şi optimizat. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia, Nr. 1160/2005, 2005-2006, 9.713 RON, **membru**. Conducător: Conf. Dr. Ing. Maté, M.

12. Aparat universal de măsurat profilul dinţilor roţilor dinţate conice. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia. Nr.1018/2001, 2001-2002, 8.400 RON, **membru**. Conducător: Prof. Dr. Ing. Hollanda, D.
13. Aparat universal de măsurat profilul dinţilor roţilor dinţate conice. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia. Nr.415/2002, 2002-2003, 18.000 RON, **membru**. Conducător: Prof. Dr. Ing. Hollanda, D.
14. Aparat universal de măsurat profilul dinţilor roţilor dinţate conice. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia. Nr.1904/2003, 2003-2004, 16.500 RON, **membru**. Conducător: Prof. Dr. Ing. Hollanda, D.
15. Aparat universal de măsurat profilul dinţilor roţilor dinţate conice. Contract cu Institutul Programelor de Cercetare a Fundaţiei Sapientia. Nr.1330/2004, 2004-2005, 17.710 RON, **membru**. Conducător: Prof. Dr. Ing. Hollanda, D.

Rezultate:
Brevet de invenţie nr. 118485 B1 din 30.03.2004

H. Creaţia artistică

H1 Participări la manifestaţii artistice internaţionale
H2. Participări la manifestaţii artistice naţionale
H3. Expoziţii, filme, spectacole, concerte, discuri de autor, opere internaţionale
H4. Expoziţii, filme, spectacole, concerte, discuri de autor, opere naţionale
H5. Produse cu drept de proprietate intelectuală în domeniul artistic

III. RECUNOAŞTEREA

I. Premii, distincţii.

Premiul "Főgépész Díj" pentru activitatea desfăşurată în cadrul Societatăţii Maghiară Tehnico-Ştiinţifică din Transilvania (Erdélyi Magyar Műszaki Tudományos Társaság), respectiv pentru dezvoltarea reţelei ştiinţifice ale acestuia, Deva, 2016.

J. Citări

1. **Tolvaly-Roşca Ferenc**, Forgó Zoltán, Mixed CAD Method to Develop Gear Surfaces Using the Relative Cutting Movements and NURBS Surfaces, *Elsevier, Procedia Technology*, No 19, 2015, ISSN 2212-0173, pp. 20-27, (ScienceDirect)

   Citat de:

   A. G. Bendefy, A. Piros, P. Horák, Arbitrary vehicle steering characteristics with changing ratio rack and pinion transmission, Advances in Mechanical Engineering, SAGE journals, Vol 7, Issue 12, 2015 (10.1177/1687814015619279) IF: 0.866

   B. T. Xiang, , L. Gu, L. Xiao, Accurate modeling of logarithmic spiral bevel gear based on the tooth flank formation and Boolean addition operation, Proceedings of the

Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, Vol 230, Issue 9, pp. 1650 – 1658, 2016 (10.1177/0954405416660998) IF: 1.078

C. N.K. Mandal, N.K. Singh, U.C. Kumar, Interactive Spur Gear Generation Using Parametric Programming with CNC End Milling, International Journal of Mechatronics and Electrical and Computer Technology, Vol. 6(22), Oct. 2016, pp. 3172-3187, ISSN: 2305-0543, Index Copernicus Value (ICV=70.57)

2. Z. Forgó, **F. Tolvaly-Rosca**, *Analytical and Numerical Model of Low DOF Manipulators*, http://www.sciencedirect.com/science/article/pii/S2212017315000080, http://dx.doi.org/10.1016/j.protcy.2015.02.007

Citat de:

A. T. Harada, T. Makino, Schönflies motion parallel robot driven by differential screws and differential belt drives, The Proceedings of JSME annual Conference on Robotics and Mechatronics (Robomec) 2016, ISSN : 2424-3124, https://doi.org/10.1299/jsmermd.2016.2P2-13b3,

3. Sz. Sütő, Z. Forgó, **F. Tolvaly-Roşca**, *Simulation Based Human-robot Co-working*, Procedia Engineering, Volume 181, 2017, pp. 503-508, https://doi.org/10.1016/j.proeng.2017.02.425

Citat de:

A. Zs. Kemény, R. Beregi, J. Nacsa, Cs. Kardos, D. Horváth, Human–robot collaboration in the MTA SZTAKI learning factory facility at Győr, Elsevier, Procedia Manufacturing, Volume 23, 2018, pp.105-110, https://doi.org/10.1016/j.promfg.2018.04.001

4. **Tolvaly-Roşca, F.**, .A számítógépes tervezés alapjai. AutoLisp és Autodesk Inventor alapismeretek. (Bazele proiectării asistate de calculator. Cunoştiiţe de bază din AutoLisp şi Autodesk Inventor), Societatea Muzeului Ardelean. Erdélyi Múzem Egyesület, Cluj Napoca, 2009, ISBN 978-973-8231-81-8.

Citat de:

A. J. Pásztor, Z. Forgó, Forgóborona munkaeszközének kinematikai vizsgálata, Műszaki Tudományos Közlemények , Fiatal Műszakiak Tudományos Ülésszaka, 2015. Kolozsvár, ISBN: 978-606-8178-80-6, pp.247-250, http://hdl.handle.net/10598/28663

K. Alte realizări semnificative.

dr.ing. Tolvaly-Roșca Ferenc

Data,
30.05.2018.

Semnătura,