Lista de lucrări în domeniul de studii universitare de licenţă:*
Ştiinţe inginereşti- Mecatronică şi robotică-Robotică
cod 120-250-020

NUMELE ŞI PRENUMELE: dr. Forgó Zoltán

A. Teza de doctorat.

Contribuţii la studiul cinematic şi dinamic al roboţilor paraleli cu patru grade de libertate, 2008, Universitatea Tehnică din Cluj-Napoca

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.

1. Forgó Zoltán, *Bevezetés a mechatronikába (Întroducere în mechatronică)*, Ed. Erdelyi Múzeum-Egyesület, Cluj-Napoca, 2009, 200 de pagini, ISBN 978-973-8231-80-1
2. Filep Fülöp-Róbert, Mihai Gafițanu, Marius Turnea, Dragoș Arotăriței, Mariana Rotariu, **Forgó Zoltán**, Cercetări privind optimizarea performanțelor cupă-proteză-bont cu considerarea aspectelor tribologice, University Press, Marosvásárhely, 2019, ISBN 978-973-169-575-4

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

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

1. Mechatronikai Rendszerek Alapjai (Bazele sistemelor mecatronice) – îndrumător de laborator, 2009, pentru uz intern, 29 pagini
2. Mechatronikai Rendszerek Dinamikája (Dinamica Sistemelor mecatronice) – îndrumător de laborator, 2009, pentru uz intern, 12 pagini
3. Ipari Robotok Alkalmazása - FANUC ROBOGUIDE (Implementarea roboților industriali) – îndrumător de laborator, 2015, pentru uz intern, 23 pagini

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. **Forgó Zoltán**, Tovaly- Rosca Ferenc, Pásztor Judit, Kővári Attila, Energy Consumption Evaluation of Active Tillage Machines Using Dynamic Modelling, APPLIED SCIENCES-BASEL, Vol.11, Issue 14, 2021, DOI10.3390/app11146240 (Web of Science, IF: 2.679)

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. **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)
5. 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)
6. 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)

C2. Lucrări ştiinţifice publicate în reviste indexate în baze de date internaţionale (indicaţi şi baza de date).

1. **Z. Forgó**, M. A. Villanueva Portela, A. Hypki ; B. Kuhlenkötter, Dual arm robot control by hands gestures using ROS, In: ISR 2020; 52th International Symposium on Robotics, Publisher VDE, 2020 9-10 decembrie 2020, München, pp. 115-120 (**ISBN:** 978-3-8007-5428-1, ieeexplore.ieee.org)

2. **Z. Forgó**, A. Hypki ; B. Kuhlenkötter, Gesture based robot programming using ROS platform, In: ISR 2018; 50th International Symposium on Robotics, Publisher VDE, 2018 20.-21. iunie 2018, München, pp. 1-7 (**ISBN:** 978-3-8007-4699-6, ieeexplore.ieee.org)

3. 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., ISSN 2247-0948.
4. 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.
5. **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*, Magyar Tudomány Ünnepe 2017, https://doi.org/10.2478/mtk-2018-0010.
6. Tolvaly-Roșca F., **Forgó Z.,** *Relatív vágómozgásokkal generált pontfelhők szűrési nehézségei*, Magyar Tudomány Ünnepe XVII, 2017, http://hdl.handle.net/10598/30080.
7. Kakucs, A., **Forgó Z**., Tolvaly Roșca 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, http://bgk.uni-obuda.hu/sites/default/files/kari_oldal/csatolmany/proc_acipv_2017.pdf

8. Cs. Dudás, **Z. Forgó**, B. Kerekes-Máthé, Surface Roughness Changes of Different Restoration Materials after Tooth Brushing Simulation Using Different Toothpastes, Journal of Interdisciplinary Medicine, Vol. 2, No S1, 2017, pp. 21-24 (de Gruyter, DOI: 10.1515/jim-2017-0012) (EBSCO Discovery Service)
9. **Forgó Z**., A virtuális és a kiterjesztett valóság mint segédeszköz a modern iparban (The virtual and augmented reality as tool in the modern industry), XXII. FMTÜ Conference, 03.2017 (http://hdl.handle.net/10598/29776, in Google Scholar)

10. Kereke-Máthé B.; Dudás Cs.; **Forgó Z**, Changes in surface roughness of composite resin and acrylic resin materials after simulated tooth brushing, Scientific Session of University Educational Staff, Acta Medica Marisiensis, Vol 62, Supl 8, 2016 December 8.-9., Ed. Universitatea de Medicină și Farmacie – Targu Mures, ISSN-L 2068-3324, ISSN 2068-3324, pp. 41 (EBSCO Discovery Service)
11. **Forgó Z.**, Szilágyi A., Dynamic modeling of new modular manipulators, In: Proceedings for the joint conference of 47th International Symposium on Robotics – ROBOTIK 2016, München, 2016 június 21-22, VDE VERLAG GMBH, ISBN 978-3-8007-4231-8, pp. 515-520 (IEEEXplore)
12. **Forgó Z.**, Filep R., Tolvaly-Roșca F., *Végtagcsonk és protézis nyomáseloszlásának vizsgálata*, In: Proceedings of XVI. Magyar Tudomány Ünnepe, Cluj-Napoca 2016, pp. 65-68 (http://hdl.handle.net/10598/29735, in Google Scholar)
13. Papp I., Máté M., Tolvaly-Roșca F., Popa-Müller I., Kakucs A., **Forgó Z.**, Lőrincz A., Farmos R., *Forgódugattyús belső égésű motor*, In: Proceedings of XVI. Magyar Tudomány Ünnepe, Cluj-Napoca 2016, pp. 115-120 (http://hdl.handle.net/10598/29723, in Google Scholar)
14. Bárócz, Á.; **Forgó, Z**., *Kerékpár gázrugó mozgás-karakterisztikájának vizsgálata*, In: Proceedings of XXI. Fiatal Műszakiak Tudományos Ülésszak, Cluj-Napoca 2016, pp. 89-92 (http://hdl.handle.net/10598/29119, in Google Scholar)
15. Nagy, S.; **Forgó, Z.**, *Fogtömés koptatását szimuláló berendezés tervezése és kivitelezése (Design And Construction Of Equipment For Filling Wear Simulation*), In: Proceedings of XXI. Fiatal Műszakiak Tudományos Ülésszak, Cluj-Napoca 2016, pp. 301-304 (http://hdl.handle.net/10598/29088, in Google Scholar)

16. Pásztor, J.; **Forgó, Z**., *Forgóborona munkaeszközének kinematikai vizsgálata*, Erdélyi Múzeum Egyesület, Műszaki Tudományok Szakosztálya, XIX. Fiatal Műszakiak Tudományos Ülésszaka, ISSN 2067 - 6 808, 20-21 martie 2015, Cluj Napoca, 247–250. (http://hdl.handle.net/10598/28663, in in Google Scholar)
17. Dienes, A. ; **Forgó Z**.: *Pneumatikus hajtás tervezése*, Erdélyi Múzeum Egyesület, Műszaki Tudományok Szakosztálya, XIX. Fiatal Műszakiak Tudományos Ülésszaka, ISSN 2067 - 6 808, 20-21 martie 2015, Cluj Napoca,, (http://scholar.google.hu/scholar?oi=bibs&cluster=8438276215974626043&btnI=1&hl=hub, in in Google Scholar)
18. Tolvaly-Roșca, F.; **Forgó, Z.,** *Modern fogaskerék-modellezési eljárások összehasonlító tanulmánya (Comparative Study Of Modern Gear Modelling Methods),* In: Proceedings of XV. Magyar Tudomány Ünnepe, Cluj-Napoca 2015, pp. 219-226 (http://hdl.handle.net/10598/29723, in Google Scholar)
19. Szabolcs, Sz., **Forgó Z**.: *Fékpad, mint mechatronikai rendszer*, Erdélyi Múzeum Egyesület, Műszaki Tudományok Szakosztálya, XIX. Fiatal Műszakiak Tudományos Ülésszaka, ISSN 2067 - 6 808, 20-21 martie 2015, Cluj Napoca,, (http://scholar.google.hu/scholar?oi=bibs&cluster=18038520784546821908&btnI=1&hl=hu, in in Google Scholar)

20. **Forgó, Z.;** Tolvaly-Roșca, F., *Gantry típusú, párhuzamos hajtású robot modellezése és vizsgálata*, XV. MTÜ-EME, 22 noiembrie 2014 (http://hdl.handle.net/10598/28552,in in Google Scholar)
21. Tolvaly-Roșca, F.; **Forgó, Z**., *Modern fogaskerék-modellezési eljárások összehasonlító tanulmánya*, XV. MTÜ-EME, 22 noiembrie 2014 (http://hdl.handle.net/10598/28546, in in Google Scholar)
22. Pásztor, J**.; Forgó, Z.,** *Altalajlazító munkaeszközének kinematikai és dinamikai vizsgálata*, XV. MTÜ-EME, 22 noiembrie 2014. (http://hdl.handle.net/10598/28536,in in Google Scholar)
23. Kakucs, A.; Papp, I.; **Forgó, Z**.; Tolvaly-Roșca, F., *Bolygódugattyús pneumatikus motor (Pneumatic motor with planetary piston),* In: Proceedings of XIV. Magyar Tudomány Ünnepe, Cluj-Napoca 2014, pp. 113-124 (http://hdl.handle.net/10598/28096, in Google Scholar)
24. Pásztor J.. **Forgó Z**., *Ásógép Munkaeszközének Kinematikai És Dinamikai Vizsgálata (Research About The Kinema Tics And The Dynamics Of The Spading Machine's Working Tool),* In: Proceedings of XIX. Fiatal Műszakiak Tudományos Ülésszak, Cluj-Napoca 2014, pp. 325-328 (http://hdl.handle.net/10598/28271, in Google Scholar)

25. Vlad C., Pásztor J., **Forgó Z.,** Bratucu, Gh., Cercetări privind cinematica şi procesul de lucu al agregatelor pentru pregătirea patului germinativ, BULLETIN OF THE TRANSILVANIA UNIVERSITY OF BRASOV, VOL. 6 (55) No.1–2013, SERIES II-FORESTRY • WOOD INDUSTRY • AGRICULTURAL FOOD ENGINEERING, Braşov, pg. 71-77, ISSN 2065-2135 (Print), ISSN 2065-2143 (CD-RO), http://webbut.unitbv.ro/Bulletin/Series%20II/Contents_II_1.html; (in Scopus, EBSCO Discovery Service, CAB Direct)
26. Pasztor J, **Forgó, Z,** Vlad C., Brătucu Gh, *Kinematics And Operation Process Of The Complex Aggregate Used To Prepare The Germinative Bed In Vegetable Farming,* In: Bulletin of the Transilvania University of Braşov, Series II: Forestry,Wood Industry Agricultural Food Engineering, Vol. 6 (55) No. 1 – 2013 (in Scopus, EBSCO Discovery Service)

27. **Forgó, Z.,** Mathematical Modeling of 4 dof Gantry type Parallel Manipulator, In: Proceedings for the joint conference of 41st International Symposium on Robotics and 6th German Conference on Robotics – ISR/ROBOTIK 2010, München, 2010 június 7-9, ISBN 978-3-8007-3273-9, pp. 1206-1211 (IEEEXplore)
28. **Forgó Z.,** *Kinematic Analysis of a 6 DOF 3-PRRS Parallel Manipulator*., In: Acta Universitatis Sapientiae-Electrical & Mechanical Engineering, No.2, 2010, pp.166-176 (in in Google Scholar)

29. Plitea, N., Vlad, L., Popescu, I., Pîslă, D., Graur, F., Tomulescu, V., Vaida, C., Furcea, L., **Forgó, Z.** *E-Learning Platform For Hepatic Robotic Minimally Invasive Surgery Using Parallel Structures,* In: Acta Technica Napocensis,Series: Applied Mathematics and Mechanics, No. 51, Vol.II, Universitate Tehnică din Cluj-Napoca, 2008, ISSN 1221-5872, (IndexCopernicus™ International)
30. Plitea, N., Pîslă, D., Negrean, I., Arghir, M., Popa, L., Vaida, C., Vidreanu, A., Prodan, B., **Forgó, Z.**, Gherman, B. *Dezvoltarea inovativă a microroboţilor paraleli cu şase grade de mobilitate şi două lanţuri de ghidare ale platformei*, In: Acta Technica Napocensis,Series: Applied Mathematics and Mechanics, No. 51, Vol.II, Universitate Tehnică din Cluj-Napoca, 2008, ISSN 1221-5872, pag. 21-26 (IndexCopernicus™ International)

31. Plitea N., Pîslă D., Negrean I., Arghir M., Popa L., Vaida C., Vidran A, Prodan B**., Forgo Z.,** Gherman B., Petrisor Silviu, *Innovative development of parallel microrobots with five degrees of freedom*, In: Acta Technica Napocensis,Series: Applied Mathematics and Mechanics, No. 50, Vol.II, Universitate Technică din Cluj-Napoca, 2008, ISSN 1221-5872, pag. 27-33 (IndexCopernicus™ International)

32. Negrean, I.; **Forgó**, **Z**. *Inverse Modelling of the Dynamic Errors of Robots*, In: Intelligent Engineering Systems INES'98. Proceedings, 1998 IEEE International Conference on. pp. 457-462. (IEEEXplore)

33. Negrean I., Vuscan I., **Forgó Z**., *Inverse modelling of the kinematical errors of industrial robots,* In: Intelligent Engineering Systems INES'97. Proceedings, 1997 IEEE International Conference on, pp. 135-140 (IEEEXplore)

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

C4. Lucrări ştiinţifice publicate în reviste din ţară, recunoscute CNCSIS (altele decât cele din baze de date internaţionale).

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

C6. Lucrări ştiinţifice publicate în volumele manifestărilor ştiinţifice

1. Pásztor, J., Tolvaly-Rosca F., **Forgó, Z.** ,Fogborona modellezése, XXIII. NEMZETKÖZI GÉPÉSZETI TALÁLKOZÓ - OGÉT 2015, Sumuleu-Ciuc, 23-26 aprilie 2015., ISSN 2068-1267.
2. **Forgó, Z.,** Robotizált szerelés és sajátos eszközei – prezentatie plenara, XXIII. NEMZETKÖZI GÉPÉSZETI TALÁLKOZÓ - OGÉT 2015, Sumuleu-Ciuc, 23-26 aprilie 2015, ISSN 2068-1267.

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

4. Tolvaly- Roşca, F., **Forgó, Z.**, *Gearing Precision Study of Cylindrical Geras having Archimedean Spiral Shaped Teeth in CAD Environment*, in: Proceedings of the 21st International Conference on Mechanical Engineering, OGÉT 2013, 25-28 aprilie 2013, Arad, ISSN 2068-1267, p. 415-418
5. Pásztor, J., **Forgó, Z.**, VLAD, C., *The Dynamic Modelling of the Oscillating Harrow's Fangs*, in: Proceedings of the 21st International Conference on Mechanical Engineering, OGÉT 2013, 25-28 aprilie 2013, Arad, ISSN 2068-1267, p. 310-314
6. **Forgó, Z.**, Tolvaly- Roşca, F., *Simulation of Robot Systems Using AutomationML and COLLADA*, in: Proceedings of the 21st International Conference on Mechanical Engineering, OGÉT 2013, 25-28 aprilie 2013, Arad, ISSN 2068-1267, p. 122-125

7. Pásztor, J., **Forgó, Z.**, Vlad, C., *A lengőborona munkaeszközeinek kinematikai modellezése és mozgásának vizsgálata*, Múzeumi Füzetek, Acta Scientiarum Transylvanica/Agronomia 19-20/2 2011-2012, Cluj-Napoca, p. 29-37.
8. Pásztor, J., **Forgó, Z.**, Vlad, C., *Modelarea cinematicii grapei oscilante*, Conferinţa Societăţii Muzeului Ardelean, secţiunea Ştiinţe Agricole, Tg-Mureş, 17 noiembrie 2012.

9. Vlad, C., Pásztor, J., Brătucu, G., **Forgó, Z.**, *Mathematical Modeling of the Aggregates Kinematics for the Preparation of Seedbed*, The 4th International Conference, *Advanced Composite Materials Engineering*, COMAT 2012, 18- 20 October 2012, Brasov, Romania, Vol. III, p 831-834.

10. **Forgó, Z.**, *Dynamic Modelling of Gantry type 4 DOF Parallel Manipulator*, in: Proceedings of the 18th International Conference on Mechanical Engineering, OGÉT 2010, Baia Mare, ISSN 2068-1267, pag. 141-144.
11. **Forgó, Z.**, *Structural Analysis of 6 DOF 3-PRRS Parallel Mechanism*, in: Proceedings of the 2nd Conference on Recent Achievements in Mechatronics, Automation, Computer Sciences and Robotics, Targu Mures, 2010, ISBN 978-973-1970-39-4, pag. 247-255.

12. Kakucs, A., Száva, I., Tolvaly-Rosca, F., **Forgó, Z.**, *New Method in Numerical Analysis of Hydraulic Circuits*, microCAD 2008 International Scientific Conference Miskolc, Miskolc, Hungary 2008, ISBN 978-963-661-812-4, ISBN978-963-661-9
13. **Forgó, Z.**, Tolvaly- Roşca, F., Kakucs, A., Száva, I. *Matrix Form Closure Equations for Geometrical Modeling of Mechanisms*, microCAD 2008 International Scientific Conference Miskolc, Miskolc, Hungary 2008, ISBN 978-963-661-812-4 Ö, ISBN978-963-661-9.
14. 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 Scientific Conference Miskolc. Hungary 2008, ISBN 978-963-661-812-4 Ö, ISBN978-963-661-9.

15. Tolvaly-Roşca, F., Hollanda, D., Száva, J., Kakucs, A., **Forgó, Z**. *Contact Algorithm in VBA, for Kinematic Studies on Rigid, Solid Gear Models.* In: microCAD 2006, International Scintific Conference, 16-17 martie 2006, Miskolc, ISBN 963 661 700 7, ISBN 963 661 706 6, pp. 31-36.

16. 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 3rd International Conference on Dynamics of Civil Engineering and Transport Structures and Wind Engineering, Vratna, Sk, 2005, ISBN 80-8070-352-5, pp. 147-150.
17. Kakucs, A., **Forgó, Z.**, Dani, P., Száva, J., Tolvaly-Roşca, F., Lőrincz, A. *Theoretical And Experimental Researches Of A Planar Mechanism From Vibrations Point Of View (Part Two).* In: CDM 2005 – A Iv-A Conferinţă De Dinamica Maşinilor, 27-28 mai 2005, Braşov, ISBN 973-635-513-6, Vol II, pag. 225.-228.
18. Kakucs, A., **Forgó, Z.,** Dani, P., Száva, J., Tolvaly-Roşca, F., Lőrincz, A. *Theoretical And Experimental Researches Of A Planar Mechanism From Vibrations Point Of View (Part One).* In: CDM 2005 – A Iv-A Conferinţă De Dinamica Maşinilor, 27-28 mai 2005, Braşov, ISBN 973-635-513-6, Vol II, pag. 225.-228.
19. **Forgó, Z.**, Kakucs, A., Száva, J., Dani, P., Papp, I. *Selection Of 3 D.O.F. Parallel Mechanism Considering Workspace Attributes*. In: International Conference On Material Science & Engineering-Bramat 2005, 25-27 februarie 2005, Braşov
20. **Forgó, Z.**, Kakucs, A., Száva, I., Dani, *Platform harmonics determination for 3 d.o.f. parallel mechanism.* In: The 4th Youth Danubia-Adria Sympsium On Experimental Solid Mechanics, 4-7 mai 2005, Castrocaro Terme, It, pag. 73.-74.
21. 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.

22. 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.
23. Kakucs, A., **Forgó, Z.,** Tolvaly-Roşca, F. *Egy Síkmechanizmus Sajátfrekvenciáinak Szélsőértékei. (Valorile extreme ale frecvenţei proprii la un mecanism plan)* In: MicroCAD 2005, International Scintific Conference, 10-11 martie 2005, Miskolc, ISBN 963 661 646 9 ö, ISBN 963 661 653 1, pp.73-78.
24. Tolvaly-Rosca, F., **Forgó, Z.** *Solid Modeling Of Bevel Gears With Spherical Involute, Octoid I, Octoid Ii Type Profiles.* In: xiii. Országos Gépész Találkozó, 28 aprilie – 1 mai 2005, Cluj-Napoca, ISBN 973-7840-03-8, pag 332.-335.
25. **Forgó, Z.**, Kakucs, A., Dani, P., Száva, *J. Experimental and theoretical determination of harmonics for planar 3 d.o.f. Parallel mechanism*. In: Fudom 05 Finno-Ugric International Conference Of Mechanics With Esi Group Symposion, 29 mai – 4 iunie 2005, Ráckeve (Budapest)
26. Tolvaly-Roşca, 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*. In: 7th International Conference Modern Technologies In Manufacturing, 6-8 octombrie 2005, Cluj-Napoca, ISBN 973-9087-83-3, pp.399-402.

27. **Forgó, Z.**, Gyenge, Cs., Száva, J., Dani, P. *Workspace Analysis For A 3 Dof Planar Mechanism Family* In: MicroCAD 2004, International Scintific Conference, 18-19 martie 2004, Miskolc, ISBN 963-661-608-6, 963-661-617-5, pag. 25.-28.
28. Száva, I., Enache, V., Ispas, N., Ispas, A., **Forgó, Z.**, Botiş, M., Dani, P., Pereţeanu, K. *Analiza Proprietăţilor Elastice Ale Zonei Lagărelor Paliere Prin Interferometrie Holografică Şi Metoda Elementelor Finite (The Main Bearing Zone Elastical Properties Analysis By Holographic Interferometry And Fem).* In: The 10th International Congress Conat-2004, Automotive And Future Technologies, Universitatea „Transilvania", 20-23 octombrie 2004, Braşov, pag. 131.
29. Száva, I., Dani, P., Enache, V**., Forgó, Z.,** Tolvaly-Roşca, F., Kakucs, A., Hlipcă, P. *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)* In: Mérnökszeizmológiai Konferencia MAGYARORSZÁG FÖLDRENGÉSBIZ-TONSÁGA, Modellezés, Méretezés. Conference On Modelling And Dimensioning In Seismology, Széchenyi István Egyetem, Építési És Környezetmérnöki Intézet Szerkezetépítési Tanszéke, 4-5 noiembrie 2004, Győr, ISBN 963-7175-24-5, pag. 194-205.

30. Száva, I., Dani, P., Hollanda, D., Constantin, V., **Forgó Z.**, Tolvaly-Roşca, F., *Some Experimental Results on Thermoprotecting Coats' Evaluation*, 7th International Conference, Mechanical Engineering, Bratislava SK 2003.

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

E. Editare, coordonare de volume

F. Brevete de invenții și alte titluri de proprietate

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

1. iunie – decembrtie 2017 Contract de colaborare științifică cu firma SC Palasmaterm SA (2092/31.05.2017, DE428/31.05.2017): Dezvoltarea unui dispozitiv de măsurare a coeficientului de frecare la temperaturi înalte, director proiect (buget: 11 500 EUR)

2. iulie – septembrie 2015 Contract de colaborare cu firma SC AAGES SA (631/02.06.2015): Proiectarea și implementarea unei celule robotizată, director proiect (buget 12 352 RON)

3. 2015-2016 Dezvoltarea procedurii de modelare mixtă a roților dințate și evaluarea calitativă de analiză cu element finit a modelelor construite, Institutul Programelor de Cercetare, Cluj-Napoca, membru (buget: 10 100 RON)

4. 2012-2014 Dezvoltarea unui motor pneumatic cu piston rotativ (614/3/08.11.2012, 34/3/21.01.2014), Institutul Programelor de Cercetare, Cluj-Napoca, membru (buget: 33 000 RON)

5. 2011-2012 Modelarea şi realizarea unui robot cu patru grade de libertate cu acţionare paralelă, Institutul Programelor de Cercetare, Cluj-Napoca, director (buget: 9 000 RON)

6. 2008-2009 Analiza, modelarea şi realizarea unui nou manipulator de tip SCARA, Institutul Programelor de Cercetare, Cluj-Napoca, director (buget: 11 130 RON)

7. 2006-2008 Analiza teoretică (cu elemente finite) şi practică (experimentală) a stratului termoprotector spumant (nr. 1055/2005), Institutul Programelor de Cercetare, Cluj-Napoca, membru (buget: 29 380 RON)

8. 2005-2006 Analiza mecanismelor paralele planare din punct de vedere al măririi spațiului de lucru (nr. 1303/2005), Institutul Programelor de Cercetare, Cluj-Napoca, membru

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. RECUNOAȘTEREA

I. Premii, distincţii.

Premiul "Főgépész Díj" pentru activitatea desfășurată în cadrul Societatății Maghiară Tehnico-Ştiinţifică din Transilvania, Cluj-Napoca (Erdélyi Magyar Műszaki Tudományos Társaság), respectiv pentru dezvoltarea rețelei științifice ale acestuia, Șumuleu-Ciuc, 2015

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. Nóbrega, L.H.M.S., de Lima Júnior, J.C., Andrezza, I.L.P. et al. Int J Adv Manuf Technol, Development of a measurement strategy, based on NURBS, for the determination of Total Profile Deviation (Fα) in spur gears, In: The International Journal of Advanced Manufacturing Technology, 2018 augusztus 21 (online), pp. 1-16 (https://doi.org/10.1007/s00170-018-2538-0) **IF: 2.209**

   B. N. K. Mandal, N. K. Singh, U.C. Kumar, Interactive Spur Gear Generation Using Parametric Programming with CNC End Milling, In: International Journal of Mechatronics, Electrical and Computer Technology (IJMEC), Vol. 6(22), Oct. 2016, PP. 3172-3187, DOI: 649123/10233

   C. 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**

   D. 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**

2. **Forgó, Z.,** Mathematical Modeling of 4 dof Gantry type Parallel Manipulator, In: Proceedings for the joint conference of 41st International Symposium on Robotics and 6th German Conference on Robotics – ISR/ROBOTIK 2010, München, 2010 június 7-9, ISBN

   Citat de:

   A. Takashi HARADA, Novel Schönflies Motion Parallel Robot Driven by Differential Mechanism, International Journal of Mechanical Engineering and Robotics Research, Vol. 9, No. 1, January 2020

   B. Takashi HARADA, Toru MAKINO, Schönflies motion parallel robot driven by differential screws and differential belt drives, The Proceedings of JSME annual Conference on Robotics and Mechatronics (Robomec), Released June 19, 2017, Online ISSN 2424-3124, Print ISSN , https://doi.org/10.1299/jsmermd.2016.2P2-13b3, https://www.jstage.jst.go.jp/article/jsmermd/2016/0/2016_2P2-13b3/_article/-char/en

   C. K. Fujii and T. Harada, "Geometry of Gaudi-inspired screw and nut for differential drive mechanism," *2017 IEEE International Conference on Robotics and Biomimetics (ROBIO)*, Macau, Macao, 2017, pp. 1900-1905. doi: 10.1109/ROBIO.2017.8324696 (IEEExplore)

   D. Grigore Gogu, Structural Synthesis of Parallel Robots, Part 5: Basic Overconstrained Topologies with Schönflies Motions, Series Title: Solid Mechanics and Its Applications, Volume 206, Springer Netherlands, 2014, ISBN 978-94-007-7400-1

E. Z Cenev, Design and implementation of double H'-gantry manipulator for TUT microfactory concept, Master of Science thesis, Tampere University of Technology, 2014, http://URN.fi/URN:NBN:fi:tty-201402271101

3. **Forgó Z.**, Szilágyi A., Dynamic modeling of new modular manipulators, In: Proceedings for the joint conference of 47th International Symposium on Robotics – ROBOTIK 2016, München, 2016 június 21-22, VDE VERLAG GMBH, ISBN 978-3-8007-4231-8, pp. 515-520 (IEEEXplore)

   A. K. Fujii and T. Harada, "Geometry of Gaudi-inspired screw and nut for differential drive mechanism," *2017 IEEE International Conference on Robotics and Biomimetics (ROBIO)*, Macau, Macao, 2017, pp. 1900-1905. doi: 10.1109/ROBIO.2017.8324696 (IEEExplore)

4. **Forgó Z.,** Tolvaly-Rosca F., Analytical and Numerical Model of Low DOF Manipulators, *Elsevier, Procedia Technology*, No 19, 2015, ISSN 2212-0173, pp. 40-47 (ScienceDirect)

   A. Li LUQUAN, Fang YUEFA, Wang LIN, Design of a family of multi-DOF drive systems for fewer limb parallel mechanisms, Mechanism and Machine Theory, Volume 148, June 2020, https://doi.org/10.1016/j.mechmachtheory.2020.103802, **IF: 3.535**
   https://www.sciencedirect.com/science/article/pii/S0094114X20300239#cebibl1

   B. Takashi HARADA, Toru MAKINO, Schönflies motion parallel robot driven by differential screws and differential belt drives, The Proceedings of JSME annual Conference on Robotics and Mechatronics (Robomec), Released June 19, 2017, Online ISSN 2424-3124, Print ISSN , https://doi.org/10.1299/jsmermd.2016.2P2-13b3, https://www.jstage.jst.go.jp/article/jsmermd/2016/0/2016_2P2-13b3/_article/-char/en

5. 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)

   A. Dorota Stadnicka, Dario Antonelli, Human-robot collaborative work cell implementation through lean thinking, In: International Journal of Computer Integrated Manufacturing, Published online: 05 Apr 2019, https://doi.org/10.1080/0951192X.2019.1599437, **IF: 1.995**

K. Alte realizări semnificative. -

Data, 29.01.2021 **Semnătura,**