

**Списък на научните трудове по конкурса  
на доц. д-р инж. Валентин Райнов Славов**

**Монография:**

- 3.1. Славов, В., Приложение на матричните методи за изследване в 3D пространството на кинематиката, динамиката и трептенията на машини, представени като многомасови механични системи, Авангард Прима, София, 2023, ISBN 978-619-239-911-5, 157 стр.

**Научни публикации, публикувани в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация:**

- 7.1. Vukov G., Zh. Gochev, V. Slavov, Torsional Vibrations in the Saw Unit of a Kind of Circular Saws. Numerical Investigations of the Natural Frequencies and Mode Shapes. Proceedings of Papers, 8<sup>th</sup> International Science Conference “Chip and Chipless Woodworking Processes”, Zvolen, 2012, ISBN 978-80-228-2385-2, pp. 371 – 378.
- 7.2. Angelov I., V. Slavov, K. Kalym, D. Karaivanov, Kinematics of Haylage Bale in 3D Space as a Body of One Fix Point and Two Rotations, Meccanica DOI 10.1007/s11012-013-9823-7. An International Journal of Theoretical and Applied Mechanics AIMETA, Volume 48, Number 8, 2013, ISSN 0025-6455.
- 7.3. Nukeshev Sayakhat, Valentin Slavov, Dimitar Karaivanov, Aigul Balabekova, Ziyada Zhaksylykova, Forced Vibrations of the Hopper of Fertilizer Applying Machine, Mechanika, 2018, ISSN 1392-1207, Volume 24(6): 798-804.
- 7.4. Nukeshev, Sayakhat; Slavov, Valentin; Kakabayev, Nurbol; Amantayev, Maxat Mathematical Modelling in 3D of Opener with Scatterer of the Grain-Fertilizer Seeder. Mechanika, Vol. 24 No. 6, 2018, ISSN 1392-1207, 840-844.
- 7.5. Slavov V., V. Aleksandrova, 3D Space Kinematics of a Robot for Process Automation in Metallurgy, JCTM (за печат).
- 7.6. Slavov V., V. Aleksandrova, Free Undamped Spatial Vibrations of a Robot for Process Automation in Metallurgy, JCTM (за печат).

**Научни публикации, публикувани в нереферирани списания с научно рецензиране или в редактирани колективни томове:**

- 8.1. Ангелов И., И. Славова, В. Славов, М. Михайлов, Свободни нелинейни трептения в 3D пространството на двуосен вагон-цистерна за течни товари. Механика на машините № 92, 2011, ISSN 0861-9727, 3-6.
- 8.2. Славов В., И. Ангелов, Д. Кожухаров, С. Читаков, Свободни трептения на робот „Версо“. Механика на машините № 92, 2011, ISSN 0861-9727, 21-24.
- 8.3. Михайлов М., В. Славов, И. Ангелов, Свободни трептения в 3D пространството на вибровалајк за упътняване. Механика на машините № 92, 2011, ISSN 0861-9727, 49-53.
- 8.4. Пискова А., Ч. Ангелов, В. Славов, С. Читаков, Свободни затихващи трептения на система с шевна машина. Механика на машините № 98, 2012, ISSN 0861-9727, 44-47.
- 8.5. Пискова А., Ч. Ангелов, В. Славов, С. Читаков, Принудени трептения на система с шевна машина. Механика на машините № 98, 2012, ISSN 0861-9727, 68-72.

- 8.6. Genchev J., G. Vukov, V. Slavov, Modeling and Analysis of the Elements and Structure of the Armchair for a Rest. Innovations in Woodworking Industry and Engineering Design, INNO, vol. II, 1/2013, Sofia, 2013, ISSN 1314-6149, pp. 105 – 110.
- 8.7. Славов В., Кинематика в 3D пространството на механичен модул с цилиндрична и сферична става. Българско списание за инженерно проектиране, брой 17, януари, 2013, ISSN 1313-7530, 21-24.
- 8.8. Бачев В., В. Славов, В. Николов, Г. Душков, Пространствени принудени трептения на двуосен автомобил с висока проходимост, породени от работата на двигателя с вътрешно горене. Българско списание за инженерно проектиране, брой 20, октомври, 2013, ISSN 1313-7530, 29-34.
- 8.9. Желев Д., В. Бачев, В. Славов, Пространствени свободни затихващи трептения на мотокар с хидравличен манипулятор, извършващ две ротации и две трансляции. Българско списание за инженерно проектиране, брой 20, октомври, 2013, ISSN 1313-7530, 65-68.
- 8.10. Желев Д., В. Бачев, В. Славов, И. Ангелов, Принудени пространствени трептения на мотокар с хидравличен манипулятор, извършващ две ротации и две трансляции. Българско списание за инженерно проектиране, брой 20, октомври, 2013, ISSN 1313-7530, 69-73.
- 8.11. Vukov G., Zh. Gochev, V. Slavov, Investigations of the Natural Frequencies and Mode Shapes of the Circular Saw with Compensating Slots by the Finite Elements Method, International Scientific Journal "Wood, Design & Technology", Vol. 2, No. 1, Skopje, 2013, ISSN 1857-8381, Original Scientific paper UDC 621.934.8-045.79:004.942, pp. 53 – 61.
- 8.12. Vukov, G., Zh. Gochev, V. Slavov, Investigations of the Natural Frequencies and Mode Shapes of the Circular Saw with Compensating Slots and Low Noise Slots by the Finite Elements Method, International Scientific Journal "Wood, Design & Technology", Vol. 3, No. 1, Skopje, 2014, ISSN 1857-8381, Original Scientific paper UDC 674.057.8-045.79:004.942, pp. 59 – 67.
- 8.13. Желев Д., В. Бачев, И. Ангелов, В. Славов, Пространствени свободни незатихващи трептения на мотокар с хидравличен манипулятор, извършващ две ротации и две трансляции. Механика на машините № 106, 2014, ISSN 0861-9727, 22-25.
- 8.14. Славов В. Принудени пространствени трептения на механичен модул с цилиндрична и сферична става. Механика на машините № 106, 2014, ISSN 0861-9727, 55-58.
- 8.15. Витларов З., В. Бачев, В. Славов, Кинематичен модел на електро-механична преса. Механика на машините № 108, 2014, ISSN 0861-9727, 36-40.
- 8.16. Райдовска А., В. Славов, Д. Желев, Изследване на коефициентите на еластичност на пневматична гума на лек автомобил. Механика на машините № 108, 2014, ISSN 0861-9727, 41-44.
- 8.17. Vukov, G., V. Slavov, G. Kovachev, Investigations of the Forced Torsional Vibrations in the Saw Unit of a Kind of Wood Shapers, Used in the Wood Production, Innovations in Woodworking Industry and Engineering Design, INNO, vol. III, 1/2014, Sofia, 2014, ISSN 1314-6149, pp. 62 – 69.
- 8.18. Нукешев С.О., В.Р. Славов, Д.П. Карапанов, Н.Н. Романюк, Н.А. Какабаев, Исследование движения маятникового распределителя сошника зернотуковой сеялки, Вестник ВКГТУ, № 3, 2016, ISSN 1561-4212, 82-87.
- 8.19. Гайфуллин Г. З., М. А. Амантаев, С. О. Нукешев, В. Славов, Кинематика афронтального ротационного рабочего органа с активным приводом, Известия

- национальной академии наук республики Казахстан, Том 5, № 35, 2016, ISSN 2224-526X, 123-127.
- 8.20. Vukov G., Zh. Gochev, V. Slavov, P. Vitchev, V. Atanasov, Mechanic-Mathematical Model for Investigations of the Forced Spatial Vibrations of Wood Shaper and its Spindle, Caused by Unbalance of the Cutting Tool, PRO LIGNO, Transilvania University Press Brasov, Romania, Vol. 13, №4, 2017, Online ISSN 2069-7430, ISSN-L 1841-4737, pp. 148÷153.
- 8.21. Vukov G., Zh. Gochev, V. Slavov, P. Vitchev, V. Atanasov, Numerical Investigations of the Forced Spatial Vibrations of Wood Shaper and its Spindle, Caused by Unbalance of the Cutting Tool, PRO LIGNO, Transilvania University Press Brasov, Romania, Vol. 13, №4, 2017, Online ISSN 2069-7430, ISSN-L 1841-4737, pp. 154÷161.
- 8.22. Slavov V., G. Vukov, Free Spatial Vibrations of Axial Fan, Science, Engineering & Education, vol. 3, iss. 1/2018, Sofia, 2018, ISSN 2534-8507 (print), 2534-8515 (on line), pp. 29 – 34.
- 8.23. Slavov V., G. Vukov, Free Damped Spatial Vibrations of Axial Fan, Science, Engineering & Education, vol. 3, iss. 1/2018, Sofia, 2018, ISSN 2534-8507 (print), 2534-8515 (on line), pp. 35 – 41.
- 8.24. Токушев М.Х., Нукешев С.О., Славов В., Моделирование траектории движения воздушного потока в распределительном устройстве удобрителя с центральным дозированием, Ізденистер, нәтижелер – Исследования, результаты. № 2 (78) 2018, ISSN 2304-334-02, 401-407.
- 8.25. Slavov V., G. Vukov, Modelling and Researching of Forced Spatial Vibrations of Axial Fans, MATEC Web of Conferences - 6<sup>th</sup> International BAPT Conference “Power Transmissions 2019”, vol. 287, Article Number 03006, p.5, eISSN: 2261-236X, DOI: <https://doi.org/10.1051/matecconf/201928703006>.
- 8.26. Slavov V., G. Vukov, Investigation of the Forced Spatial Vibrations of a Wood Shaper, Caused by Rotor’s Unbalance of its Electric Motor and by Cutting Forces, MATEC Web of Conferences, Volume 317(1) - 7<sup>th</sup> International BAPT Conference “Power Transmissions 2020”, Article Number 02001, p.7, eISSN: 2261-236X, DOI: <https://doi.org/10.1051/matecconf/202031702001>.
- 8.27. Vukov G., V. Slavov, P. Vichev, Zh. Gochev (2020). Forced Spatial Vibrations of a Wood Shaper, Caused by the Cutting Force on the Worn Cutting Tool, Scientific journal, „Chip and Chipless Woodworking Processes“, 12(1), Technical University- Zvolen, Slovakia, pp. 109-117, ISSN 2453-904X (print), ISSN 1339-8350 (online).
- 8.28. Vukov G., V. Slavov, P. Vichev, Zh. Gochev (2021), Forced Spatial Vibrations of a Wood Shaper, Caused by the Wear of the Cutting Tool, Innovations in Woodworking Industry and Engineering Design, INNO, vol. X, 2/2021, Sofia, 2021, ISSN 1314-6149, eISSN 2367-6663, pp. 51 – 62.
- 8.29. Ангелов И., В. Славов, Ст. Читаков, Динамика на манипулятор „Верко”, Scientific Conference on Aeronautics, Automotive and Technologies “BulTrans-2010”, September 24-26, 2010, Proceedings, 152-155.
- 8.30. Читаков Ст., В. Славов, И. Ангелов, И. Славова, Звукови трептения на колоос с гумени еластични елементи между бандажа и колелото, Scientific Conference on Aeronautics, Automotive and Technologies “BulTrans-2010”, September 24-26, 2010, Proceedings, 197-200.
- 8.31. Славов В., Ст. Читаков, И. Ангелов, И. Славова, Вибраакустична диагностика на гумено-метална колоос и на метален бандаж, Scientific Conference on Aeronautics,

Automotive and Technologies “BulTrans-2010”, September 24-26, 2010, Proceedings, 201-204.

- 8.32. Вуков, Г. Й., Ж. Гочев, В. Славов, Усукващи трептения в режещия механизъм на клас циркулярни машини. Механо-математичен модел. Сборник научни доклади – Трета научно-техническа конференция „Иновации в горската промишленост и инженерния дизайн”, София, 2010, ISSN 1314-0663, стр. 185 – 188.
- 8.33. Валентин Славов, Свободни трептения, собствени честоти и форми в 3D пространството на механичен модул с цилиндрична и сферична става. Научни трудове на Русенския университет, Русе, 2012, том 51, серия 2, ISSN 1311-3321, стр. 14-18.
- 8.34. Деян Желев, Валентин Славов, Илия Ангелов, Модел за изследване на принудени пространствени трептения на мотокар, породени от неравностите на пътя и от смущения от ДВГ. Научни трудове на Русенския университет, Русе, 2012, том 51, серия 4, ISSN 1311-3321, стр. 93-97.
- 8.35. Vukov, G., Zh. Gochev, V. Slavov, G. Wieloch, Investigation of the Forced Torsional Vibrations in the Saw Unit of a Kind of the Circular Saws. Part I: Mechanic-Mathematical Model, Annals of Warsaw University of Life Science – SGGW, Forestry and Wood Technology № 81, 2013, ISSN 1898-5912, pp. 279÷285.
- 8.36. Vukov, G., Zh. Gochev, V. Slavov, G. Wieloch, Investigation of the Forced Torsional Vibrations in the Saw Unit of a Kind of the Circular Saws. Part II: Numerical Investigations, Annals of Warsaw University of Life Science – SGGW, Forestry and Wood Technology № 81, 2013, ISSN 1898-5912, pp. 286÷292.
- 8.37. Vukov, G., Zh. Gochev, V. Slavov, Investigations of the Natural Frequencies and Mode Shapes of the Circular Saw Using Finite Elements Method. Part I: Mechanic-Mathematical Model, Proceedings International Scientific Conference ”WOOD TECHNOLOGY & PRODUCT DESIGN”, Ohrid, Republic of Macedonia, 16–18 May, 2013, ISBN 978-608-4723-00-4, pp. 18 – 22.
- 8.38. Vukov, G., Zh. Gochev, V. Slavov, Investigations of the Natural Frequencies and Mode Shapes of the Circular Saw Using Finite Elements Method. Part II: Numerical Investigations, Proceedings International Scientific Conference ”WOOD TECHNOLOGY & PRODUCT DESIGN”, Ohrid, Republic of Macedonia, 16 – 18 May, 2013, ISBN 978-608-4723-00-4, pp. 52 – 59.
- 8.39. Vukov, G., Zh. Gochev, V. Slavov, Mechanic-Mathematical Model for Investigations of the Free Damped Spatial Vibrations of Wood Shaper and its Spindle, Proceedings of the IIInd International Furniture Congress, Mugla, Turkey, October 13th-15th, 2016, pp. 216 – 219.
- 8.40. Vukov, G., Zh. Gochev, V. Slavov, Numerical Investigations of the Free Damped Spatial Vibrations of Wood Shaper and its Spindle, Proceedings of the II-nd International Furniture Congress, Mugla, Turkey, October 13th-15th, 2016, pp. 220 – 224.
- 8.41. Vukov, G., Zh. Gochev, V. Slavov, P. Vichev, V. Atanasov, Mechanic-Mathematical Model for Investigations of the Natural Frequencies and Mode Shapes of the Free Spatial Vibrations of Wood Shaper and its Spindle, Proceedings of the 10th International Science Conference „Chip and Chipless Woodworking Processes”, Slovakia, Technical University in Zvolen, 10(1), 2016, ISSN 1339-8350 (online), ISSN 2453-904X (print), pp. 203 – 209.
- 8.42. Vukov, G., Zh. Gochev, V. Slavov, P. Vichev, V. Atanasov, Numerical Investigations of the Natural Frequencies and Mode Shapes of the Free Spatial Vibrations of Wood Shaper

- and its Spindle, Proceedings of the 10th International Science Conference „Chip and Chipless Woodworking Processes”, Slovakia, Technical University in Zvolen, 10(1), 2016, ISSN 1339-8350 (online), ISSN 2453-904X (print), pp. 211 – 216.
- 8.43. Vukov G., V. Atanasov, V. Slavov, Zh. Gochev, Investigation of Spatial Vibrations of a Wood Milling Shaper and its Spindle, Caused by Cutting Force, Proceedings of the 5<sup>th</sup> International Conference on Processing Technologies for the Forest and Bio-based Products Industries (PTF BPI 2018) Freising/Munich, September 20-21, 2018, pp. 144÷152.
- 8.44. Vukov G., V. Slavov, P. Vichev, Zh. Gochev (2019), Investigations of the Free Space Vibrations of a Woodworking Shaper, Considered as a Mechanical System with Three Main Bodies, Proceedings 4<sup>th</sup> International Scientific Conference "WOOD TECHNOLOGY & PRODUCT DESIGN", Ohrid, Republic of Macedonia, 4 – 7 September, 2019, ISBN 978-608-4723-03-5, pp. 127– 135.
- 8.45. Vukov G., P. Vichev, V. Slavov, Zh. Gochev (2019), Free Damped Space Vibrations of a Woodworking Shaper, Considered as a mechanical system with three main bodies, Proceedings 4<sup>th</sup> International Scientific Conference "WOOD TECHNOLOGY & PRODUCT DESIGN", Ohrid, Republic of Macedonia, 4 – 7 September, 2019, ISBN 978-608-4723-03-5, pp. 136 – 145.
- 8.46. Vukov G., V. Slavov, P. Vichev, Zh. Gochev (2020), Forced Spatial Vibrations of a Wood Shaper, Caused by the Wear of the Cutting Tool, Proceedings Tenth Scientific and Technical Conference Innovations in Forest Industry and Engineering Design INNO 2020, Sofia, ISBN 978-619-7554-32-8, pp. 81 – 91.