

**Analysis and study of the influence of the geometrical parameters of mini unmanned quad-rotor helicopters to optimise energy saving**

**Penkov, Igor; Aleksandrov, Dmitri** International journal of automotive and mechanical engineering 2017 / p. 4730-4746 : ill  
<https://doi.org/10.15282/ijame.14.4.2017.11.0372> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Analysis of torque distribution in ball-screw mechanisms under extreme temperature conditions**

**Penkov, Igor** Transport means 2018 : proceedings of the international scientific conference : part I 2018 / p. 33-36 : ill  
<https://transportmeans.ktu.edu/wp-content/uploads/sites/307/2018/02/Transport-means-I-dalis-2018-09-25.pdf>

**Axial displacements in ball screw mechanisms with two and four contact-point**

**Penkov, Igor; Aleksandrov, Dmitri** International review of mechanical engineering 2011 / p. 1213-1218  
[https://www.researchgate.net/publication/289762576\\_Axial\\_displacements\\_in\\_ball\\_screw\\_mechanisms\\_with\\_two\\_and\\_four\\_contact-point](https://www.researchgate.net/publication/289762576_Axial_displacements_in_ball_screw_mechanisms_with_two_and_four_contact-point)

**Calculation method for optimization of barge hull**

Gornostajev, Dmitri; **Arjassov, Gennadi; Penkov, Igor** International review of mechanical engineering (IREME) 2016 / p. 115-124 : ill  
<https://doi.org/10.15866/ireme.v10i2.8351> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Calculation method for plates with discrete variable thickness under uniform loading or hydrostatic pressure**

Aryassov, G.; Gornostajev, Dmitri; **Penkov, Igor** International journal of applied mechanics and engineering 2018 / p. 835–853  
<https://doi.org/10.2478/ijame-2018-0046> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Calculation of optimal design for knee joint smart orthosis**

Turchinovich, Nikita; Krokhaeva, Nadezhda; Monahov, Yury; **Sivitski, Alina**; Perepelkina, Svetlana; **Penkov, Igor; Arjassov, Gennadi** Proceedings of the 11th International Conference of DAAAM Baltic Industrial Engineering : 20-22th April 2016, Tallinn, Estonia 2016 / p. 214-218 : ill <http://innomet.ttu.ee/daaam/>

**Calculation of threaded joints in creep condition**

**Strižak, Viktor; Penkov, Igor** OST-03 Symposium on Machine Design 2003 / p. 61-70 : ill

**Calculation of threaded joints on complex loading**

**Strižak, Viktor; Penkov, Igor** Актуальные проблемы механики, прочности и теплопроводности при низких температурах : тезисы докладов VII научно-технической конференции 2001 / с. 9-12 : ил

**Condition of common deformations in screws and ball screws**

**Penkov, Igor** 2017 <https://www.lap-publishing.com>

**Deformations in round-profiled threads and their influence on the screw durability**

**Penkov, Igor; Strižak, Viktor; Sivitski, Alina** International Review of Civil Engineering 2014 / p. 61-67

**Deformations in round-profiled threads and their influence on the screw durability**

**Penkov, Igor; Strižak, Viktor; Sivitski, Alina** International review of mechanical engineering (IREME) 2007 / 4, p. 372-379 : ill  
<https://www.praiseworthyprize.org/jsm/index.php?journal=irece&page=article&op=view&path%5B%5D=76>

**Dependence of load capacity of threaded joints on design parameters**

**Strižak, Viktor; Penkov, Igor** OST-95 Symposium on Machine Design : proceedings, Oulu, Finland, May 18-19, 1995 1995 / p. 66-75: ill [https://www.ester.ee/record=b1033949\\*est](https://www.ester.ee/record=b1033949*est)

**Dependence of strength of screw joints on design parameters**

**Penkov, Igor** Proceedings of the First National DAAAM Conference in Estonia : Science '95 1996 / p. 40-49: ill

**Design of stud ends and their influence on load of machine housings**

**Penkov, Igor** Trans & motauto world 2017 / p. 98-101 : ill <https://stumejournals.com/journals/tm/2017/3/98>

**Determination of optimal number of working coils in threaded joints**

**Strižak, Viktor; Arjassov, Gennadi; Penkov, Igor** 17th International Conference BEM/FEM99 : Boundary & FEM in Mechanics of Solids & Structures. Vol. 1 1999 / p. 268-275

**Determination of the most loaded bolt cross section in critical threaded joint**

**Strižak, Viktor; Penkov, Igor** Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 29-33 : ill

**Development of the calculation method for barge hull = Pargase korpuse uus arvutusmeetod**

**Gornostajev, Dmitri** 2014 <https://digi.lib.ttu.ee/i/?1230> [https://www.ester.ee/record=b4412789\\*est](https://www.ester.ee/record=b4412789*est)

**Distribution of axial load on bolt and nut threads**

**Strižak, Viktor; Penkov, Igor** International Symposium on History of Machines and Mechanisms : Cassino, Italy : proceedings HMM 2000 2000 / p. 101-110 : ill

**Effect of thread profiles on load distribution on threads**

**Strižak, Viktor; Penkov, Igor** Proceedings of International Conference on Reliability of Machines and Their Life Prediction. I 2000 / p. 235-244

**Efficiency optimization of mini unmanned multicopter**

**Penkov, Igor; Aleksandrov, Dmitri** International review of aerospace engineering 2017 / p. 277-281 : ill  
<https://doi.org/10.15866/irease.v10i5.12132> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Energy consumption of mini UAV helicopters with different number of rotors**

**Aleksandrov, Dmitri; Penkov, Igor** 11th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 16-21, 2012 2012 / p. 259-262 : ill

**Energy saving types of mini unmanned aerial vehicles**

**Aleksandrov, Dmitri; Penkov, Igor** 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 117-120 : ill

**Evolution of design, use and strength calculations of screw threads and threaded joints**

**Strižak, Viktor; Penkov, Igor; Pappel, Toivo** International Symposium on History of Machines and Mechanisms : proceedings HMM04 : [Cassio, Italy] 2004 / p. 243-257 : ill [https://link.springer.com/chapter/10.1007/1-4020-2204-2\\_20](https://link.springer.com/chapter/10.1007/1-4020-2204-2_20)

**Fluid flow optimization on semiautomatic code marker base**

**Aleksandrov, Dmitri; Penkov, Igor** Journal of energy and power engineering 2012 / p. 916-920 : ill  
[https://www.academia.edu/84941764/Fluid\\_Flow\\_Optimization\\_on\\_Semiautomatic\\_Code\\_Marker\\_Base?uc-sb-sw=19159372](https://www.academia.edu/84941764/Fluid_Flow_Optimization_on_Semiautomatic_Code_Marker_Base?uc-sb-sw=19159372)

**Fluid flow optimization on semiautomatic code marker base**

**Aleksandrov, Dmitri; Penkov, Igor** 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 306-308 : ill

**Human foot motion simulation during walking**

**Žigailov, Sergei; Arjassov, Gennadi; Penkov, Igor; Musalimov, Victor** Machines, technologies, materials 2019 / p. 198-201 : ill  
<https://stumejournals.com/journals/mtm/2019/5/198>

**Improvement of the barge hull by optimization of its rigidity parameters**

**Gornostajev, Dmitri; Arjassov, Gennadi; Penkov, Igor** Trans & motauto world 2016 / p. 36-39 : ill <http://stumejournals.com/tm/2016/1-2016.pdf>

**Increasing of power characteristics of mini UAV helicopter by changing of its geometrical parameters**

**Aleksandrov, Dmitri; Penkov, Igor** Machines, technologies, materials : [virtual journal] 2012 / p. 30-32 : ill <http://trans-motauto.com/sbornik/2012/22.INCREASING%20OF%20POWER%20CHARACTERISTICS%20OF%20MINI%20UAV%20HELICOPTER%20BY%20CHANGING%20OF%20ITS%20GEOMETRICAL%20PARAMETERS.pdf>

**Increasing the efficiency of casting and dosing devices with mobile dosing-heads**

**Penkov, Igor; Strižak, Viktor** Machines, technologies, materials 2007 / 2/3, p. 89-90 : ill <http://mech-ing.com/journal/papers/23.pdf>

**Influence of design parameters on productivity of manipulators**

**Penkov, Igor; Strižak, Viktor** Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 46-49 : ill

**Influence of nozzle geometry on fluid flow parameters**

**Penkov, Igor; Aleksandrov, Dmitri** International journal of applied mechanics and engineering 2020 / p. 215-222 : ill  
<https://doi.org/10.2478/ijame-2020-0060> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Influence of pressure angle on load distribution in ballscrew mechanisms**

**Penkov, Igor; Strižak, Viktor** Proceedings of BEM/FEM : 21st International Conference of Mathematical Modeling in Mechanics of Solid and Structures by Boundary & Finite Elements Methods 2005 / [5] p

**Influence of pressure angle on load distribution in ballscrew mechanisms**

**Penkov, Igor; Strižak, Viktor** Proceedings of Symposium of Mathematical Modelling in Solid Mechanics by BEMAMPFEM. 3 2006 / p. 89-95

**Influence of strengthening on load capacity of threaded parts**

**Strižak, Viktor; Penkov, Igor** OST-98 Symposium on Machine Design, Oulanka, Finland, October 1-3, 1998 : proceedings 1998 / p. 123-133: ill

### **Influence of the method of loading on stress condition in threaded joints**

**Strižak, Viktor; Penkov, Igor** International Symposium on Machine Design OST 2001 : [Tallinn, Estonia, October 4-5, 2001] : abstracts 2001 / [1] p

### **Influence of the method of loading on stress condition in threaded joints**

**Strižak, Viktor; Penkov, Igor** OST-01 Symposium on Machine Design : Tallinn, Estonia, October 4-5, 2001 : proceedings 2001 / p. 303-310 : ill

### **Influence of the threaded part designs on the load distribution on the threads**

**Strižak, Viktor; Penkov, Igor** OST-99 Symposium on Machine Design : Stockholm, 30th Sept. - 1st Oct., 1999 : proceedings 1999 / p. 123-130: ill

### **Intelligent system and equipment for greenhouses monitoring**

**Penkov, Igor** Journal of hygienic engineering and design 2018 / p. 41-46 : ill

<http://www.jhed.mk/filemanager/JHED%20Vol.%2022/03.%20FPP/01.%20Full%20paper%20-%20Igor%20Penkov.pdf> [Journal metrics at Scopus](#)  
[Article at Scopus](#)

### **Intencity of load distribution in ballscrews**

**Penkov, Igor; Strižak, Viktor** Proceedings of XII International Scientific-technical Conference TransAMPMotAuto'05 : Sofia, Bulgaria. 3 2005 / p. 160-162

### **Intencity of load distribution in ballscrews**

**Penkov, Igor; Strižak, Viktor** Machinebuilding and electrotechnics 2005 / 10/11, p. 45-47

### **Light-weight multicopter structural design for energy saving = Kerglassi multikopteri energiatarbe vähendamise konstruktsioonilised lahendused**

**Aleksandrov, Dmitri** 2013 [http://www.ester.ee/record=b2994326\\*est](http://www.ester.ee/record=b2994326*est)

### **Limit load on screws strengthened by plastic deformations**

**Penkov, Igor; Strižak, Viktor; Arjassov, Gennadi** Machines, technologies, materials 2007 / 6/7, p. 22-24

### **Making more precise of strength calculations of critical threaded joints**

**Strižak, Viktor; Arjassov, Gennadi; Penkov, Igor** Tenth World Congress on the Theory of Machines and Mechanisms : University of Oulu, Finland, June 20-24, 1999 : proceedings. Vol. 6 1999 / p. 2482-2487 : ill

### **Modeling and control strategy for hybrid electrical vechile**

**Vu, Trieu Minh; Sivitski, Alina; Tamre, Mart; Penkov, Igor** New applications of electric drives 2015 / p. 27-57 : ill

### **Modeling and control strategy for hybrid electrical vehicle**

**Vu, Trieu Minh; Sivitski, Alina; Tamre, Mart; Penkov, Igor** New applications of electric drives 2015 / p. 27-57 : ill

<http://dx.doi.org/10.5772/61415>

### **Modeling of the human lower-limb motion, design and control of knee joint orthosis**

**Musalimov, Victor; Monahov, Yury; Tamre, Mart; Rõbak, Dmitri; Sivitski, Alina; Arjassov, Gennady; Penkov, Igor** International review on modelling and simulations (IREMOS) 2017 / p. 371-376 <https://doi.org/10.15866/iremos.v10i5.11853> [Journal metrics at Scopus](#)  
[Article at Scopus](#)

### **Modelling and simulation of human lower-limb motion**

**Žigailov, Sergei; Musalimov, Victor; Arjassov, Gennadi; Penkov, Igor** International review on modelling and simulations (IREMOS) 2016 / p. 114-123 : ill <https://doi.org/10.15866/iremos.v9i2.8358> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Modelling of the human knee joint supported by active orthosis**

**Musalimov, Victor; Monahov, Juri; Tamre, Mart; Rõbak, Dmitri; Sivitski, Alina; Arjassov, Gennadi; Penkov, Igor** International journal of applied mechanics and engineering 2018 / p. 107-120 : ill <https://doi.org/10.1515/ijame-2018-0007> [Journal metrics at Scopus](#)  
[Article at Scopus](#)

### **Motion imitation of the human pelvic and hip joints**

**Musalimov, Victor; Arjassov, Gennadi; Žigailov, Sergei; Rõbak, Dmitri; Penkov, Igor** Mechatronics systems and materials 2018 2018 / art. 020046, 6 p. : ill <https://doi.org/10.1063/1.5066508> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Motion modeling of the human lower limb, supported by orthoses**

**Krokhaleva, Nadezhda; Turchinovich, Nikita; Ovchinnikov, Ivan; Penkov, Igor; Arjassov, Gennadi; Perepelkina, Svetlana; Reznikov, S.** Proceedings of the 11th International Conference of DAAAM Baltic Industrial Engineering : 20-22th April 2016, Tallinn, Estonia 2016 / p. 132-136 : ill <http://innomet.ttu.ee/daaam/>

**Optimal gap distance between rotors of mini quadrotor helicopter**

**Aleksandrov, Dmitri; Penkov, Igor** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 1 2012 / p. 251-255 : ill

**Optimization mini unmanned helicopter energy consumption by changing geometrical parameters of coaxial rotor pairs**

**Aleksandrov, Dmitri; Penkov, Igor** 12th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Kuressaare, Estonia, June 11-16, 2012 2012 / p. 139-141 : ill

**Optimization of lift force of mini quadrotor helicopter by changing of gap size between rotors**

**Aleksandrov, Dmitri; Penkov, Igor** Mechatronic systems and materials IV 2013 / p. 226-231 : ill

<https://doi.org/10.4028/www.scientific.net/SSP.198.226> [Article collection metrics at Scopus](#) [Article at Scopus](#) [Article collection metrics at WOS](#) [Article at WOS](#)

**Peculiarities of strength calculations of strengthened threaded parts**

**Strižak, Viktor; Arjassov, Gennadi; Penkov, Igor** OST-99 Symposium on Machine Design : Stockholm, 30th Sept. - 1st Oct., 1999 : proceedings 1999 / p. 115-122: ill

**Precision of simulation models of human lower limb motion**

**Rõbak, Dmitri; Musalimov, Victor; Arjassov, Gennadi; Penkov, Igor** The 16th International Conference "Mechatronic Systems and Materials" : MSM 2021 July 1, 2021 - July 2, 2021 : abstract book 2021 / p. 9-11 <https://vb.vgtu.lt/object/elaba:100810507/100810507.pdf>

**Precision of thread manufacturing and its influence on durability of screws with different thread profiles**

**Strižak, Viktor; Penkov, Igor** Machines, technologies, materials 2015 / p. 47-51 : ill <http://stumejournals.com/mtm/Archive/2015/7-2015.pdf>

**Propeller shrouding influence on lift force of mini unmanned quadcopter**

**Penkov, Igor; Aleksandrov, Dmitri** International journal of automotive and mechanical engineering 2017 / p. 4486-4495 : ill <https://doi.org/10.15282/ijame.14.3.2017.7.0354> [Journal metrics at Scopus](#) [Article at Scopus](#)

**The reliability of stud-bolt joints**

**Strižak, Viktor; Penkov, Igor** OST-97 Symposium on Machine Design, Tallinn, Estonia, May 22-23, 1997 : proceedings 1997 / p. 196-204 : ill [https://www.ester.ee/record=b1083704\\*est](https://www.ester.ee/record=b1083704*est)

**Rotor lifting force optimization by changing dimensions of rim around it**

**Aleksandrov, Dmitri; Penkov, Igor** 13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 14-19, 2013 2013 / p. 292-295 : ill

**Strength investigation of rolled threads**

**Strižak, Viktor; Penkov, Igor** HARDMEKO'98 : proceedings of International Symposium on Advances in Hardness Measurement : September 21-23, 1998, Beijing, China 1998 / p. 35-40 : ill

**Strength investigation of threaded joints under static and dynamic loading**

**Penkov, Igor** 2001 [https://www.ester.ee/record=b1505236\\*est](https://www.ester.ee/record=b1505236*est)

**System vibration control using linear quadratic regulator**

**Abdelrahman, Mostafa; Arjassov, Gennadi; Tamre, Mart; Penkov, Igor** International journal of applied mechanics and engineering 2022 / p. 1-8 <https://doi.org/10.2478/ijame-2022-0031> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Tangential loads and torque in ball screws**

**Penkov, Igor** Trans & MotAuto'06 : Varna, 25-28 October 2006. 3 2006 / p. 45-47

**The influence of manufacturing accuracy of thread on the strength of threaded joints**

**Strižak, Viktor; Penkov, Igor** Proceedings of the Second National DAAAM Conference in Estonia : Science'96 1997 / p. 102-111: ill

**The strength of studded joints**

**Strižak, Viktor; Penkov, Igor** International DAAAM : [DAAAM National Estonia] : proceedings of the 1st International Conference, 25-27th September 1997, Tallinn, Estonia 1997 / p. 42-45: ill

**Various ways for controlling different types of devices using EMG signals**

**Rõbak, Dmitri; Penkov, Igor** Machines, technologies, materials 2017 / p. 128-130 : ill <http://stumejournals.com/mtm.html>

**Изнашивание шарниров транспортных цепей = The bushes wear of conveyor chains**

**Penkov, Igor; Pappel, Toivo** Machines, technologies, materials : [virtual journal] 2010 / 8/9, p. 37-39 : ill

**Математическое моделирование движения нижних конечностей человека**

**Žigailov, Sergei;** Musalimov, Victor; **Arjassov, Gennadi;** **Penkov, Igor** Известия высших учебных заведений. Приборостроение 2016 / с. 683-689 : ил <http://dx.doi.org/10.17586/0021-3454-2016-59-8-683-689>

**Общие методы определения давления на витки в резьбовых соединениях**

**Strižak, Viktor; Penkov, Igor** BEM & FEM-2000 : Математическое моделирование в механике сплошных сред на основе методов граничных и конечных элементов : XVIII международная конференция : труды том III : 18th International Conference Mathematical Modelling in Solid Mechanics by Boundary & Finite Element Methods : May 16-20, 2000. Proceedings, III 2000 / с. 201-206 : ил

**Распределение нагрузки по виткам резьбовых соединений с круглой резьбой**

**Penkov, Igor** BEM & FEM-2000 : Математическое моделирование в механике сплошных сред на основе методов граничных и конечных элементов : XVIII международная конференция : труды том III : 18th International Conference Mathematical Modelling in Solid Mechanics by Boundary & Finite Element Methods : May 16-20, 2000. Proceedings, III 2000 / с. 85-91

**Тангенциальные силы и крутящий момент в шариковинтовых передачах**

**Penkov, Igor** Машиностроение и электротехника = Machinebuilding and electrical engineering 2006 / 7/8, с. 62-64 : ил