

### **Active blended learning as a tool focused on industry 5.0 at EuroTeQ Engineering University**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** 2024 IEEE Global Engineering Education Conference (EDUCON) : proceedings 2024 / p. 1-5 <https://doi.org/10.1109/EDUCON60312.2024.10578688>

### **Active blended learning engineering students : a case study**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Education Sciences 2022 / art. 344 <https://doi.org/10.3390/educsci12050344>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Active blended learning of industry 5.0-oriented sustainable power engineering specialists**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** First International Conference on Sustainable Energy Education (SEED 2024) : proceedings 2024 / p. 719-725 <https://doi.org/10.4995/SEED2024.2024.19007>

### **Active learning of students with diverse goals and backgrounds in the light of Industry 4.0 requirements**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Proceedings of the 2022 IEEE Global Engineering Education Conference (EDUCON) 2022 / p. 351-355 <https://doi.org/10.1109/EDUCON52537.2022.9766564>

### **Adaptive output feedback linearization for a class of NN-based ANARX models**

**Petlenkov, Eduard; Nõmm, Sven; Kotta, Ülle** Proceedings of the 6th IEEE International Conference on Control and Automation : Guangzhou, China, May 30 - June 1, 2007 2007 / p. 3173-3178 <https://ieeexplore.ieee.org/document/4376947>

### **Adaptive output feedback linearization for a class of NN-based ANARX models**

**Petlenkov, Eduard; Nõmm, Sven; Kotta, Ülle** 5th Junior European Meeting on Control & Information Technology : September 20-22, 2006, Tallinn, Estonia : book of abstracts 2006 / p. 10

### **Advanced control of district heating processes in Estonia = Keskkütte soojuse tootmisprotsesside juhtimine**

**Vansovitš, Vitali** 2018 <https://digi.lib.ttu.ee/ii/?10628> [https://www.ester.ee/record=b5151484\\*est](https://www.ester.ee/record=b5151484*est)

### **Ajud ees, töökohad järel : Eestil on šanss valida talendisõjas võitjate pool**

**Petlenkov, Eduard** Postimees 2014 / lk. 13

### **An enhancement of the driver distraction detection and evaluation method based on computational intelligence algorithms**

**Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Petlenkov, Eduard** 2018 IEEE 16th International Conference on Industrial Informatics (INDIN 2018) : Porto, Portugal, 18-20 July 2018 2018 / p. 201-206 : ill <https://doi.org/10.1109/INDIN.2018.8472045>

### **Application of genetic algorithms to neural networks based control of a liquid level tank system**

**Vassiljeva, Kristina; Belikov, Juri; Petlenkov, Eduard** 2014 International Joint Conference on Neural Networks (IJCNN) : July 6-11, 2014, Beijing, China 2014 / p. 2525-2530 : ill <https://doi.org/10.1109/IJCNN.2014.6889912> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Application of MPC to industrial water boiler control system in district heat plant**

**Vansovitš, Vitali; Petlenkov, Eduard; Vassiljeva, Kristina; Tepljakov, Aleksei; Belikov, Juri** 2014 13th International Conference on Control, Automation, Robotics & Vision (ICARCV 2014) : Marina Bay Sands, Singapore, 10-12th December 2014 2014 / p. 1609-1614 : ill

### **Application of neural networks based ANARX structure to backing up control of a truck-trailer [Electronic resource]**

**Belikov, Juri; Petlenkov, Eduard; Nõmm, Sven** 6th IFAC Symposium on Intelligent Autonomous Vehicles : IFAC IAV 2007 : September 3-5, 2007, Toulouse, France : symposium proceedings CD ROM 2007 / [5] p. [CD-ROM]  
<https://www.sciencedirect.com/science/article/pii/S147466701634647X>

### **Application of neural networks based SANARX model for identification and control liquid level tank system**

**Belikov, Juri; Nõmm, Sven; Petlenkov, Eduard; Vassiljeva, Kristina** 2013 12th International Conference on Machine Learning and Applications : ICMLA 2013 : 4-7 December 2013, Miami, Florida, USA : proceedings. Vol. 1 2013 / p. 246-251 : ill

### **Application of neural-network based variable fractional order PID controllers for load frequency control in isolated microgrids**

**Belikov, Juri; Nosrati, Komeil; Škiparev, Vjatšeslav; Tepljakov, Aleksei; Petlenkov, Eduard; Levron, Yoash** Power system frequency control : modeling and advances. 1st Ed 2023 / p. 203-216 : ill <https://www.elsevier.com/books/power-system-frequency-control/mishra/978-0-443-18426-0>

### **Application of Newton's method to analog and digital realization of fractional-order controllers**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** International journal of microelectronics and computer science 2012 / p. 45-52 : ill  
[https://www.researchgate.net/publication/259741864\\_Application\\_of\\_Newton%27s\\_Method\\_to\\_Analog\\_and\\_Digital\\_Realization\\_of\\_Fractional-order\\_Controllers](https://www.researchgate.net/publication/259741864_Application_of_Newton%27s_Method_to_Analog_and_Digital_Realization_of_Fractional-order_Controllers)

### **Application of self organizing Kohonen Map to detection of surgeon motions during endoscopic surgery**

**Petlenkov, Eduard; Nömm, Sven; Vain, Jüri;** Miyawaki, Fujio 2008 International Joint Conference on Neural Networks (IJCNN2008), 2008 IEEE World Congress on Computational Intelligence (WCCI2008) : June 1-6, 2008, Hong Kong 2008 / p. 2807-2812 <https://ieeexplore.ieee.org/document/4634193>

### **Applications of digital twins for demand side recommendation scheme with consumer comfort constraints**

**Onile, Abiodun Emmanuel; Belikov, Juri; Petlenkov, Eduard;** Levron, Yoash IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2023) : proceedings 2023 / 5 p <https://doi.org/10.1109/ISGTEUROPE56780.2023.10407399>

### **Artificial intelligence methods for data based modeling and analysis of complex processes : real life examples [Online resource]**

**Vassiljeva, Kristina; Petlenkov, Eduard; Vansovits, Vitali; Tepljakov, Aleksei** Proceedings of the 2016 IEEE First International Conference on Data Stream Mining & Processing (DSMP) : Lviv, Ukraine, August 23-27, 2016 2016 / p. 363-368 : ill <https://doi.org/10.1109/DSMP.2016.7583579>

### **Automated neural network model selection algorithm for feedback linearization based control**

**Vassiljeva, Kristina; Petlenkov, Eduard; Belikov, Juri** BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 235-238 : ill

### **Automatic generation control of a future multisource power system considering high renewables penetration and electric vehicles: Egyptian Power System in 2035**

Nour, Morsy; Magdy, Gaber; Chaves-Avila, Jose Pablo; Sanchez-Miralles, Alvaro; **Petlenkov, Eduard** IEEE Access 2022 / p. 51662-51681 : ill <https://doi.org/10.1109/ACCESS.2022.3174080> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Automatic visual traffic sign damage detection and measurement of damaged area**

**Ersü, Can; Janson, Karl; Petlenkov, Eduard; Reinsalu, Uljana** 2024 18th International Conference on Control, Automation, Robotics and Vision (ICARCV) 2024 / p. 505-510 <https://doi.org/10.1109/ICARCV63323.2024.10821546>

### **Baltic DB&IS 2020 Conference Forum and Doctoral Consortium co-located with the 14th International Baltic Conference on Databases and Information Systems (BalticDB&IS 2020) Tallinn, Estonia, June 16-19, 2020 : proceedings**

2020 <http://ceur-ws.org/Vol-2620/xpreface.pdf> <http://ceur-ws.org/Vol-2620/>

### **Band gap tuning based on adjustable stiffness of local resonators**

**Alimohammadi, Hossein; Vassiljeva, Kristina;** HosseinNia, Hassan; **Petlenkov, Eduard** META 2023 Paris - France : The 13th International Conference on Metamaterials, Photonic Crystals and Plasmonics : proceedings 2023 / p. 1743-1744 : ill [https://metaconferences.org/META23/files/meta23\\_proceedings.pdf](https://metaconferences.org/META23/files/meta23_proceedings.pdf)

### **Bandgap dynamics in locally resonant metastructures : a general theory of internal resonator coupling**

**Alimohammadi, Hossein; Vassiljeva, Kristina;** HosseinNia, S. Hassan; **Petlenkov, Eduard** Applied Sciences (Switzerland) 2024 / art. 2447 <https://doi.org/10.3390/app14062447> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bilateral output feedback control of fractional PDEs with space-dependent coefficients**

**Chen, Juan; Tepljakov, Aleksei; Petlenkov, Eduard;** Zhuang, Bo IFAC-PapersOnLine 2020 / p. 3743 - 3748 <https://doi.org/10.1016/j.ifacol.2020.12.2555> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Blended antilock braking system control method for all-wheel drive electric sport utility vehicle**

Aksjonov, Andrei; **Vodovozov, Valery;** Augsburg, Klaus; **Petlenkov, Eduard** Electrimacs 2019 : Selected Papers, Vol. 1 2020 / p. 229-241 [https://doi.org/10.1007/978-3-030-37161-6\\_17](https://doi.org/10.1007/978-3-030-37161-6_17) [Conference proceeding at Scopus](#) [Article at Scopus](#)

### **Boundary Mittag-Leffler stabilization of coupled time fractional order reaction–advection–diffusion systems with non-constant coefficients**

Chen, Juan; **Tepljakov, Aleksei; Petlenkov, Eduard;** Chen, YangQuan; Zhuang, Bo Systems & control letters 2021 / art. 104875 <https://doi.org/10.1016/j.sysconle.2021.104875> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Boundary state and output feedbacks for underactuated systems of coupled time-fractional PDEs with different space-dependent diffusivity**

Chen, Juan; **Tepljakov, Aleksei; Petlenkov, Eduard;** Zhuang, Bo International journal of systems science 2020 / p. 2922-2942 <https://doi.org/10.1080/00207721.2020.1803442> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Bridging the gap in technology transfer for advanced process control with industrial applications**

**Vansovits, Vitali; Petlenkov, Eduard; Tepljakov, Aleksei; Vassiljeva, Kristina; Belikov, Juri** Sensors 2022 / art. 4149 <https://doi.org/10.3390/s22114149> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Challenges of active learning in a view of integrated engineering education**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Education Sciences 2021 / art. 43 <https://doi.org/10.3390/educsci11020043>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Challenges, benefits, and open questions in data-driven commercial building cooling optimization**

**Sukhanov, Ivan; Volkova, Anna; Köse, Ahmet; Hani, Allan; Petlenkov, Eduard** E3S Web of Conferences : BuildSim Nordic 2024 2024 / art. 06003 <https://doi.org/10.1051/e3sconf/202456206003>

**Closed-loop identification of fractional-order models using FOMCON toolbox for MATLAB**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** BEC 2014 : 2014 14th Biennial Baltic Electronics Conference : proceedings of the 14th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 6-8, 2014, Tallinn, Estonia 2014 / p. 213-216 : ill

**Comparative analysis of intelligent braking controllers for electric vehicles**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Renewable energy and power quality journal 2022 / p. 55-60  
<https://doi.org/10.24084/repqj20.217> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Comparative analysis of machine learning techniques for non-intrusive load monitoring**

**Shabbir, Noman; Vassiljeva, Kristina; Hokmabad, Hossein Nouroollahi; Husev, Oleksandr; Petlenkov, Eduard; Belikov, Juri** Electronics 2024 / art. 1420 <https://doi.org/10.3390/electronics13081420> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A comparative study on graph-based ranking algorithms for consumer-oriented demand side management**

**Onile, Abiodun Emmanuel; Belikov, Juri; Petlenkov, Eduard; Levron, Yoash** 2021 IEEE Madrid PowerTech 2021 / 6 p  
<https://doi.org/10.1109/PowerTech46648.2021.9494752>

**Computation of open-loop frequency-domain characteristics of fractional FORDT plants with FOPID controllers**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Doctoral School in Information and Communication Technology : proceedings of doctoral session of BEC 2014 : October 6-8 2014, Laulasmaa 2014 / p. 23-26

**Computational intelligence approach for estimation of vehicle insurance risk level**

**Vassiljeva, Kristina; Tepljakov, Aleksei; Petlenkov, Eduard; Netšajev, Eduard** 2017 International Joint Conference on Neural Networks (IJCNN 2017) : Anchorage, Alaska, USA, 14-19 May 2017 2017 / p. 4073-4078 : ill  
<https://doi.org/10.1109/IJCNN.2017.7966370> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Computational intelligence methods based design of closed-loop system**

**Belikov, Juri; Petlenkov, Eduard; Vassiljeva, Kristina; Nõmm, Sven** Neural information processing : 20th International Conference, ICONIP 2013, Daegu, Korea, November 3-7, 2013 : proceedings. Part I 2013 / p. 215-224 : ill [https://doi.org/10.1007/978-3-642-42054-2\\_28](https://doi.org/10.1007/978-3-642-42054-2_28) [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Constrained intelligent frequency control in an AC Microgrid : an Online reinforcement learning based PID tuning approach**

**Nosrati, Komeil; Tepljakov, Aleksei; Petlenkov, Eduard; Škiparev, Vjatšeslav; Belikov, Juri; Levron, Yoash** 2023 IEEE Power & Energy Society General Meeting (PESGM) 2023 / 5 p. : ill <https://doi.org/10.1109/PESGM52003.2023.10252482>

**Continuous automated ventilation heat recovery efficiency performance assessment using building monitoring system**

**Kull, Tuule Mall; Mikola, Alo; Tukia, Andres; Köse, Ahmet; Petlenkov, Eduard; Thalfeldt, Martin** E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 10006, 10 p. : ill <https://doi.org/10.1051/e3sconf/202124610006> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Control of pick-and-place robots with reduced power consumption**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTU CON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 4 p  
<https://doi.org/10.1109/RTU CON60080.2023.10413180>

**Coordinated PI-based frequency deviation control of isolated hybrid microgrid : an online multi-agent tuning approach via reinforcement learning**

**Nosrati, Komeil; Tepljakov, Aleksei; Petlenkov, Eduard; Levron, Yoash; Škiparev, Vjatšeslav; Belikov, Juri** 2022 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe) : proceedings 2022 / p. 1-5 : ill <https://doi.org/10.1109/ISGT-Europe54678.2022.9960311>

**Data-driven baseline generation for post-retrofit energy saving assessment, a comparison of statistical and machine learning methods**

**Kuivjõgi, Helena; Vasman, Sofia; Petlenkov, Eduard; Thalfeldt, Martin; Kurnitski, Jarek** Journal of building engineering 2024 / art. 111016 <https://doi.org/10.1016/j.jobe.2024.111016>

**Data-driven model for real-time evaluating capacity of commercial buildings to participate in the demand response**

**Belikov, Juri;** Matskevich, Aliaksei; **Köse, Ahmet; Petlenkov, Eduard** E3S Web of Conferences : BuildSim Nordic 2024 2024 / art. 04001, 12 p <https://doi.org/10.1051/e3sconf/202456204001>

**Data-driven occupancy profile identification and application to the ventilation schedule in a school building**

**Vassiljeva, Kristina; Matson, Margarita; Ferrantelli, Andrea; Petlenkov, Eduard; Thalfeldt, Martin; Belikov, Juri** Energies 2024 / art. 3080 <https://doi.org/10.3390/en17133080> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Day-ahead PV output power forecasting utilizing boosting recursive lightGBM-LSTM framework**

**Hokmabad, Hossein Nouroollahi; Husev, Oleksandr; Vinnikov, Dmitri; Belikov, Juri; Petlenkov, Eduard** IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2023) : proceedings 2023 / 5 p <https://doi.org/10.1109/ISGTEUROPE56780.2023.10408090>

**Deep learning for detection of pavement distress using nonideal photographic images**

**Tepljakov, Aleksei; Riid, Andri; Pihlak, Rene; Vassiljeva, Kristina; Petlenkov, Eduard** 2019 42nd International Conference on Telecommunications and Signal Processing (TSP) 2019 / p. 195-200 : ill <https://doi.org/10.1109/TSP.2019.8769086>

**Demand side management for commercial buildings : multiple heating systems based optimization in real-time**

**Köse, Ahmet; Sukhanov, Ivan; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** Proceedings of the 30th ICE IEEE/ITMC Conference on Engineering, Technology, and Innovation: Digital Transformation on Engineering, Technology and Innovation, ICE 2024 2024 IEEE International Conference on Engineering, Technology, and Innovation (ICE/ITMC) 2024 / 8 p <https://doi.org/10.1109/ICE/ITMC61926.2024.10794302>

**Design and experimentation of fuzzy logic control for an anti-lock braking system**

**Aksjonov, Andrei; Vodovozov, Valery; Petlenkov, Eduard** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 207-210 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**Design and implementation of fractional-order PID controllers for a fluid tank system**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri; Halas, Miroslav** 2013 American Control Conference (ACC) : Washington, DC, USA, June 17-19, 2013 2013 / p. 1777-1782 : ill <https://doi.org/10.1109/acc.2013.6580093> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Design of a MATLAB-based teaching tool in introductory fractional-order systems and controls [Electronic resource]**

**Tepljakov, Aleksei; Petlenkov, Eduard; Gonzalez, Emmanuel A.; Petraš, Ivo** 2017 IEEE Frontiers in Education Conference (FIE) : proceedings 2017 / 4 p. : ill [USB] <https://doi.org/10.1109/FIE.2017.8190681>

**Design of regenerative anti-lock braking system controller for 4 in-wheel-motor drive electric vehicle with road surface estimation**

**Aksjonov, Andrei; Vodovozov, Valery; Augsburg, Klaus; Petlenkov, Eduard** International journal of automotive technology 2018 / p. 727-742 : ill <https://doi.org/10.1007/s12239-018-0070-8> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Design of retuning fractional PID controllers for a closed-loop magnetic levitation control system**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri; Gonzalez, Emmanuel A.** 2014 13th International Conference on Control, Automation, Robotics & Vision (ICARCV 2014) : Marina Bay Sands, Singapore, 10-12th December 2014 2014 / p. 1345-1350 : ill

**Detection and evaluation of driver distraction using machine learning and fuzzy logic**

**Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Petlenkov, Eduard; Herrmann, Martin** IEEE Transactions on Intelligent Transportation Systems 2019 / p. 2048 - 2059 <https://doi.org/10.1109/TITS.2018.2857222> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Development of analytical tuning methods for fractional-order controllers**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK kuuenda aastakonverentsi artiklite kogumik : 3.-5. oktoobril 2012, Laulasmaa 2012 / p. 93-96 : ill

**Digitaalsed kaksikud teevad säästlikust energiatarbimisest võistluse [Võrguväljaanne]**

**Harrik, Airika** novaator.err.ee 2021 / fot [Digitaalsed kaksikud teevad säästlikust energiatarbimisest võistluse](#)

**Digital fractional-order control of a position servo**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri; Astapov, Sergei** Proceedings of the 20th International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2013, Gdynia, Poland, June 20-22, 2013 2013 / p. 462-467 : ill

**Digital implementation of retuning fractional controllers for an existing closed-loop magnetic levitation control system**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** 2016 39th International Conference on Telecommunications and Signal Processing : TSP : June 27-29, 2016, Vienna, Austria 2016 / p. 630-633 : ill <https://doi.org/10.1109/TSP.2016.7760958>



### **Digital realization of retuning fractional-order controllers for an existing closed-loop control system**

**Tepljakov, Aleksei; Petlenkov, Eduard; Gonzalez, Emmanuel A.; Belikov, Juri** Journal of circuits, systems, and computers 2017 / art. 1750165, p. 1-26 <https://doi.org/10.1142/S0218126617501651> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Digital twin based learning from demonstration system for industrial robots**

**Bondarenko, Yevhen; Pizzagalli, Simone Luca; Kuts, Vladimir; Petlenkov, Eduard; Otto, Tauno** ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023) : proceedings. Vol. 3 2024 / art. IMECE2023-113240, V003T03A081 <https://doi.org/10.1115/IMECE2023-113240>

### **Digital twin simulations based reinforcement learning for navigation and control of a wheel-on-leg mobile robot**

**Alsaleh, Saleh Ragheb Saleh; Tepljakov, Aleksei; Tamre, Mart; Kuts, Vladimir; Petlenkov, Eduard** Proceedings of ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), 2B: Columbus, Ohio, USA, October 30 - November 3, 2022 2022 / art. IMECE2022-95411, V02BT02A025, 8 p <https://doi.org/10.1115/IMECE2022-95411>

### **Driver distraction detection and evaluation with artificial neural network and fuzzy logic : In-vehicle information system as a driver's secondary activity: case study**

**Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Petlenkov, Eduard** 2018 IEEE 15th International Workshop on Advanced Motion Control (AMC 2018) 2018 / p. 523–528 : ill [Driver distraction detection and evaluation with artificial neural network and fuzzy logic : In-vehicle information system as a driver's secondary activity: case study](#)

### **Driver distraction while performing a secondary task evaluation approach based on fuzzy expert system**

**Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Petlenkov, Eduard; Herrmann, Martin** 2017 / p. 1-27 : ill <https://www.etis.ee/File/DownloadPublic/9fe35346-efcf-4429-af04-ba8325dc1480?name=GSVF2017-Aksjonov.pdf&type=application%2Fpdf> <https://www.gsvf.at/index.php/en/program-2017>

### **Dynamic output feedback linearization based adaptive control of nonlinear MIMO systems**

**Petlenkov, Eduard; Belikov, Juri; Nömm, Sven; Wyrwas, Małgorzata** The American Control Conference (ACC2008) : Seattle, Washington, USA, June 11-13, 2008 2008 / p. 3446-3451 <https://ieeexplore.ieee.org/document/4587026>

### **Dynamic pole placement based control of nonlinear discrete time systems with input delay**

**Belikov, Juri; Petlenkov, Eduard** Control Applications (CCA) & Intelligent Control (ISIC) : 2009 IEEE : 8-10 July 2009, St.Petersburg 2009 / p. 394-399

### **Dynamic predictive modeling approach of user behavior in virtual reality based application**

**Köse, Ahmet; Tepljakov, Aleksei; Petlenkov, Eduard** 2019 27th Mediterranean Conference on Control and Automation (MED) 2019 / p. 57-62 : ill <https://doi.org/10.1109/MED.2019.8798521>

### **Eesti tehisaru teadlased: tulevikus «mõistab» maja elaniku mõtteid ja soove**

postimees.ee 2024 <https://teadus.postimees.ee/8099095/eesti-tehisaru-teadlased-tulevikus-moistab-maja-elaniku-motteid-ja-soove>

### **Efficient analog implementations of fractional-order controllers**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Proceedings of the 2013 14th International Carpathian Control Conference (ICCC) : Rytro, Hotel Perla Południa, Poland, May 26-29, 2013 2013 / p. 377-382 : ill

### **Efficient Deep Learning Model Optimization for Resource Constrained Devices = Tõhus süvaõppe mudeli optimeerimine piiratud ressurssidega seadmete jaoks**

**Ademola, Olutosin Ajibola** 2025 [https://www.ester.ee/record=b5750529\\*est](https://www.ester.ee/record=b5750529*est) <https://digikogu.taltech.ee/et/Item/183f6305-2924-4e30-a7cc-d06ac86581b8> <https://doi.org/10.23658/taltech.37/2025>

### **Embedded system implementation of digital fractional filter approximations for control applications**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Proceedings of the 21st International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2014 : Lublin, Poland, June 19-21, 2014 2014 / p. 441-445 : ill

### **Emerging role of industry 5.0 digital twins in demand response electricity market and applications**

**Onile, Abiodun Emmanuel; Belikov, Juri; Petlenkov, Eduard; Levron, Yoash** IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2023) : proceedings 2023 / 6 p <https://doi.org/10.1109/ISGTEUROPE56780.2023.10407322>

### **Energiainformaatika: energia ja infotehnoloogia ühinemine**

**Petlenkov, Eduard; Belikov, Juri** Elektriala 2023 / lk. 12-13 : ill., portr [https://www.ester.ee/record=b1240496\\*est](https://www.ester.ee/record=b1240496*est)

### **Energy consumption characteristics based on monitored data : a school case study**

**Vassiljeva, Kristina; Matson, Margarita; Petlenkov, Eduard; Belikov, Juri; Thalfeldt, Martin; Kurnitski, Jarek** CLIMA 2022 : REHVA 14th HVAC World Congress 22nd-25th May in Rotterdam, The Netherlands 2022 / 5 p. : ill <https://doi.org/10.34641/clima.2022.274>

**Energy efficient behavior modeling for demand side recommender system in solar microgrid applications using multi-agent reinforcement learning model**

**Onile, Abiodun Emmanuel; Belikov, Juri; Levron, Yoash; Petlenkov, Eduard** Sustainable cities and society 2023 / art. 104392, 20 p. : ill <https://doi.org/10.1016/j.scs.2023.104392> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Energy saving in centrifugal pumps using mutual pressure and flowrate control**

**Serbin, Aleksandr; Petlenkov, Eduard; Vodovozov, Valery** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [5] p. : ill <http://dx.doi.org/10.1109/RTUCON.2017.8124805>

**Energy storage and forecasting error impact analysis in photovoltaic equipped residential nano-grids**

**Hokmabad, Hossein Nouroollahi; Husev, Oleksandr; Belikov, Juri; Vinnikov, Dmitri; Petlenkov, Eduard** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p. <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227406>

**Energy-efficient operation of linear Delta robots with an artificial intelligence model**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard; Semjonova, Natalia** 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 5 p <https://doi.org/10.1109/BEC61458.2024.10737977> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**An enhanced NN-based load frequency control design of MGs : a fractional order modeling method**

**Škiparev, Vjatšeslav; Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 6 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227392>

**Enhancing bandgap depth in locally resonant metastructures via notch-filtered piezoelectric actuation**

**Alimohammadi, Hossein; Vassiljeva, Kristina; Hosseinia, S. Hassan; Petlenkov, Eduard** 2024 IEEE International Conference on Industrial Technology (ICIT) 2024 <https://doi.org/10.1109/ICIT58233.2024.10540976> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Ensemble of Tensor Train Decomposition and Quantization Methods for Deep Learning Model Compression**

**Ademola, Olutosin Ajibola; Petlenkov, Eduard; Leier, Mairo** 2022 International Joint Conference on Neural Networks (IJCNN) 2022 <https://doi.org/10.1109/IJCNN55064.2022.9892626> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Evaluating the energy readiness of national building stocks through benchmarking**

**Ferrantelli, Andrea; Belikov, Juri; Petlenkov, Eduard; Thalfeldt, Martin; Kurnitski, Jarek** IEEE Access 2022 / p. 45430-45443 : ill <https://doi.org/10.1109/ACCESS.2022.3170716> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Evaluation function optimization for the genetic algorithm based tuning of NN-ANARX model structure**

**Nömm, Sven; Vassiljeva, Kristina; Petlenkov, Eduard** WCCI 2012 : IEEE World Congress on Computational Intelligence : June, 10-15, 2012, Brisbane, Australia 2012 / p. 1682-1688 : ill <https://ieeexplore.ieee.org/document/6252599>

**Evaluation of deep neural network compression methods for edge devices using weighted score-based ranking scheme**

**Ademola, Olutosin Ajibola; Leier, Mairo; Petlenkov, Eduard** Sensors 2021 / art. 7529 <https://doi.org/10.3390/s21227529> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Evolutionary design of the closed loop control on the basis of NN-ANARX model using genetic algorithm**

**Vassiljeva, Kristina; Petlenkov, Eduard; Nömm, Sven** Neural information processing : 19th International Conference, ICONIP 2012, Doha, Qatar, November 12-15, 2012 : proceedings. Part I 2012 / p. 592-599 : ill [https://link.springer.com/chapter/10.1007/978-3-642-34475-6\\_71](https://link.springer.com/chapter/10.1007/978-3-642-34475-6_71)

**An evolutionary field theorem : evolutionary field optimization in training of power-weighted multiplicative neurons for nitrogen oxides-sensitive electronic nose applications**

**Alagoz, Baris Baykant; Simsek, Ozlem Imik; Ari, Davut; Tepljakov, Aleksei; Petlenkov, Eduard; Alimohammadi, Hossein** Sensors 2022 / art. 3836 <https://doi.org/10.3390/s22103836> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**The experience of a selfassessment tool for enhancing XR technology adoption in SMEs and HEIs across Europe**

**Köse, Ahmet; Tepljakov, Aleksei; Alsaleh, Saleh Ragheb Saleh; Petlenkov, Eduard** Extended Reality: International Conference, XR Salento 2023, Lecce, Italy, September 6-9, 2023, Proceedings, Part I 2023 / p. 184-197 [https://doi.org/10.1007/978-3-031-43401-3\\_12](https://doi.org/10.1007/978-3-031-43401-3_12) [Conference proceedings at Scopus](#) [Article at Scopus](#) [Conference proceedings at WOS](#) [Article at WOS](#)

**Experiments in neural network inverse modelling based control for a class of nonlinear systems**

**Petlenkov, Eduard; Rüstern, Ennu** BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 145-148 : ill

**Explainability and transparency of classifiers for air-handling unit faults using explainable artificial intelligence (XAI)**

**Meas, Molika;** Machlev, Ram; **Köse, Ahmet; Tepljakov, Aleksei; Loo, Lauri;** Levron, Yoash; **Petlenkov, Eduard; Belikov, Juri** Sensors 2022 / art. 6338 : ill <https://doi.org/10.3390/s22176338> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Explainable AI based fault detection and diagnosis system for air handling units**

**Belikov, Juri; Meas, Molika;** Machlev, Ram; **Köse, Ahmet; Tepljakov, Aleksei; Loo, Lauri; Petlenkov, Eduard;** Levron, Yoash Proceedings of the 19th International Conference on Informatics in Control, Automation and Robotics - ICINCO, 2022 , Lisbon, Portugal 2022 / p. 271-279 <https://doi.org/10.5220/0011350000003271>

**Exploring internally coupled resonator's dynamics and spatial variability in metamaterials for vibration suppression**

**Alimohammadi, Hossein;** Vassiljeva, Kristina; HosseinNia, S. Hassan; **Petlenkov, Eduard** Active and Passive Smart Structures and Integrated Systems XVII 2024 / art. 1294614 <https://doi.org/10.1117/12.3024067> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Exploring the real-world challenges and efficacy of internal coupling in metastructures : an experimental perspective**

**Alimohammadi, Hossein; Vassiljeva, Kristina;** Hosseinnia, S. Hassan; **Ellervee, Peeter; Petlenkov, Eduard** 2024 International Conference on Electrical, Computer and Energy Technologies (ICECET) 2024 <https://doi.org/10.1109/ICECET61485.2024.10698725> [Article at Scopus](#)

**Extended fractional singular Kalman filter**

**Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** Applied mathematics and computation 2023 / art. 127950, 15 p. : ill <https://doi.org/10.1016/j.amc.2023.127950> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Extended reality in power distribution grid : applications and future trends**

**Nosrati, Komeil; Alsaleh, Saleh; Tepljakov, Aleksei; Petlenkov, Eduard; Onile, Abiodun Emmanuel; Škiparev, Vjatšeslav; Belikov, Juri** 27th International Conference on Electricity Distribution (CIRED 2023) : Rome, 12-15 June 2023 2023 / p. 3615 - 3619 <https://doi.org/10.1049/icp.2023.0788> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Feasibility study of a DC house connected to a conventional AC distribution network**

**Hokmabad, Hossein Nouroollahi; Shabir, Noman; Astapov, Victor; Petlenkov, Eduard; Husev, Oleksandr; Belikov, Juri** 2024 IEEE 18th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2024 / 6 p <https://doi.org/10.1109/CPE-POWERENG60842.2024.10604419>

**Feature engineering for short-term forecast of energy consumption**

**Spitšakova, Margarita; Belikov, Juri; Nõu, Kalvi; Petlenkov, Eduard** Proceedings of 2019 IEEE PES : Innovative Smart Grid Technologies Europe : (ISGT-Europe), Bucharest Romania, 29 September - 2 October, 2019 2019 / 5 p. : ill <https://doi.org/10.1109/ISGTEurope.2019.8905698>

**Feature engineering of Weather Data for Short-Term Energy Consumption Forecast**

**Sinimaa, Maria; Spitšakova, Margarita; Belikov, Juri; Petlenkov, Eduard** 2021 IEEE Madrid PowerTech 2021 / 6 p. <https://doi.org/10.1109/PowerTech46648.2021.9494920>

**A flexible MATLAB tool for optimal fractional-order PID controller design subject to specifications**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Proceedings of the 31st Chinese Control Conference : July, 2012, Hefei, China 2012 / p. 4698-4703 : ill [https://www.researchgate.net/publication/259741861\\_A\\_Flexible\\_MATLAB\\_Tool\\_for\\_Optimal\\_Fractional-order\\_PID\\_Controller\\_Design\\_Subject\\_to\\_Specifications](https://www.researchgate.net/publication/259741861_A_Flexible_MATLAB_Tool_for_Optimal_Fractional-order_PID_Controller_Design_Subject_to_Specifications)

**FOMCON : a MATLAB toolbox for fractional-order system identification and control**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** International journal of microelectronics and computer science 2011 / p. 51-62 [https://www.researchgate.net/publication/259741855\\_FOMCON\\_a\\_MATLAB\\_toolbox\\_for\\_fractional-order\\_system\\_identification\\_and\\_control](https://www.researchgate.net/publication/259741855_FOMCON_a_MATLAB_toolbox_for_fractional-order_system_identification_and_control)

**FOMCON : fractional-order modeling and control toolbox for MATLAB**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Proceedings of the 18th International Conference Mixed Design of Integrated Circuits and Systems : MIXDES 2011 : Gliwice, Poland 16 - 18 June, 2011 2011 / p. 684-689 [https://www.researchgate.net/publication/259741855\\_FOMCON\\_a\\_MATLAB\\_toolbox\\_for\\_fractional-order\\_system\\_identification\\_and\\_control](https://www.researchgate.net/publication/259741855_FOMCON_a_MATLAB_toolbox_for_fractional-order_system_identification_and_control)

**FOMCON toolbox for modeling, design and implementation of fractional-order control systems**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Handbook of fractional calculus with applications 2019 / p. 211-236 <https://doi.org/10.1515/9783110571745>

**FOMCONpy: Fractional-order modelling and control library for python**

**Onyedi, Tobechukwu; Tepljakov, Aleksei; Petlenkov, Eduard** 2020 43rd International Conference on Telecommunications and Signal Processing : TSP 2020, Milan, Italy, July 7-9, 2020 2020 / p. 239-245 <http://doi.org/10.1109/TSP49548.2020.9163581>

**FOPID controller tuning for fractional FOPDT plants subject to design specifications in the frequency domain**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** 2015 European Control Conference (ECC) : July 15-17, 2015, Linz, Austria 2015 / p. 3502-3507 : ill <http://dx.doi.org/10.1109/ECC.2015.7331076>

### **FOPID controllers and their industrial applications: a survey of recent results**

**Tepljakov, Aleksei;** Alagoz, Baris Baykant; **Petlenkov, Eduard** IFAC-PapersOnLine 2018 / p. 25-30

<https://doi.org/10.1016/j.ifacol.2018.06.014> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Fractional order model identification of receptor-ligand complexes formation by equivalent electrical circuit modeling**

Ates, Abdullah; Alagoz, Baris Baykant; **Tepljakov, Aleksei;** **Petlenkov, Eduard** 2019 International Artificial Intelligence and Data Processing Symposium (IDAP) 2019 / 5 p. : ill <https://doi.org/10.1109/IDAP.2019.8875913>

### **Fractional-order calculus application to industrial control problems**

**Tepljakov, Aleksei;** **Petlenkov, Eduard;** **Belikov, Juri** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK viienda aastakonverentsi artiklite kogumik : 25.-26. novembril 2011, Nelijärve 2011 / p. 47-50 : ill

### **Fractional-order controller design and digital implementation using FOMCON toolbox for MATLAB**

**Tepljakov, Aleksei;** **Petlenkov, Eduard;** **Belikov, Juri;** **Finajev, Jevgeni** 2013 IEEE Conference on Computer Aided Control System Design (CACSD) : Part of 2013 IEEE Multi-Conference on Systems and Control : Hyderabad, India, August 28-30, 2013 2013 / p. 340-345 : ill

### **Fractional-order controller design for a magnetic levitation system**

**Tepljakov, Aleksei;** **Petlenkov, Eduard;** **Belikov, Juri** Proceedings of the 8th Annual Conference of the Estonian National Doctoral School in Information and Communication Technologies : December 5-6, 2014, Rakvere 2014 / p. 137-140 : ill

### **Fractional-order digital filter approximation method for embedded control applications**

**Tepljakov, Aleksei;** **Petlenkov, Eduard;** **Belikov, Juri** International journal of microelectronics and computer science 2014 / p. 54-60 : ill

### **Fractional-order modeling and control of dynamic systems = Murrulistel tuletistel põhinev dünaamiliste süsteemide identifitseerimine ja juhtimine**

**Tepljakov, Aleksei** 2015 [https://www.ester.ee/record=b4494460\\*est](https://www.ester.ee/record=b4494460*est)

### **Fractional-order modeling and control of ionic polymer-metal composite actuator**

**Tepljakov, Aleksei;** Vunder, Veiko; **Petlenkov, Eduard;** Nakshatharan, S Sunjai; Punning, Andres; **Kaparin, Vadim;** **Belikov, Juri;** Aabloo, Alvo Smart materials and structures 2019 / 12 p. : ill <https://doi.org/10.1088/1361-665X/ab2c75> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Fuel cell city buses : grey shadows of green energy**

**Vodovozov, Valery;** **Raud, Zoja;** **Petlenkov, Eduard** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l. <https://doi.org/10.1109/BEC56180.2022.9935604>

### **Fuzzy gradient control of electric vehicles at blended braking with volatile driving conditions**

**Vodovozov, Valery;** **Petlenkov, Eduard;** Aksjonov, Andrei; **Raud, Zoja** ICINCO 2020 : 17th International Conference on Informatics in Control, Automation and Robotics, July 7-9, 2020 : online 2020 / p. 250-261 <http://wikicfp.com/cfp/servlet/event.showcfp?eventid=97093&copyownerid=45217>

### **Fuzzy logic control of electric vehicles in changing braking conditions**

**Vodovozov, Valery;** **Raud, Zoja;** **Aksjonov, Andrei;** **Petlenkov, Eduard** 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / art. 20192756, p. 107-112 <https://doi.org/10.1109/ICEPDS47235.2020.9249083>

### **GA based optimization of NN-SANARX model for adaptive control of nonlinear systems**

**Vassiljeva, Kristina;** **Petlenkov, Eduard;** **Belikov, Juri** WCCI 2012 : IEEE World Congress on Computational Intelligence : June, 10-15, 2012, Brisbane, Australia 2012 / p. 1674-1681 : ill <https://ieeexplore.ieee.org/document/6252598>

### **Gain and order scheduled fractional-order PID control of fluid level in a multi-tank system**

**Tepljakov, Aleksei;** **Petlenkov, Eduard;** **Belikov, Juri** 2014 International Conference on Fractional Differentiation and its Applications (ICFDA) : Catania, Italy, 23-25 June 2014 2014 / [6] p. : ill

### **Gen Z oriented engineering education in the "Industry 4.0" age**

**Raud, Zoja;** **Vodovozov, Valery;** **Petlenkov, Eduard** 2023 IEEE 64th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / p. 1-4 <https://doi.org/10.1109/RTUCON60080.2023.10413087>

### **Genetic algorithm based structure identification for feedback control of nonlinear MIMO systems**

**Vassiljeva, Kristina;** **Belikov, Juri;** **Petlenkov, Eduard** Lecture notes in computer science 2011 / p. 215-226 : ill [https://link.springer.com/chapter/10.1007/978-3-642-23857-4\\_23](https://link.springer.com/chapter/10.1007/978-3-642-23857-4_23)

### **Genetic programming based identification of an industrial process**



**Tarasevich, Maksimilian; Tepļakov, Aleksei; Petlenkov, Eduard; Vansovits, Vitali** 44th International Conference on Telecommunications and Signal Processing (TSP) 2021 / p. 134-140 <https://doi.org/10.1109/TSP52935.2021.9522588>

**Gray box time variant clogging behaviour and pressure drop prediction of the air filter in the HVAC system**  
**Alimohammadi, Hossein; Vassiljeva, Kristina; Petlenkov, Eduard; Thalfeldt, Martin; Mikola, Alo; Kull, Tuule Mall; Köse, Ahmet** E3S Web Conference: Cold Climate HVAC and Energy 2021 2021 / art. 10002 <https://doi.org/10.1051/e3sconf/202124610002>  
[Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Grey box identification of fractional-order system models from frequency domain data**  
**Tepļakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** 41th International Conference on Telecommunications and Signal Processing : July 4-6, 2018, Athens, Greece : proceedings 2018 / p. 319-322 : ill <https://doi.org/10.1109/TSP.2018.8441247>

**Hardware-in-the-Loop test of an open loop fuzzy control method for decoupled electro-hydraulic antilock braking system**  
**Aksjonov, Andrei; Ricciardi, Vincenzo; Augsburg, Klaus; Vodovozov, Valery; Petlenkov, Eduard** IEEE transactions on fuzzy systems 2020 / p. 965-975: ill <https://doi.org/10.1109/TFUZZ.2020.2965868> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Harvesting energy and stability insights in internally coupled resonator systems**  
**Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia, S. Hassan; Petlenkov, Eduard** Proceedings, IEEE 18th International Conference on Advanced Motion Control, AMC2024, February 28-March 1, 2024 2024 / p. 1-6 : ill <https://doi.org/10.1109/AMC58169.2024.10505680>

**Hybrid approach to detection of the surgeon's hand motions during endoscope surgery**  
**Nömm, Sven; Vain, Jüri; Petlenkov, Eduard; Miyawaki, Fujio; Yoshimitsu, Kitaro** ICIEA : 4th IEEE Conference on Industrial Electronics and Applications : Xi'an, 25-27 May 2009 2009 / p. 3488-3492 <https://ieeexplore.ieee.org/abstract/document/5138854>

**Hyperspectral data processing and interpretation in remote sensing based on laser-induced fluorescence method = Hüperspektraalse andmete analüüs ja tõlgendamine kaugseires laser-induced-fluorescence-meetodi põhjal**  
**Sobolev, Innokenti** 2014

**Identification of industrial water boiler for model predictive control of district heat plant**  
**Vansovits, Vitali; Petlenkov, Eduard; Vassiljeva, Kristina; Guljajev, Aleksandr** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 315-318 : ill

**Identification, implementation and simulation of ground source heat pump with ground temperature modeling**  
**Köse, Ahmet; Petlenkov, Eduard** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 163-166 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**IKTDK interdistsiplinaarsetest projektidest**  
**Petlenkov, Eduard** A & A 2011 / lk. 38-43 [https://artiklid.elnet.ee/record=b2472218\\*est](https://artiklid.elnet.ee/record=b2472218*est)

**Image encryption using fractional singular chaotic systems : an extended Kalman filtering approach**  
**Nosrati, Komeil; Belikov, Juri; Tepļakov, Aleksei; Petlenkov, Eduard** 2022 International Conference on Electrical, Computer and Energy Technologies (ICECET) 2022 / 6 p. : ill <https://doi.org/10.1109/ICECET55527.2022.9873484>

**Impact of the COVID-19 pandemic on the energy use and performance in commercial buildings**  
**Belikov, Juri; Köse, Ahmet; Petlenkov, Eduard; Tepļakov, Aleksei; Loo, Lauri** 2022 45th International Conference on Telecommunications and Signal Processing, TSP 2022 2022 / p. 187-191 <https://doi.org/10.1109/TSP55681.2022.9851384>

**Implementation and real-time simulation of a fractional-order controller using a MATLAB based prototyping platform**  
**Tepļakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** BEC 2012 : 2012 13th Biennial Baltic Electronics Conference : proceedings of the 13th Biennial Baltic Electronics Conference : October 3-5, 2012, Tallinn, Estonia 2012 / p. 145-148 : ill

**Implementation of series resonance-based fault current limiter for enhanced transient stability of grid-connected photovoltaic farm**  
**Demin, Slava; Barbie, Eli; Heistrene, Leena; Belikov, Juri; Petlenkov, Eduard; Levron, Yoash; Baimel, Dmitry** Electronics (Switzerland) 2024 / art. 2987 <https://doi.org/10.3390/electronics13152987> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Improving beam-based regulation for continuous-wave linear accelerators with a disturbance model-based design = Pidevaine lineaarse kiirendite kiire põhise reguleerimise täiustamine häiringu mudelil põhineva sünteesi abil**  
**Maalberg, Andrei** 2023 <https://doi.org/10.23658/taltech.51/2023> <https://digikogu.taltech.ee/et/Item/b6a935be-08cf-4874-aef2-dcda56693add> [https://www.ester.ee/record=b5638841\\*est](https://www.ester.ee/record=b5638841*est)

### **Incorporation of fractional-order dynamics into an existing PI/PID DC motor control loop**

**Tepljakov, Aleksei**; Gonzales, Emmanuel A.; **Petlenkov, Eduard**; **Belikov, Juri**; Monje, Concepcion A.; Petraš, Ivo ISA transactions 2016 / p. 262-273 : ill <https://doi.org/10.1016/j.isatra.2015.11.012> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Info- ja kommunikatsioonitehnoloogia doktorikool 2011. aastal**

**Petlenkov, Eduard** A & A 2011 / lk. 3-4 [https://artiklid.elnet.ee/record=b2472206\\*est](https://artiklid.elnet.ee/record=b2472206*est)

### **Info- ja kommunikatsioonitehnoloogia doktorikoolist**

**Petlenkov, Eduard** A & A 2010 / 4, lk. 3-5 [https://artiklid.elnet.ee/record=b2286468\\*est](https://artiklid.elnet.ee/record=b2286468*est)

### **Innovative energy services based on behavioural-reflective-attributes and intelligent recommendation systems = Arukatel soovitussüsteemidel põhinevad uuenduslikud energiateenused**

**Onile, Abiodun Emmanuel** 2024 [https://www.ester.ee/record=b5707376\\*est](https://www.ester.ee/record=b5707376*est) <https://digikogu.taltech.ee/et/Item/b717302e-ead7-45c8-b6ea-7ba264519b27> <https://doi.org/10.23658/taltech.62/2024>

### **Intelligent control of robots with minimal power consumption in pick-and-place operations**

**Vodovozov, Valery**; **Raud, Zoja**; **Petlenkov, Eduard** Energies 2023 / art. 7418 <https://doi.org/10.3390/en16217418> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Intelligent frequency control of AC microgrids with communication delay : an online tuning method subject to stabilizing parameters**

**Nosrati, Komeil**; **Škiparev, Vjatšeslav**; **Tepljakov, Aleksei**; **Petlenkov, Eduard**; **Belikov, Juri** Energy and AI 2024 / art. 100421 <https://doi.org/10.1016/j.egyai.2024.100421> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Intelligent virtual environments with assessment of user experiences**

**Köse, Ahmet**; **Tepljakov, Aleksei**; **Petlenkov, Eduard** Artificial Intelligence and Soft Computing : 20th International Conference, ICAISC 2021, Virtual Event, June 21–23, 2021 : proceedings, Part I 2021 / p. 463–474 : ill [https://doi.org/10.1007/978-3-030-87986-0\\_41](https://doi.org/10.1007/978-3-030-87986-0_41) [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

### **ISS0010 süsteemiteooria : ülesannete kogu**

**Gordon, Boris**; **Petlenkov, Eduard** 2007 [http://www.ester.ee/record=b2238345\\*est](http://www.ester.ee/record=b2238345*est) <https://digikogu.taltech.ee/et/Item/01a87d1c-157f-47d6-9e21-cbc0fe8429ea>

### **Leveraging digital twins and demand side recommender Chatbot for optimizing smart grid energy efficiency**

**Onile, Abiodun Emmanuel**; **Belikov, Juri**; **Petlenkov, Eduard**; **Levron, Yoash** 2023 IEEE PES Innovative Smart Grid Technologies - Asia, ISGT Asia 2023 2023 / 5 p <https://doi.org/10.1109/ISGTAsia54891.2023.10372761>

### **Liner dynamic systems with static actuator nonlinearities identification for control [Electronic resource]**

**Petlenkov, Eduard**; **Rüstern, Ennu** ICGST International Conference on Automatic Control and System Engineering (ACSE-05) : Cairo, Egypt, 2005 2005 / [6] p. [CD-ROM]

### **Management of braking energy in electric vehicles using reinforcement learning**

**Vodovozov, Valery**; **Raud, Zoja**; **Petlenkov, Eduard** 2023 International Conference on Clean Electrical Power (ICCEP) 2023 / p. 559-564 <https://doi.org/10.1109/ICCEP57914.2023.10247359>

### **A method for detection and evaluation of driver distraction induced by in-vehicle information systems**

**Aksjonov, Andrei**; **Nedoma, Pavel**; **Vodovozov, Valery**; **Petlenkov, Eduard** IECON 2018 - 44th Annual Conference of the IEEE Industrial Electronics Society : proceedings 2018 / p. 4513-4518 : ill <https://doi.org/10.1109/IECON.2018.8591252>

### **A method of driver distraction evaluation using fuzzy logic : phone usage as a driver's secondary activity : case study**

**Aksjonov, Andrei**; **Nedoma, Pavel**; **Vodovozov, Valery**; **Petlenkov, Eduard**; **Herrmann, Martin** Proceedings : IACAT 2017 : XXVI International Conference on Information, Communication and Automation Technologies, October 26-28, 2017, Sarajevo, Bosnia-Herzegovina 2017 / 6 p. : ill <https://doi.org/10.1109/IACAT.2017.8171599>

### **MIMO reinforcement learning based approach for frequency support in microgrids with high renewable energy penetration**

**Skiparev, Vjatšeslav**; **Belikov, Juri**; **Petlenkov, Eduard** 2021 IEEE Power & Energy Society General Meeting (PESGM), 26-29 July 2021 2021 / 5 p. : ill <https://doi.org/10.1109/PESGM46819.2021.9637942>

### **Model based control of a water tank system**

**Belikov, Juri**; **Petlenkov, Eduard** Proceedings of the 19th IFAC World Congress, 2014 : Cape Town, South Africa, 24-29 August 2014 2014 / p. 10838-10843 : ill <https://doi.org/10.3182/20140824-6-za-1003.00695> [Journal metrics at Scopus](#) [Article at Scopus](#)

### **Model predictive control of descriptor systems**

**Nosrati, Komeil**; **Belikov, Juri**; **Tepljakov, Aleksei**; **Petlenkov, Eduard** IEEE Control Systems Letter 2024 / p. 2139 - 2144

**Model reference adaptive control scheme for retuning method-based fractional-order PID control with disturbance rejection applied to closed-loop control of a magnetic levitation system**

**Tepljakov, Aleksei;** Alagoz, Baris Baykant; Gonzalez, Emmanuel A.; **Petlenkov, Eduard;** Yeroglu, Celaledin Journal of circuits, systems, and computers 2018 / 1850176 <https://doi.org/10.1142/S0218126618501761> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Model reference control of nonlinear MIMO systems by dynamic output feedback linearization of ANARX models**

**Belikov, Juri; Petlenkov, Eduard** IEEE International Conference on Control and Automation : ICCA 2009 : Christchurch, New Zealand, December 9-11, 2009 2009 / p. 536-541 <https://ieeexplore.ieee.org/document/5410177?tp=&arnumber=5410177>

**Model reference control of nonlinear systems by dynamic output feedback linearization of neural network based ANARX models**

**Petlenkov, Eduard** Proceedings of the 10th International Conference on Control Automation Robotics & Vision (ICARCV 2008) : Hanoi, Vietnam, December 17-20, 2008 2008 / p. 1119-1123 <https://ieeexplore.ieee.org/document/4795677>

**Model reference control of nonlinear TITO systems by dynamic output feedback linearization of neural network based ANARX models**

**Belikov, Juri; Petlenkov, Eduard** Control Applications (CCA) & Intelligent Control (ISIC) : 2009 IEEE : 8-10 July 2009, St.Petersburg 2009 / p. 1820-1825 <https://ieeexplore.ieee.org/document/5410177?tp=&arnumber=5410177>

**Model-based control design for a district heating plant**

Vansovitš, Vitali; Godoy, Boris I.; **Tepljakov, Aleksei; Vassiljeva, Kristina; Petlenkov, Eduard** 2017 IEEE 15th International Conference on Industrial Informatics (INDIN 2017) : Emden, Germany, 24-26 July 2017 2017 / p. 615-620 : ill <https://doi.org/10.1109/INDIN.2017.8104842>

**Modeling and identification of an industrial hot water boiler**

**Tarasevich, Maksimilian; Tepljakov, Aleksei; Petlenkov, Eduard; Vansovitš, Vitali** 2020 43rd International Conference on Telecommunications and Signal Processing : TSP 2020, Milan, Italy, July 7-9, 2020 2020 <https://doi.org/10.1109/TSP49548.2020.9163503>

**Modelling of a versatile vehicle braking system with a fuzzy PID torque controller**

**Vodovozov, Valery; Raud, Zoja; Aksjonov, Andrei; Petlenkov, Eduard** 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 / 6 p. : ill <https://doi.org/10.1109/BEC49624.2020.9276798>

**Motivating Students to Avoid Academic Dishonesty in Learning Engineering Courses**

**Raud, Zoja; Vodovozov, Valery; Petlenkov, Eduard; Serbin, Aleksandr** EDUCON 2018 : Global Engineering Education Conference : abstracts 2018 / p. 100 [http://www.educon-conference.org/current/documents/EDUCON2018\\_abstracts.pdf](http://www.educon-conference.org/current/documents/EDUCON2018_abstracts.pdf)

**Multi-loop model reference adaptive control of fractional-order PID control systems**

Alagoz, Baris Baykant; **Tepljakov, Aleksei; Petlenkov, Eduard;** Yeroglu, Celaledin 2017 40th International Conference on Telecommunications and Signal Processing TSP : July 5-7, 2017, Barcelona, Spain 2017 / p. 702-705 : ill <https://doi.org/10.1109/TSP.2017.8076078>

**Multi-loop model reference proportional integral derivative controls: design and performance evaluations**

Alagoz, Baris Baykant; **Tepljakov, Aleksei; Petlenkov, Eduard;** Yeroglu, Celaledin Algorithms 2020 / 26 p. : ill <https://doi.org/10.3390/a13020038> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**A NARX model reference adaptive control scheme: Improved disturbance rejection fractional-order PID control of an experimental magnetic levitation system**

**Alimohammadi, Hossein;** Alagoz, Baris Baykant; **Tepljakov, Aleksei; Vassiljeva, Kristina; Petlenkov, Eduard** Algorithms 2020 / p. 1-27 <https://doi.org/10.3390/a13080201> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Neural network based configuring of linear delta robots with reduced energy consumption**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Renewable energies environment and power quality journal 2024 / p. 82-88 <https://doi.org/10.24084/reepqj24.267>

**Neural network based dynamic pole placement control of nonlinear systems**

**Petlenkov, Eduard; Belikov, Juri** IEEE International Conference on Control and Automation : ICCA 2009 : Christchurch, New Zealand, December 9-11, 2009 2009 / p. 410-415 <https://ieeexplore.ieee.org/document/5410160>

**Neural network based minimal state-space representation of nonlinear MIMO systems for feedback control**

**Vassiljeva, Kristina; Petlenkov, Eduard; Belikov, Juri** The 11th International Conference Control, Automation, Robotics and Vision : ICARCV 2010 : 7-10 December 2010, Singapore 2010 / p. 2191-2196 [https://www.researchgate.net/publication/221144201\\_Neural\\_network\\_based\\_minimal\\_state-space\\_representation\\_of\\_nonlinear\\_MIMO\\_systems\\_for\\_feedback\\_control](https://www.researchgate.net/publication/221144201_Neural_network_based_minimal_state-space_representation_of_nonlinear_MIMO_systems_for_feedback_control)

**Neural network based system for real-time organ recognition by analysis of sequence of endoscopic images received during surgical operation**

Artemtšuk, Igor; Petlenkov, Eduard; **Miyawaki, F.**; Gladki, A. BEC 2010 : 2010 12th Biennial Baltic Electronics Conference : proceedings of the 12th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 4-6, 2010, Tallinn, Estonia 2010 / p. 349-352 : ill

**Neural network based system for real-time organ recognition during surgical operation**

**Artemtšuk, Igor; Petlenkov, Eduard;** Miyawaki, Fujio Proceedings of the 18th IFAC World Congress : Milano, Italy, August 28 - September 2, 2011 2011 / p. 6478-6483 <https://www.sciencedirect.com/science/article/pii/S1474667016446458#cekeyws10>

**Neural network control of green energy vehicles with blended braking systems**

**Vodovozov, Valery; Petlenkov, Eduard; Aksjonov, Andrei; Raud, Zoja** Renewable Energy & Power Quality Journal 2021 / p. 344-349 <https://doi.org/10.24084/repqj19.291> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Neural network-based model reference control of braking electric vehicles**

**Vodovozov, Valery;** Aksjonov, Andrei; **Petlenkov, Eduard; Raud, Zoja** Energies 2021 / art. 2373 <https://doi.org/10.3390/en14092373> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Neural networks based ANARX structure for identification and model based control**

**Petlenkov, Eduard; Nömm, Sven; Kotta, Ülle** 9th International Conference on Control, Automation, Robotics and Vision : 5-8 December, 2006, Singapore : [proceedings] 2006 / p. 2284-2288 <https://ieeexplore.ieee.org/document/4150221>

**Neural networks based identification and control of nonlinear systems : ANARX model based approach**

**Petlenkov, Eduard** 2007 [https://www.ester.ee/record=b2315845\\*est](https://www.ester.ee/record=b2315845*est)

**Neural networks based identification for control**

**Vassiljeva, Kristina; Petlenkov, Eduard; Belikov, Juri** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK viienda aastakonverentsi artiklite kogumik : 25.-26. novembril 2011, Nelijärve 2011 / p. 157-160 : ill

**Neural networks based minimal or reduced model representation for control of nonlinear MIMO systems**

**Vassiljeva, Kristina; Belikov, Juri; Petlenkov, Eduard** Proceedings of International Joint Conference on Neural Networks : San Jose, California, USA, July 31 – August 5, 2011 2011 / p. 1706-1713 <https://ieeexplore.ieee.org/document/6033430>

**Neural networks based simplified ANARX structure for control on nonlinear MIMO systems**

**Petlenkov, Eduard** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK teise aastakonverentsi artiklite kogumik : 11.-12. mai 2007, Viinistu kunstimuuseum 2007 / lk. 39-42 : ill

**Neuro-fuzzy dynamic pole placement control of nonlinear discrete-time systems**

**Belikov, Juri; Petlenkov, Eduard** Proceedings of International Joint Conference on Neural Networks : San Jose, California, USA, July 31 – August 5, 2011 2011 / p. 1577-1582 : ill <https://ieeexplore.ieee.org/document/6033412>

**A new virtual synchronous generator design based on the SMES system for frequency stability of low-inertia power grids**

Magdy, Gaber; Bakeer, Abualkasim Ahmed Ali; Nour, Morsy; **Petlenkov, Eduard** Energies 2020 / art. 5641, 17 p. : ill <https://doi.org/10.3390/en13215641> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**NN-ANARX model based control of liquid level using visual feedback**

**Vassiljeva, Kristina; Tepļakov, Aleksei; Petlenkov, Eduard** 2015 IEEE International Conference on Industrial Informatics (INDIN) : proceedings : Robinson College, Cambridge, United Kingdom, 22-24 July, 2015 2015 / p. 133-138 : ill <http://dx.doi.org/10.1109/INDIN.2015.7281723>

**NN-ANARX model based control of nonlinear discrete-time systems with input delay**

**Belikov, Juri; Petlenkov, Eduard** Control Applications (CCA) & Intelligent Control (ISIC) : 2009 IEEE : 8-10 July 2009, St.Petersburg 2009 / p. 1039-1044 <https://ieeexplore.ieee.org/document/5281182>

**NN-ANARX structure based dynamic output feedback linearization for control of nonlinear MIMO systems**

**Petlenkov, Eduard** Proceedings of the 15th Mediterranean Conference on Control and Automation : MED'07 : Athena (Greece), June 27-29, 2007 2007 / [6] p [https://www.researchgate.net/publication/224303099>NN-ANARX\\_structure\\_based\\_dynamic\\_output\\_feedback\\_linearization\\_for\\_control\\_of\\_nonlinear\\_MIMO\\_systems](https://www.researchgate.net/publication/224303099>NN-ANARX_structure_based_dynamic_output_feedback_linearization_for_control_of_nonlinear_MIMO_systems)

**NN-ANARX structure for control of nonlinear SISO and MIMO systems : neural networks based approach**

**Petlenkov, Eduard; Belikov, Juri** Proceedings of the 26th Chinese Control Conference : July 26-31, 2007, Zhangjiajie, Hunan, China. 4 2007 / p. 138-145 <https://ieeexplore.ieee.org/document/4347185/keywords#keywords>

**NN-SANARX model based control of a multi tank liquid-level system**

**Belikov, Juri; Petlenkov, Eduard** International journal of computational intelligence systems 2015 / p. 265-277



**NN-SANARX model based control of a water tank system using embedded microcontroller Arduino**

Škiparev, Vjatseslav; Belikov, Juri; Petlenkov, Eduard Proceedings of the 2019 10th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications : IDAACS'2019, 18-21 Sept. 2019 2019 / p. 372-377 : ill <https://doi.org/10.1109/IDAACS47747.2019>

**Nonlinear dynamics in PEH for enhanced power output and vibration suppression in metastructures**

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia, S. Hassan; Petlenkov, Eduard Nonlinear Dynamics 2024 / p. 12941 - 12963 <https://doi.org/10.1007/s11071-024-09739-w> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**A novel artificial neural networks based automatic adaptive fault detection technique for analog circuits**

Petlenkov, Eduard; Jutman, Artur; Nömm, Sven; Ubar, Raimund-Johannes BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 167-170 : ill

**A Novel driver performance model based on machine learning**

Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Petlenkov, Eduard; Herrmann, Martin IFAC-PapersOnLine 2018 / p. 267-272 : ill <http://dx.doi.org/10.1016/j.ifacol.2018.07.044>

**A novel Taylor series based approach for control computation in NN-ANARX structure based control of nonlinear systems**

Belikov, Juri; Vassiljeva, Kristina; Petlenkov, Eduard; Nömm, Sven Proceedings of the 27th Chinese Control Conference : July 16-18, 2008, Kunming, Yunnan, China. 2 2008 / p. 474-478 <https://ieeexplore.ieee.org/document/4605837>

**A numerical study for plant-independent evaluation of fractional-order PID controller performance**

Alagoz, Baris Baykant; Tepljakov, Aleksei; Yeroglu, Celaeddin; Gonzalez, Emmanuel A.; Hossein Nia, S. Hassan; Petlenkov, Eduard IFAC-PapersOnLine 2018 / p. 539-544 : ill <https://doi.org/10.1016/j.ifacol.2018.06.151> Conference proceedings at Scopus Article at Scopus Article at WOS

**Observation and stabilisation of coupled timelfractional reaction–advection–diffusion systems with spatiallylvarying coefficients**

Chen, Juan; Tepljakov, Aleksei; Petlenkov, Eduard IET control theory and applications 2020 / p. 3128–3138 <https://doi.org/10.1049/iet-cta.2020.0520> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**On robust stability of uncertain control systems with time delay : an approach based on the overlap of value sets**

Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard IEEE Transactions on Automatic Control 2024 / p. 6349 - 6356 <https://doi.org/10.1109/TAC.2024.3381912> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Ontology-based design of educational trajectories**

Raud, Zoja; Vodovozov, Valery; Petlenkov, Eduard; Serbin, Aleksandr 59th Annual International Scientific Conference on Power and Electrical Engineering : November 12, 13, 2018, Riga Technical University (RTUCON) : conference proceedings 2018 / 4 p. . ill <https://doi.org/10.1109/RTUCON.2018.8659893>

**Optimal robust filter of uncertain fractional order systems : a penalized deterministic approach**

Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard IEEE Control Systems Letters 2023 / p. 1075 - 1080 <https://doi.org/10.1109/LCSYS.2022.3230773> Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS

**Penalized least-squares method for LQR problem of singular systems**

Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard 62nd IEEE Conference on Decision and Control, CDC 2023, Singapore, 13-15 December 2023 2023 / p. 1251-1256 <https://doi.org/10.1109/CDC49753.2023.10383412> Conference proceeding at Scopus Article at Scopus Article at WOS

**Pick-and-place operation of linear Delta robots with low energy consumption**

Vodovozov, Valery; Lehtla, Madis; Raud, Zoja; Petlenkov, Eduard 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2024 / 6 p <https://doi.org/10.1109/RTUCON62997.2024.10830764>

**Piezoelectric compensation of structural damping in metamaterial beams: stability and performance analysis**

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia, S. Hassan; Ellervee, Peeter; Petlenkov, Eduard Active and Passive Smart Structures and Integrated Systems XVIII 2024 / art. 129460J, 11 p. : ill <https://doi.org/10.1117/12.3024120> Conference proceedings at Scopus Article at Scopus Article at WOS

**Polynomial methods for nonlinear control systems = Polünoommeetodid mittelineaarsetes juhtimissüsteemides**

Belikov, Juri 2012 [http://www.ester.ee/record=b2854462\\*est](http://www.ester.ee/record=b2854462*est)

**Practical demand side management and demand response in large scale buildings with multiple case studies**

Köse, Ahmet; Sukhanov, Ivan; Maivel, Mikk; **Tepljakov, Aleksei; Hokmabad, Hossein Nourollahi; Petlenkov, Eduard** 2024 20th International Conference on the European Energy Market (EEM) 2024 / 5 p <https://doi.org/10.1109/EEM60825.2024.10608965>  
[Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Practical demand side management: one day case study**

**Köse, Ahmet; Hokmabad, Hossein Nourollahi; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** Healthy Buildings 2023 Europe: Beyond Disciplinary Boundaries: proceedings ; 1 2023 / p. 36-42 <https://www.proceedings.com/content/070/070278webtoc.pdf>

**Practical evaluation of two-layer perceptrons optimal architecture for identification of 2-nd and 3-d order nonlinear dynamic discrete time SISO systems**

**Kondratjeva, Julija; Petlenkov, Eduard** 5th Junior European Meeting on Control & Information Technology : September 20-22, 2006, Tallinn, Estonia : book of abstracts 2006 / p. 16-17

**Practical real-time data-driven approach for district cooling plant operational optimization**

**Sukhanov, Ivan; Köse, Ahmet; Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2024) : proceedings 2024 / 5 p  
<https://doi.org/10.1109/ISGTEUROPE62998.2024.10863248>

**Predict the remaining useful life in HVAC filters using a hybrid strategy**

**Alimohammadi, Hossein; Vassiljeva, Kristina; Petlenkov, Eduard; Kull, Tuule Mall; Thalfeldt, Martin** CLIMA 2022: the 14th REHVA HVAC World Congress, 22nd – 25th May in Rotterdam, The Netherlands 2022 / p. 1-8 <https://doi.org/10.34641/clima.2022.273>

**Professorid Juri Belikov ja Eduard Petlenkov selgitavad, kuidas Eestit rohelisemaks muuta**

goodnews.ee 2023 [Professorid Juri Belikov ja Eduard Petlenkov selgitavad, kuidas Eestit rohelisemaks muuta](#) [Professorid Juri Belikov ja Eduard Petlenkov selgitavad, kuidas Eestit rohelisemaks muuta](#)

**Profiling and schedule based forecast of electricity usage to improve energy performance of administrative buildings**

**Vassiljeva, Kristina; Matson, Margarita; Belikov, Juri; Petlenkov, Eduard** Proceedings of the 30th ICE IEEE/ITMC Conference on Engineering, Technology, and Innovation: Digital Transformation on Engineering, Technology and Innovation, ICE 2024 2024 IEEE International Conference on Engineering, Technology, and Innovation (ICE/ITMC) 2024 / 8 p  
<https://doi.org/10.1109/ICE/ITMC61926.2024.10794299>

**Promotion of the students' success in higher engineering education**

**Raud, Zoja; Vodovozov, Valery; Aksjonov, Andrei; Petlenkov, Eduard** 2017 IEEE 58th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : proceedings : Latvia, Riga, 12-13 October, 2017 2017 / [6] p. : ill <https://doi.org/10.1109/RTUCON.2017.8124806>

**Real time data communication for intelligent extended reality applications**

**Köse, Ahmet; Tepljakov, Aleksei; Petlenkov, Eduard** 2020 IEEE International Conference on Computational Intelligence and Virtual Environments for Measurement Systems and Applications (CIVEMSA), 22-24 June 2020 : proceedings 2021 / 6 p  
<https://doi.org/10.1109/CIVEMSA48639.2020.9132970>

**Real-time regulation of beam-based feedback : implementing an FPGA solution for a continuous wave linear accelerator**

**Maalberg, Andrei; Kuntzsch, Michael; Petlenkov, Eduard** Sensors 2022 / art. 6236, 22 p. : ill <https://doi.org/10.3390/s22166236>  
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Recognition of the surgeon's motions during endoscopic operation by statistics based algorithm and neural networks based ANARX models**

**Nõmm, Sven; Petlenkov, Eduard; Vain, Jüri; Belikov, Juri; Miyawaki, Fujio; Yoshimitsu, Kitaro** Proceedings of the 17th World Congress The International Federation of Automatic Control : Seoul, Korea, July 6-11, 2008 2008 / p. 14773-14778  
<https://www.sciencedirect.com/science/article/pii/S1474667016413662>

**Region of admissible values for discrete-time nonlinear control system linearized by output feedback**

**Belikov, Juri; Petlenkov, Eduard** Proceedings of the 18th IFAC World Congress : Milano, Italy, August 28 - September 2, 2011 2011 / p. 209-214 <https://www.sciencedirect.com/science/article/pii/S1474667016436128>

**Regulation of electron bunch arrival time for a continuous-wave linac : exploring the application of the H2 mixed-sensitivity problem**

**Maalberg, Andrei; Kuntzsch, Michael; Zenker, Klaus; Petlenkov, Eduard** Physical Review Accelerators and Beams 2023 / art. 072801, 13 p. : ill <https://doi.org/10.1103/PhysRevAccelBeams.26.072801> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Regulation of the linear accelerator ELBE exploiting continuous wave mode of a superconducting RF cavity**

**Maalberg, Andrei; Kuntzsch, Michael; Petlenkov, Eduard** 2022 American Control Conference (ACC) : Atlanta, GA, USA, 8-10 June 2022 : proceedings 2022 / p. 5346-5353 : ill <https://doi.org/10.23919/ACC53348.2022.9867172> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Relmagine lab : bridging the gap between hands-on, virtual and remote control engineering laboratories using digital twins and extended reality**

**Alsaleh, Saleh Ragheb Saleh; Tepljakov, Aleksei; Köse, Ahmet; Belikov, Juri; Petlenkov, Eduard** IEEE Access 2022 / p. 89924-889943 : ill <https://doi.org/10.1109/ACCESS.2022.3199371> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Reinforcement learning based approach for virtual inertia control in microgrids with renewable energy sources**

**Škiparev, Vjatšeslav; Belikov, Juri; Petlenkov, Eduard** Proceedings of 2020 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe), 26-28 October, 2020 2020 / p. 1020-1024 <https://doi.org/10.1109/ISGT-Europe47291.2020.9248777>

**Reinforcement learning based MIMO controller for virtual inertia control in isolated microgrids**

**Škiparev, Vjatšeslav; Belikov, Juri; Petlenkov, Eduard; Levron, Yoash** 2022 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe) : proceedings 2022 / art. 184786, 5 p. : ill <https://doi.org/10.1109/ISGT-Europe54678.2022.9960447>

**Research and development of computational-intelligence–based safety Systems for ground vehicles = Tehisintellekti meetoditel põhinevate ohutussüsteemide uurimine ja arendamine maapealsete sõidukite jaoks**

**Aksjonov, Andrei** 2019 <https://digi.lib.ttu.ee/i/?12389>

**Resource-aware scene text recognition using learned features, quantization, and contour-based character extraction**

**Ademola, Olutosin Ajibola; Petlenkov, Eduard; Leier, Mairo** IEEE Access 2023 / p. 56865 - 56874 <https://doi.org/10.1109/ACCESS.2023.3283931> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Restricted connectivity neural network structure for organ recognition by analysis of endoscopic images during surgical operation**

**Petlenkov, Eduard; Artemtšuk, Igor; Miyawaki, F.; Yoshimitsu, Kitaro** BEC 2008 : 2008 International Biennial Baltic Electronics Conference : proceedings of the 11th Biennial Baltic Electronics Conference : Tallinn University of Technology : October 6-8, 2008, Tallinn, Estonia 2008 / p. 261-264 : ill

**Review of energy challenges and horizons of hydrogen city buses**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Energies 2022 / art. 6945 <https://doi.org/10.3390/en15196945> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Review on Braking Energy Management in Electric Vehicles**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** Energies 2021 / art. 4477 <https://doi.org/10.3390/en14154477> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Revisiting the LQR problem of singular systems**

**Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** IEEE/CAA Journal of Automatica Sinica 2024 / p. 2236-2252 : ill <https://doi.org/10.1109/JAS.2024.124665> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robust D-stability analysis of fractional-order controllers**

**Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard** 2023 American Control Conference, ACC 2023, San Diego, 31 May-2 June 2023 : proceedings 2023 / p. 3871-3876 : ill <https://doi.org/10.23919/ACC55779.2023.10156257> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Robust FOPI and FOPID controller design for FFOPDT plants in embedded control applications using frequency-domain analysis**

**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** 2015 American Control Conference : Hilton Palmer House, Chicago, IL, July 1-3, 2015 2015 / p. 3868-3873 : ill <https://doi.org/10.1109/ACC.2015.7171933> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

**Robust FOPID stabilization for Smith Predictor structures**

**Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard** 61st IEEE Conference on Decision and Control, CDC 2022, Cancun, 6 December - 9 December 2022, proceedings 2022 / p. 1696-1701 <https://doi.org/10.1109/CDC51059.2022.9993283> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Robust fractional order singular Kalman filter**

**Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard** International journal of robust and nonlinear control 2024 / p. 602-627 : ill <https://doi.org/10.1002/rnc.6990> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robust PID controller design for continuous-time systems via reduced routh parameters = Pidevaja süsteemide robustse PID kontrolleri süntees taandatud Routh parametrite kaudu**

**Artemtšuk, Igor** 2019 <https://digi.lib.ttu.ee/i/?13259>

**Robust stability analysis of interval fractional-order plants with interval time delay and general form of fractional-order controllers**

**Ghorbani, Majid;** Tavakoli-Kakhki, Mahsan; **Tepljakov, Aleksei; Petlenkov, Eduard;** Farnam, Arash; Crevecoeur, Guillaume IEEE Control Systems Letters 2022 / p. 1268-1273 <https://doi.org/10.1109/LCSYS.2021.3091525> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robust stability analysis of Smith predictor based interval fractional-order control systems: a case study in level control process**

**Ghorbani, Majid;** Tavakoli-Kakhki, Mahsan; **Tepljakov, Aleksei; Petlenkov, Eduard** IEEE/CAA Journal of Automatica Sinica 2023 / p. 762-780 <https://doi.org/10.1109/JAS.2022.105986> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Robust stability region of PI controllers for an interval time delayed load frequency control**

**Ghorbani, Majid; Nosrati, Komeil; Tepljakov, Aleksei; Belikov, Juri; Petlenkov, Eduard** IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT Europe 2024) : proceedings 2024 / 5 p <https://doi.org/10.1109/ISGTEUROPE62998.2024.10863205>

**Robust stability testing function for a complex interval family of fractional-order polynomials**

**Ghorbani, Majid;** Rezaei, Hossein; **Tepljakov, Aleksei; Petlenkov, Eduard** Journal of the Franklin Institute 2022 / p. 10038 - 10057 <https://doi.org/10.1016/j.franklin.2022.09.042> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Self assessment tool to bridge the gap between XR Technology, SMEs, and HEIs**

**Köse, Ahmet; Tepljakov, Aleksei; Alsaleh, Saleh Ragheb Saleh; Petlenkov, Eduard** Extended Reality : First International Conference, XR Salento 2022, Lecce, Italy, July 6-8, 2022, Proceedings, Part I 2022 / p. 296-311 : ill [https://doi.org/10.1007/978-3-031-15546-8\\_25](https://doi.org/10.1007/978-3-031-15546-8_25) [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at Scopus](#)

**Self-scaling laboratory crane fuzzy logic control with anti-swing regulation [Online resource]**

**Aksjonov, Andrei; Vodovozov, Valery; Petlenkov, Eduard** 2016 57th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) : October 13, 14, 2016 : conference proceedings 2016 / [6] p. : ill <https://doi.org/10.1109/RTUCON.2016.7763088>

**Sensorless control of the three-dimensional crane using the Euler-Lagrange approach with a built-in state-space model**

**Aksjonov, Andrei; Vodovozov, Valery; Petlenkov, Eduard** 2015 56th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2015 / p. 255-258 : ill

**Simulation of RF noise propagation to relativistic electron beam properties in a linear accelerator**

**Maalberg, Andrei; Kuntzsch, Michael; Petlenkov, Eduard** IFAC-PapersOnLine 2020 / p. 348-354 <https://doi.org/10.1016/j.ifacol.2020.12.184> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

**Simulation study of electric vehicles at fuzzy PID control of braking torque**

**Vodovozov, Valery; Petlenkov, Eduard; Aksjonov, Andrei; Raud, Zoja** Informatics in Control, Automation and Robotics : 17th International Conference, ICINCO 2020 Lieusaint - Paris, France, July 7-9, 2020, Revised Selected Papers 2022 / p. 261-290 [https://doi.org/10.1007/978-3-030-92442-3\\_15](https://doi.org/10.1007/978-3-030-92442-3_15) [Conference proceedings at Scopus](#) [Article at Scopus](#)

**Simulation study of processes in electric vehicles under braking control based on reinforcement learning**

**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227478>

**Smartgrid-based hybrid digital twins framework for demand side recommendation service provision in distributed power systems**

**Onile, Abiodun Emmanuel; Petlenkov, Eduard; Levron, Yoash; Belikov, Juri** Future generation computer systems 2024 / p. 142-156 : ill <https://doi.org/10.1016/j.future.2024.03.018> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Sound localization and processing for inducing synesthetic experiences in virtual reality**

**Tepljakov, Aleksei; Astapov, Sergei; Petlenkov, Eduard; Vassiljeva, Kristina; Draheim, Dirk** BEC 2016 : 2016 15th Biennial Baltic Electronics Conference : proceedings of the 15th Biennial Baltic Electronics Conference : Tallinn University of Technology, October 3-5, 2016, Tallinn, Estonia 2016 / p. 159-162 : ill [http://www.ester.ee/record=b2150914\\*est](http://www.ester.ee/record=b2150914*est)

**Speed control of electric vehicle propulsion with autotuning at changeable driving modes and road conditions**

**Aksjonov, Andrei; Nedoma, Pavel; Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** 2019 IEEE International Conference on Mechatronics (ICM) : proceedings 2019 / p. 584-589 : ill <https://doi.org/10.1109/ICMECH.2019.8722909>

**Stabilization and stability robustness of coupled non-constant parameter time fractional PDEs**

**Chen, Juan; Tepljakov, Aleksei; Petlenkov, Eduard** IEEE Access 2019 / p. 163969 - 163980 : ill <https://doi.org/10.1109/ACCESS.2019.2951058> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Stabilization and uncertainty analysis of a time-fractional reaction diffusion equation cascaded with a time-fractional hyperbolic partial differential equation**



Chen, Juan; Zhuang, Bo; **Tepljakov, Aleksei; Petlenkov, Eduard** The Asian Journal of Control 2022 / p. 2294-2310  
<https://doi.org/10.1002/asjc.2637> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Stabilizing region of fractional-order proportional integral derivative controllers for interval delayed fractional-order plants**  
**Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard** Asian Journal of Control 2023 / p. 1145 - 1155  
<https://doi.org/10.1002/asjc.2894> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Stabilizing region of fractional-order proportional integral derivative controllers for interval fractional-order plants**  
**Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard** Transactions of the Institute of Measurement and Control 2023 / p. 546-556 : ill <https://doi.org/10.1177/01423312221117866> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Stability analysis and energy harvesting in lumped parameter systems with internally coupled resonators**  
**Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia, S. Hassan; Petlenkov, Eduard** JVC/Journal of Vibration and Control 2024 / 13 p. : ill <https://doi.org/10.1177/10775463241241161> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**State and output feedback boundary control of time fractional pde–fractional ode cascades with space-dependent diffusivity**  
Chen, Juan; **Tepljakov, Aleksei; Petlenkov, Eduard**; Chen, Yangquan; Zhuang, Bo IET Control Theory and Applications 2020 / p. 3589 - 3600 <https://doi.org/10.1049/iet-cta.2019.1015> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**State-space control of nonlinear systems identified by ANARX and neural network based SANARX models**  
**Vassiljeva, Kristina; Petlenkov, Eduard; Belikov, Juri** The 2010 International Joint Conference on Neural Networks (IJCNN) : 18-23 July 2010, Barcelona : proceedings 2010 / p. 3816-3823 : ill <https://ieeexplore.ieee.org/document/5596581>

**Steroidid äri jaoks: energiaeinformaatika tahab viia Eesti majanduse uuele tõusule**  
postimees.ee 2023 [Steroidid äri jaoks: energiaeinformaatika tahab viia Eesti majanduse uuele tõusule](#)

**Strengthening active learning with a reinforcement approach in engineering education**  
**Vodovozov, Valery; Raud, Zoja; Petlenkov, Eduard** 2024 IEEE 65th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON) 2024 / 5 p <https://doi.org/10.1109/RTUCON62997.2024.10830891>

**Structure identification of NN-ANARX model by genetic algorithm with combined cross-correlation-test based evaluation function**  
**Nõmm, Sven; Vassiljeva, Kristina; Belikov, Juri; Petlenkov, Eduard** 2011 9th IEEE International Conference on Control and Automation (ICCA) : Santiago, Chile, December 19-21, 2011 : [proceedings] 2011 / p. 65-70 : ill <https://ieeexplore.ieee.org/document/6137961>

**Synthesis of digital filters for embedded fractional-order control applications**  
**Tepljakov, Aleksei; Petlenkov, Eduard; Belikov, Juri** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK seitsmenda aastakonverentsi artiklite kogumik : 15.-16. novembril 2013, Haapsalu 2013 / p. 103-106 : ill

**System identification models and using neural networks for Ground Source Heat Pump with ground temperature modeling [Electronic resource]**  
**Köse, Ahmet; Petlenkov, Eduard** 2016 International Joint Conference on Neural Networks (IJCNN) : 24-29 July 2016, Vancouver, Canada 2016 / p. 2850-2855 : ill. [USB] <https://doi.org/10.1109/IJCNN.2016.7727559>

**A systematic review of cutting-edge radar technologies : applications for unmanned ground vehicles (UGVs)**  
**Ersü, Can; Petlenkov, Eduard; Janson, Karl** Sensors 2024 / art. 7807 <https://doi.org/10.3390/s24237807> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**TalTechi professor Eduard Petlenkov: kõige puhtam on energia, mida ei pea tootma**  
**Petlenkov, Eduard**; Küla, Janar; Täkker, Siim ari.geenius.ee 2023 [TalTechi professor Eduard Petlenkov: kõige puhtam on energia, mida ei pea tootma](#)

**TalTechi professor Eduard Petlenkov: kõige puhtam on energia, mida ei pea tootma**  
ari.geenius.ee 2023 [TalTechi professor Eduard Petlenkov: kõige puhtam on energia, mida ei pea tootma](#)

**TalTechi uus magistrikava avab lõpetajatele ukseid looma uut nutikat maailma tarkadest majadest rohepöördeni**  
arileht.delfi.ee 2023 [TalTechi uus magistrikava avab lõpetajatele ukseid looma uut nutikat maailma tarkadest majadest rohepöördeni](#)

**Tehisintellekt rohepöörde eesmärkide teenistuses**  
**Petlenkov, Eduard; Belikov, Juri** RUP. Finants- ja õigusajakiri 2023 / lk. 9-13 : ill [https://www.ester.ee/record=b5550879\\*est](https://www.ester.ee/record=b5550879*est)

**Tehisintellektide pealetung: kas inimkond peaks kartma või rõõmustama?**

**A theoretical investigation on consideration of initial conditions in fractional-order transfer function modeling**

Alagoz, Baris Baykant; **Tepljakov, Aleksei; Petlenkov, Eduard**; Yeroglu, Celaledin 2017 40th International Conference on Telecommunications and Signal Processing TSP : July 5-7, 2017, Barcelona, Spain 2017 / p. 710-713 : ill <https://doi.org/10.1109/TSP.2017.8076080>

**Three-dimensional crane modelling and control using Euler-Lagrange state-space approach and anti-swing fuzzy logic**

**Aksjonov, Andrei; Vodovozov, Valery; Petlenkov, Eduard** Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2015 / p. 5-13 : ill <http://dx.doi.org/10.1515/ecce-2015-0006>

**Time-domain identification of one noninteger order plus time delay models from step response measurements**

Alagoz, Baris Baykant; **Tepljakov, Aleksei**; Ates, Abdullah; **Petlenkov, Eduard**; Yeroglu, Celaledin International journal of modeling, simulation, and scientific computing 2019 / art. 1941011, 22 p. : ill <https://doi.org/10.1142/S1793962319410113> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Torque control in blended antilock braking systems of electric vehicles [Online resource]**

**Vodovozov, Valery; Petlenkov, Eduard; Raud, Zoja**; Aksjonov, Andrei BEC 2018 : 2018 16th Biennial Baltic Electronics Conference (BEC) : proceedings of the 16th Biennial Baltic Electronics Conference, October 8-10, 2018 2018 / 4 p.: ill <https://doi.org/10.1109/BEC.2018.8600978>

**Towards a synesthesia laboratory : real-time localization and Visualization of a sound source for virtual reality applications**

**Köse, Ahmet; Tepljakov, Aleksei; Astapov, Sergei; Draheim, Dirk; Petlenkov, Eduard; Vassiljeva, Kristina** Journal of communications software and systems 2018 / p. 112–120 : ill <https://doi.org/10.24138/jcomss.v14i1.410> [Journal metrics at Scopus](#) [Article at Scopus](#)

**Towards an Intelligent Control System for district heating plants : design and implementation of a fuzzy logic based control loop**

**Vansovitš, Vitali; Tepljakov, Aleksei; Vassiljeva, Kristina; Petlenkov, Eduard** 2016 IEEE 14th International Conference on Industrial Informatics (INDIN) : Palais des Congrès du Futuroscope, Futuroscope - Poitiers, France, 19-21 July, 2016 : proceedings 2016 / p. 405-410 : ill <https://doi.org/10.1109/INDIN.2016.7819193>

**Towards artificial intelligence based automatic adaptive response analyzer for high frequency analog BIST**

**Petlenkov, Eduard; Jutman, Artur; Nömm, Sven; Ubar, Raimund-Johannes** CIMS 2008 : IEEE International Conference on Computational Intelligence for Measurement Systems and Applications : Istanbul, Turkey, July 14-16, 2008 2008 / p. 99-104 : ill <https://ieeexplore.ieee.org/document/4595841>

**Towards artificial intelligence driven immersive environments in virtual reality for industrial applications**

**Alsaleh, Saleh Ragheb Saleh; Tepljakov, Aleksei; Tamre, Mart; Petlenkov, Eduard** 44th International Conference on Telecommunications and Signal Processing (TSP) 2021 / p. 340-345 <https://doi.org/10.1109/TSP52935.2021.9522676>

**Towards assessment of behavioral patterns in a virtual reality environment**

**Köse, Ahmet; Tepljakov, Aleksei; Abel, Mihkel; Petlenkov, Eduard** Augmented Reality, Virtual Reality, and Computer Graphics : 6th International Conference, AVR 2019 : Santa Maria al Bagno, Italy, June 24–27, 2019 : Proceedings. Part I 2019 / p. 237–253 : ill [https://doi.org/10.1007/978-3-030-25965-5\\_18](https://doi.org/10.1007/978-3-030-25965-5_18) [Conference proceeding at Scopus](#) [Article at Scopus](#) [Conference proceeding at WOS](#) [Article at WOS](#)

**Towards assisting interactive reality : interactive reality for education, data analysis and industry**

**Köse, Ahmet; Tepljakov, Aleksei; Petlenkov, Eduard** Augmented Reality, Virtual Reality, and Computer Graphics : 5th International Conference : AVR 2018, Otranto, Italy, June 24–27, 2018 : proceedings, Part I 2018 / p. 569-588 [https://doi.org/10.1007/978-3-319-95282-6\\_41](https://doi.org/10.1007/978-3-319-95282-6_41) [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

**Towards dynamic modeling in immersive environments with assessment of user experiences = Džinaamiliised mudelid virtuaalsetes keskkondades ja kasutajakogemuste hindamine**

**Köse, Ahmet** 2020 [https://www.ester.ee/record=b5378018\\*est](https://www.ester.ee/record=b5378018*est) <https://digikogu.taltech.ee/et/Item/4f5fbdbd-21c5-4c6a-94ee-fa8374b5ce3a>

**Towards genetic algorithm based structure identification for minimal state-space representation and feedback control of nonlinear MIMO systems**

**Vassiljeva, Kristina; Petlenkov, Eduard; Belikov, Juri** Info- ja kommunikatsioonitehnoloogia doktorikooli IKTDK neljanda aastakonverentsi artiklite kogumik : 26.-27. novembril 2010, Essu mõis 2010 / lk. 11-14 : ill

**Towards industrialization of FOPID controllers : a survey on milestones of fractional-order control and pathways for future developments**

**Tepljakov, Aleksei**; Alagoz, Baris Baykant; Yeroglu, Celaledin; Gonzalez, Emmanuel A.; HosseinNia, Hassan; **Petlenkov, Eduard**; Ates, Abdullah; Cech, Martin IEEE Access 2021 / p. 21016-21042 <https://doi.org/10.1109/ACCESS.2021.3055117> [Journal metrics at](#)

[Scopus Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Transferal skills in applied artificial intelligence : the case of financial sector**

Porjazoska Kujundziski, Aleksandra; Domazet, Ervin; Kamberaj, Hiqmet; Rahmani, Damir; Feta, Amra; **Petlenkov, Eduard**; **Vassiljeva, Kristina**; Štajduhar, Ivan; Hagen, Tobias MIC2023 . Management International Conference. Toward Green, Inclusive, and Digital Growth, Trieste, Italy • 7–10 June 2023. Abstracts of the Joint International Conference 2023 / p. 24 <https://doi.org/10.26493/978-961-293-234-3>

### **TTÜ aastal 2020 : töögrupi visioon**

**Aav, Riina**; **Ellmann, Artu**; **Karilaid, Ivo**; **Kattel, Rainer**; **Lõugas, Tiina**; **Petlenkov, Eduard**; **Veinthal, Renno**; **Valgma, Ingo** Mente et Manu 2009 / 16. veebr., lk. 3 : fot [https://www.ester.ee/record=b1242496\\*est](https://www.ester.ee/record=b1242496*est)

### **Tuning and digital implementation of a fractional-order PD controller for a position servo**

**Tepljakov, Aleksei**; **Petlenkov, Eduard**; **Belikov, Juri**; **Astapov, Sergei** International journal of microelectronics and computer science 2013 / p. 116-123 : ill

### **Uses of the digital twins concept for energy services, intelligent recommendation systems, and demand side management : a review**

**Onile, Abiodun Emmanuel**; Machlev, Ram; **Petlenkov, Eduard**; Levron, Yoash; **Belikov, Juri** Energy reports 2021 / p. 997–1015 <https://doi.org/10.1016/j.egy.2021.01.090> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Uus magistrikava avab lõpetajatele ukse nutikasse maailma tarkadest majadest rohepöördeni**

postimees.ee 2023 [Uus magistrikava avab lõpetajatele ukse nutikasse maailma tarkadest majadest rohepöördeni](#) [TalTech avab elektroonikainseneridele suunatud magistrikava](#)

### **Virtuaalreaalsus võib peagi väikeettevõtetele kättesaadavamaks muutuda**

Oidermaa, Jaan-Juhan novaator.err.ee 2023 [Virtuaalreaalsus võib peagi väikeettevõtetele kättesaadavamaks muutuda](#)

### **Virtual inertia control methods in islanded microgrids**

**Škiparev, Vjatšeslav**; Machlev, Ram; Chowdhury, Nilanjan Roy; Levron, Yoash; **Petlenkov, Eduard**; **Belikov, Juri** Energies 2021 / art. 1562, 20 p. : ill <https://doi.org/10.3390/en14061562> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Virtual inertia control of isolated microgrids using an NN-based VFOPID controller**

**Škiparev, Vjatšeslav**; Nosrati, Komeil; **Tepljakov, Aleksei**; **Petlenkov, Eduard**; Levron, Yoash; **Belikov, Juri**; Guerrero, Joseph M. IEEE Transactions on sustainable energy 2023 / p. 1558-1568 <https://doi.org/10.1109/TSTE.2023.3237922> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Virtual inertia control of microgrids using deep reinforcement learning methods = Mikrovõrkude virtuaalse inertsiooni juhtimine sügava stiimulõppe meetoditega**

**Škiparev, Vjatšeslav** 2023 <https://doi.org/10.23658/taltech.37/2023> <https://digikogu.taltech.ee/et/Item/6d924a63-2390-4324-bf1c-00b24111605e> [https://www.ester.ee/record=b5571224\\*est](https://www.ester.ee/record=b5571224*est)

### **Virtual reality meets intelligence in large scale architecture**

**Köse, Ahmet**; **Petlenkov, Eduard**; **Tepljakov, Aleksei**; **Vassiljeva, Kristina** Augmented Reality, Virtual Reality, and Computer Graphics : 4th International Conference, AVR 2017, Ugento, Italy, June 12-15, 2017 : proceedings. Part II 2017 / p. 297-309 : ill [https://doi.org/10.1007/978-3-319-60928-7\\_26](https://doi.org/10.1007/978-3-319-60928-7_26) [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Искусственный интеллект в решении задач зеленого поворота**

**Petlenkov, Eduard**; **Belikov, Juri** RUP. Финансово-правовой журнал 2023 / с. 3-7 [https://www.ester.ee/record=b5550868\\*est](https://www.ester.ee/record=b5550868*est)

### **Профессор: в ИИ я вижу перспективу развития для многих**

**Petlenkov, Eduard** Stolitsa.ee 2023 [Профессор: в ИИ я вижу перспективу развития для многих](#)

### **Профессор: в ИИ я вижу перспективу развития для многих**

**Petlenkov, Eduard** Stolitsa.ee 2023 [Профессор: в ИИ я вижу перспективу развития для многих](#)

### **Школьников и студентов в Эстонии устно будут спрашивать чаще**

Grebneva, N. rus.postimees.ee 2023 [Школьников и студентов в Эстонии устно будут спрашивать чаще](#)