

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> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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

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

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

Petlenkov, Eduard; Nõmm, 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 Kani, Seyed 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

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

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia Kani, Seyed 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 [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> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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; Nömm, 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 [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, Vjatseslav; 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 (RTUCon), Riga, Latvia, October 9-10, 2023 : conference proceedings 2023 / 4 p
<https://doi.org/10.1109/RTUCon60080.2023.10413180>

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, Vjatseslav; 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>

Damping Optimization in Locally Resonant Metastructures via Hybrid GA-PSO Algorithms and Modal Analysis

Alimohammadi, Hossein; Vassiljeva, Kristina; Hosseinia Kani, Seyed Hassan; Ellervee, Peeter; Petlenkov, Eduard ASME 2024 Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS2024) : September 9–11, 2024, Atlanta, Georgia, USA : proceedings 2024 / Paper No: SMASIS2024-137019 ; 8 p <https://doi.org/10.1115/SMASIS2024-137019>

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

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> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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>

Deep learning for radar-based object detection in unmanned ground vehicles

Ersü, Can; Petlenkov, Eduard; Janson, Karl Future Frontiers : PhD Conference on Emerging Technologies : Book of Abstracts 2025 / p. 8 : oral 33 https://tuit.ut.ee/sites/default/files/2025-05/PhD%20Conference%202025%20Book%20of%20Abstracts_pub3.pdf

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

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; Hermann, 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, Malgorzata 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://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

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 Nourollahi; 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, Vjatseslav; 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 Kani, Seyed 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

Nõmm, 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; Nõmm, 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

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 [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 Kani, Seyed 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 Kani, Seyed 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, Vjatsjeslav; 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

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

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

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

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](#)

From data to stability: a novel approach for controlling unknown linear time-invariant systems with performance enhancement

Ghorbani, Majid; Nosrati, Komeil; Tepljakov, Aleksei; Petlenkov, Eduard Journal of Computational Applied Mechanics 2024 / p. 451-461 <https://doi.org/10.22059/JCAMECH.2024.368986.913> [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 p <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©ownerid=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

Genetic programming based identification of an industrial process

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

Graphical tuning for robust stabilization : implementable stability regions for fractional-order proportional integral controllers in interval fractional-order systems

Ghorbani, Majid; Farnam, Arash; Tepljakov, Aleksei; Petlenkov, Eduard; Crevecoeur, Guillaume; Eskandarian, Azim 2024 IEEE 63rd Conference on Decision and Control (CDC) 2024 / p. 8902 - 8907 <https://doi.org/10.1109/CDC56724.2024.10885794> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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

Tepljakov, 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 Kani, Seyed 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

Nõmm, 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 kaugeires laser-induced-fluorescence-meetodi põhjal

Sobolev, Innokenti 2014

Identification of industrial water boiler for model predictive control of district heat plant

Vansovitš, 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.eester.ee/record=b2150914*est

IKTDK interdistsiplinaarsetest projektidest

Petlenkov, Eduard A & A 2011 / lk. 38-43 https://artiklid.elnet.ee/record=b2472218*est

Image encryption using fractional singular chaotic systems : an extended Kalman filtering approach

Nosrati, Komeil; Belikov, Juri; Tepljakov, 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; Tepljakov, Aleksei; Loo, Lauri 2022 45th International Conference on Telecommunications and Signal Processing, TSP 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

Tepljakov, 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 lineaarseite 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

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

Info- ja kommunikatsioonitehnoloogia doktorikoolist

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

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

Onile, Abiodun Emmanuel 2024 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, Vjatseslav; 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 [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 <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]

LQG problem of descriptor systems and separation principle

Nosrati, Komeil; Belikov, Juri; Tepljakov, Aleksei; Petlenkov, Eduard 2024 IEEE 63rd Conference on Decision and Control (CDC) 2024 / p. 1412 - 1417 <https://doi.org/10.1109/CDC56724.2024.10886178> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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>

Managing energy consumption of linear delta robots using neural network models

Vodovozov, Valery; Lehtla, Madis; Raud, Zoja; Semjonova, Natalia; Petlenkov, Eduard Energies 2024 / art. 4081 <https://doi.org/10.3390/en17164081> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Škiparev, 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 <https://doi.org/10.1109/LCSYS.2024.3448310> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Vansovits, 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; Vansovits, 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

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

Alagoz, Baris Baykant; **Tepljakov, Aleksei; Petlenkov, Eduard; Yeroglu, Celaledin** 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

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/reepqj19.291> [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; Nõmm, 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.eester.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

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
<https://doi.org/10.1080/18756891.2015.1001950> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Škiparev, Vjatšeslav; 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; Hosseinia Kani, Seyed 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](#)

Noored insenerid digitaalsetes kaksikutes

Vaaks, Eveliis Trialoog 2025 <https://trialoog.taltech.ee/noored-insenerid-digitaalsetes-kaksikutes/>

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

Petlenkov, Eduard; Jutman, Artur; Nõmm, 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; Nõmm, 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; **Tepļakov, Aleksei**; Yeroglu, Celaeddin; Gonzalez, Emmanuel A.; Hosseinia, 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; Hosseinia Kani, Seyed 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 juhtimisüsteemides

Belikov, Juri 2012 http://www.eester.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 Nouroollahi; 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 Nouroollahi; 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; Tepļakov, 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](#)

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

Alsaleh, Saleh Ragheb Saleh; Tepļakov, 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, Vjatseslav; 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, Vjatseslav; 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 stabilization of interval fractional-order plants with an interval time delay by fractional-order proportional integral derivative controllers

Ghorbani, Majid; Tepljakov, Aleksei; Petlenkov, Eduard IET Control Theory and Applications 2024 / p. 614-625 <https://doi.org/10.1049/cth2.12594> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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 [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 [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.eester.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 Kani, Seyed 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; Tækker, 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

Tehisintellektide pealetung: kas inimkond peaks kartma või rõõmustama?

Einama, Kaido Postimees 2023 / Lk. 11 <https://dea.digar.ee/article/ak/2023/02/11/7.1>

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

Alagoz, Baris Baykant; Tepljakov, Aleksei; Petlenkov, Eduard; Yeroglu, Celaleddin 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, Celaleddin 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 CIMSA 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 [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 [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 = Dünaamilised mudelid virtuaalsetes keskkondades ja kasutajakogemuste hindamine

Köse, Ahmet 2020 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, Celaeddin; Gonzalez, Emmanuel A.; Hosseinia Kani, Seyed 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](#)

Transferral 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

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.egyr.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, Vjatseslav; 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, Vjatseslav; 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 inertsijuhimine sügava stiimulõppe meetoditega

Škiparev, Vjatseslav 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

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 [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

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](#)