

Advanced control of district heating processes in Estonia = Keskkütte soojuste tootmisprotsesside juhtimine

Vansovitš, Vitali 2018 <https://digi.lib.ttu.ee/ii/?10628> https://www.eester.ee/record=b5151484*est

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 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

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

Vassiljeva, Kristina; Petlenkov, Eduard; Vansovitš, 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

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](#)

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

Vansovitš, 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](#)

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](#)

Computational intelligence approach for estimation of vehicle insurance risk level

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

Computational intelligence methods based design of closed-loop system

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

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

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia 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 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](#)

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>

Development of anti-lock braking system (ABS) for vehicles braking

Vu, Trieu Minh; Oamen, Godwin; Vassiljeva, Kristina; Teder, Leo Open engineering 2016 / p. 554-559 : ill <https://doi.org/10.1515/eng-2016-0078> [Journal metrics at Scopus](#) [Article at scopus](#)

Dynamics Modeling and Optimization of Locally Resonant Metastructures for Vibration Suppression and Energy Harvesting = Dünaamiline modelleerimine ja optimeerimine kohalikult resonantsete metastruktuuride jaoks vibratsiooni summutamiseks ja energia kogumiseks

Alimohammadi, Hossein 2025 https://www.ester.ee/record=b5767448*est <https://digikogu.taltech.ee/et/Item/06e0647d-9b4e-4151-a6e6-364daf9a2937> <https://doi.org/10.23658/taltech.79/2025>

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>

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

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia 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](#)

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>

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

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](#)

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>

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

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](#)

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>

Human limb model structure optimization with genetic algorithm

Nõmm, Sven; Vassiljeva, Kristina; Kuusik, Alar EMS2013 : UKSim-AMSS 7th European Modelling Symposium, 20-22 November 2013, Manchester, United Kingdom : [proceedings] 2013 / p. 124-129

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

Model-based control design for a district heating plant

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

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 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 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>

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

Vassiljeva, Kristina; Tepljakov, 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>

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

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia 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](#)

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

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

On-line identification and adaptive control of nonlinear systems using neural networks

Vassiljeva, Kristina; Rüstern, Ennu BEC 2004 : proceedings of the 9th Biennial Baltic Electronics Conference : October 3-6, 2004, Tallinn, Estonia 2004 / p. 149-152 : ill

Pavement distress detection with deep learning using the orthoframes acquired by a mobile mapping system

Riid, Andri; Lõuk, Roland; Pihlak, Rene; Tepljakov, Aleksei; Vassiljeva, Kristina Applied sciences 2019 / art. 4829, 22 p. : ill
<https://doi.org/10.3390/app9224829> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

Alimohammadi, Hossein; Vassiljeva, Kristina; HosseinNia 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](#)

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>

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>

Restricted connectivity neural networks based identification for control = Piiratud ühenduvusega tehisnärvivõrkudel

põhinev identifitseerimine juhtimiseks
Vassiljeva, Kristina 2012

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

Stability analysis and energy harvesting in lumped parameter systems with internally coupled resonators

Alimohammadi, Hossein; Vassiljeva, Kristina; Hosseinia 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-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>

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>

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 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

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

Porjazoska Kujundziskij, 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>

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](#)