

### **A neutral network based identification for complex non-linear systems**

**Vaarmann, Otu** Proceedings of the 3rd International Conference on Applied Operational Research, 24-26 August 2011, Istanbul, Turkey 2011 / p. 39-46

### **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 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>

### **Aerial imagery terrain classification for long-range autonomous navigation**

**Hudjakov, Robert; Tamre, Mart** Proceedings of International Symposium on Optomechatronic Technologies : ISOT 2009 2009 / p. 88-91 <https://ieeexplore.ieee.org/document/5326104>

### **Aerial imagery terrain classification for long-range autonomous navigation**

**Hudjakov, Robert; Tamre, Mart** Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [I] 2010 / p. 530-535 : ill

### **American Sign Language Character Recognition using Convolutional Neural Networks**

**Abdullah, Atesam; Ali, Nisar; Ali, Raja Hashim; Abideen, Zain Ul; Ijaz, Ali Zeeshan; Bais, Abdul** 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE) : Regina, SK, Canada, 24-27 September 2023 2023 / p. 165-169 <https://doi.org/10.1109/CCECE58730.2023.10288799>

### **An enhanced situational awareness of a mission for an autonomous vehicle by multirate control**

**Astrov, Igor; Pedai, Andrus** Proceedings of the 5th WSEAS International Conference on Dynamical Systems and Control : CONTROL'09 : La Laguna, Spain, July 1-3, 2009 2009 / p. 33-39 [https://www.researchgate.net/publication/228809791\\_An\\_enhanced\\_situational\\_awareness\\_of\\_a\\_mission\\_for\\_an\\_autonomous\\_underwater\\_vehicle\\_by\\_multirate\\_control](https://www.researchgate.net/publication/228809791_An_enhanced_situational_awareness_of_a_mission_for_an_autonomous_underwater_vehicle_by_multirate_control)

### **An integrated decision support system for the resilience assessment of eastern Baltic Sea coasts**

**Barzehkar, Mojtaba; Parnell, Kevin Ellis; Soomere, Tarmo** CoastGIS 2021 : Sustainable Coastal Management in a Changing World : conference proceedings 2021 / p. 12 <https://www.novia.fi/assets/Projectsites/CoastGIS/CoastGIS-2021-Book-of-Abstracts.pdf>

### **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>

### **Applications of artificial neural networks (ANN) to machining process planning**

**Wang, Kesheng; Lei, Bing; Papstel, Jüri** International DAAAM : [DAAAM National Estonia] : proceedings of the 1st International Conference, 25-27th September 1997, Tallinn, Estonia 1997 / p. 95-100: ill

### **Artificial neural networks and evolutionary algorithms in engineering design**

**Velsker, Tarmo; Majak, Jüri; Pohlak, Meelis; Eerme, Martin; Karjust, Kristo** Journal of achievements in materials and manufacturing engineering 2011 / p. 88-95 : ill

### **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 asphalt pavement crack detection and classification using neural networks**

**Saar, Tõnis; Talvik, Ott** 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. 345-348 : ill

### **The bearing faults detection methods for electrical machines — the state of the art**

**Khan, Muhammad Amir; Asad, Bilal; Kudelina, Karolina; Vaimann, Toomas; Kallaste, Ants** Energies 2023 / art. 296 <https://doi.org/10.3390/en16010296>

### **Challenges in using neural networks in safety-critical applications**

**Forsberg, H.; Linden, Jan; Hjorth, J.; Manefjord, T.; Daneshtalab, Masoud** AIAA/IEEE Digital Avionics Systems Conference - Proceedings, 2020 AIAA/IEEE 39th Digital Avionics Systems Conference (DASC), Virtual Conference, October 11-16, 2020 :

**Comment on "Solitons in the Heimburg-Jackson model of sound propagation in lipid bilayers are enabled by dispersion of a stiff membrane" by M. Drab et al.**

**Peets, Tanel; Tamm, Kert; Engelbrecht, Jüri** The European physical journal E 2023 / art. 34 <https://doi.org/10.1140/epje/s10189-023-00299-2>

**Composing graph theory and deep neural networks to evaluate SEU type soft error effects**

**Balakrishnan, Aneesh;** Lange, Thomas; Glorieux, Maximilien; Alexandrescu, Dan; **Jenihhin, Maksim** 9th Mediterranean Conference on Embedded Computing (MECO'2020), Budva, Montenegro, 8-11 June 2020 2020 <https://doi.org/10.1109/MECO49872.2020.9134279>

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

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

**Custom simplified machine learning algorithms for fault diagnosis in electrical machines**

**Raja, Hadi Ashraf; Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton;** Belahcen, Anouar Diagnostika '22 : 2022 International Conference on Diagnostics in Electrical Engineering : Conference proceedings 2022 / 4 p. <https://doi.org/10.1109/Diagnostika55131.2022.9905174>

**DeepAxe : a framework for exploration of approximation and reliability trade-offs in DNN accelerators**

**Taheri, Mahdi;** Riazati, Mohamad; **Ahmadilivani, Mohammad Hasan; Jenihhin, Maksim; Daneshtalab, Masoud; Raik, Jaan;** Sjödin, Mikael; Lisper, Björn arXiv.org 2023 / 8 p. : ill <https://doi.org/10.48550/arXiv.2303.0822>

**DeepFlexiHLS : Deep Neural Network Flexible High-Level Synthesis Directive Generator**

Riazati, Mohammad; **Daneshtalab, Masoud;** Sjödin, Mikael; Lisper, Björn Riazati, M.; Daneshtalab, M.; Sjödin, M.; Lisper, B. 2022 / p. 1-6 <https://doi.org/10.1109/NorCAS57515.2022.9934617>

**DeepHLS: A complete toolchain for automatic synthesis of deep neural networks to FPGA**

**Riazati, Mohammad; Daneshtalab, Masoud;** Sjödin, Mikael; Lisper, Björn ICECS 2020 - 27th IEEE International Conference on Electronics, Circuits and Systems, November 23-25, 2020, Virtual Conference : Proceedings 2020 / 4 p <https://doi.org/10.1109/ICECS49266.2020.9294881>

**DenseDisp: Resource-Aware Disparity Map Estimation by Compressing Siamese Neural Architecture**

Loni, Mohammad; Zoljodi, Ali; Maier, Daniel; Majd, Amin; **Daneshtalab, Masoud;** Sjödin, Mikael; Juurlink, Ben H.H.; Akbari, Reza 2020 IEEE Congress on Evolutionary Computation (CEC) : Conference proceedings 2020 / 8 p <https://doi.org/10.1109/CEC48606.2020.9185611>

**Design of performance characteristics on laser treated denim fabric**

**Mandre, Nele; Plamus, Tiia; Linder, Angelika; Varjas, Toivo; Majak, Jüri; Krumme, Andres** The materials science = Medžiagotyra 2023 / 10 p. : ill <https://doi.org/10.5755/j02.ms.33259>

**Early detection of network attacks using deep learning**

Ahmad, Tanwir; Truscan, Dragos; **Vain, Jüri;** Porres, Ivan 2022 IEEE 15th International Conference on Software Testing, Verification and Validation Workshops : ICSTW 2022, 4–13 April 2022, Virtual Event : proceedings 2022 / p. 30-39 <https://doi.org/10.1109/ICSTW55395.2022.00020> <https://arxiv.org/pdf/2201.11628.pdf>

**ECG classification with event-driven sampling**

Saeed, Maryam; **Märtens, Olev;** Larras, Benoit; Frappe, Antoine; John, Deepu; Cardiff, Barry IEEE Access 2024 / p. 25188-25199 <https://doi.org/10.1109/ACCESS.2024.3364115>

**An efficient analog convolutional neural network hardware accelerator enabled by a novel memoryless architecture for insect-sized robots**

Dadras, Iman; **Ahmadilivani, Mohammad Hasan;** Banerji, Saoni; **Raik, Jaan;** Abloo, Alvo 2022 11th International Conference on Modern Circuits and Systems Technologies (MOCAST) : Bremen, Germany : 08-10 June 2022 2022 / p. 1-6 <https://doi.org/10.1109/MOCAST54814.2022.9837551>

**Efficient fixed-switching modulated finite control set-model predictive control based on artificial neural networks**

**Bakeer, Abualkasim;** Alhasheem, Mohammed; Peyghami, Saeed Applied Sciences (Switzerland) 2022 / art. 3134 <https://doi.org/10.3390/app12063134> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Efficient on-device transfer learning using activation memory reduction**

Yoosefi, Amin; Mousavi, Hamid; **Daneshtalab, Masoud;** Kargahi, Mehdi 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 210-215 <https://doi.org/10.1109/FMEC59375.2023.10306182>

### **Enhanced decision mechanism for RAN subslicing in management closed control loop**

**Kulmar, Marika; Mürsepp, Ivo; Alam, Muhammad Mahtab** 2023 Eighth International Conference on Fog and Mobile Edge Computing (FMEC) 2023 / p. 175-181 : ill <https://doi.org/10.1109/FMEC59375.2023.10306223>

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

**Škiparev, Vjatšeslav; Nosrati, Komeil; Belikov, Juri; Tepļakov, 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 situational awareness through multirate control of an autonomous underwater vehicle**

**Astrov, Igor; Pedai, Andrus; Rüstern, Ennu** Proceedings of the 2009 IEEE International Conference on Mechatronics and Automation : August 9-12, Changchun, China 2009 / p. 1184-1189 : ill <https://ieeexplore.ieee.org/document/5246459?reload=true&arnumber=5246459>

### **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](#)

### **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](#)

### **Event-driven ECG classification using an open-source, LC-ADC based non-uniformly sampled dataset**

Saeed, Maryam; Wang, Qingyuan; **Märtens, Olev**; Larras, Benoit; Frappe, Antoine; Cardiff, Barry; John, Deepu 2021 IEEE International Symposium on Circuits and Systems (ISCAS), Daegu, Korea May 22-28, 2021 : proceedings 2021 / 5 p <https://doi.org/10.1109/ISCAS51556.2021.9401333> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Event-driven ECG classification using functional approximation and Chebyshev polynomials**

Saeed, Maryam; **Märtens, Olev**; Larras, Benoit; Frappe, Antoine; John, Deepu; Cardiff, Barry 2022 IEEE Biomedical Circuits and Systems Conference (BioCAS), 13-15 Oct. 2022 2022 / p. 595-599 <https://doi.org/10.1109/BioCAS54905.2022.9948612>

### **Experimental evaluation and numerical modelling of the quality of photovoltaic modules**

**Tšukrejev, Pavel; Karjust, Kristo; Majak, Jüri** Proceedings of the Estonian Academy of Sciences 2021 / p. 477-483 : ill <https://doi.org/10.3176/proc.2021.4.15> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Experimental measurements and numerical modelling of additively manufactured Fe-Si cores**

Stella, Marco; Faba, Antonio; Fulginei, F. Riganti; Quercio, Michele; Scorretti, Riccardo; Bertolini, Vittorio; Sabino, Luis Gustavo; **Tiismus, Hans; Kallaste, Ants**; Cardelli, Ermanno Journal of magnetism and magnetic materials 2024 / art. 171752 <https://doi.org/10.1016/j.jmmm.2024.171752>

### **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

### **Explainable Artificial Intelligence (XAI) techniques for energy and power systems: Review, challenges and opportunities**

Machlev, Ram; Heistrene, L.; Perl, M.; Levy, K. Y.; **Belikov, Juri**; Mannor, S.; Levron, Yoash Energy and AI 2022 / art. 100169, 13 p. : ill <https://doi.org/10.1016/j.egyai.2022.100169> [Journal metrics at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Exploratory data analysis based short-term electrical load forecasting : a comprehensive analysis**

Javed, Umar; Ijaz, Khalid; **Shabbir, Noman; Kütt, Lauri; Husev, Oleksandr** Energies 2021 / art. 5510 <https://doi.org/10.3390/en14175510> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **FaCT-LSTM : fast and compact ternary architecture for LSTM recurrent neural networks**

Mirsalari, Seyed Ahmad; Nazari, Najmeh; Sinaei, Sima; Salehi, Mostafa E.; **Daneshtalab, Masoud** IEEE design & test 2022 / p. 45-53 <https://doi.org/10.1109/MDAT.2021.3070245>

### **Fault detection and predictive maintenance of electrical machines : perspective chapter**

**Raja, Hadi Ashraf; Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas** New Trends in Electric Machines - Technology and Applications 2022 <https://doi.org/10.5772/intechopen.107167>

### **FedBranched : leveraging federated learning for anomaly-aware load forecasting in energy networks**

Manzoor, Habib Ullah; Khan, Ahsan Raza; Flynn, David; **Alam, Muhammad Mahtab**; Akram, Muhammad; Imran, Muhammad Ali; Zoha, Ahmed Sensors 2023 / art. 3570 <https://doi.org/10.3390/s23073570>

### **Fingerprint recognition for distorted image applications using three-rate hybrid Kohonen neural network**

**Astrov, Igor**; Tatarly, Sergei; Tatarly, Svetlana; **Rüstern, Ennu** Mathematical Methods and Computational Techniques in Research

and Education : 7th WSEAS International Conference on Wavelet Analysis and Multirate Systems (WAMUS'07) : Arcachon, France, October 13-15, 2007 2007 / p. 122-126 <https://dl.acm.org/doi/abs/10.5555/1974885.1974887>

### **Forecasting of wind speed and power through FFNN and CFNN using HPSOBA and MHPSO-BAACs techniques**

Ellahi, Manzoor; Usman, Muhammad Rehan; Arif, Waqas; Usman, Hafiz Fuad; Khan, Waheed A.; Satrya, Gandeve Bayu; **Daniel, Kamran; Shabbir, Noman** Electronics 2022 / art. 4193 <https://doi.org/10.3390/electronics11244193> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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>

### **Generative adversarial network and CNN-LSTM based short-term power load forecasting**

Liu, Y.; Liang, Z.; Li, X.; **Bakeer, Abualkasim Ahmed Ali** 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227473>

### **Hardware Trojans for confidence reduction and misclassifications on neural networks**

Grailoo, Mahdieh; **Leier, Mairo; Pagliarini, Samuel Nascimento** Proceedings Of The Twenty Third International Symposium On Quality Electronic Design (ISQED 2022) 2022 / art. 180541, p. 230-235 <https://doi.org/10.1109/ISQED54688.2022.9806246>

### **Hierarhilis-temporaalse mälu printsiip**

**Tammemäe, Kalle A & A** 2007 / 3, lk. 9-19 : ill [https://artiklid.elnet.ee/record=b1020789\\*est](https://artiklid.elnet.ee/record=b1020789*est)

### **Infotehnoloogia. Sõnastik. Osa 34, Intellektitehnika. Neurovõrgud**

Hanson, Vello; Tavast, Arvi; **Kalja, Ahto; Võhandu, Leo** 2001 [https://www.ester.ee/record=b1536069\\*est](https://www.ester.ee/record=b1536069*est)

### **Intellekt on võime ennustada**

**Kirt, Toomas** Horisont 2006 / 3, lk. 40-43 : ill <https://cs.ioc.ee/excs/popular/kirt-horisont306.pdf>

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

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

### **JÄNES : a NAS framework for ML-based EDA applications**

**Selg, Hardi; Jenihhin, Maksim; Ellervee, Peeter** IEEE International Symposium on Defect and Fault Tolerance in VLSI Systems 2021 <https://doi.org/10.1109/DFT52944.2021.9568321>

### **Learning process at development of intelligent environment for computer-aided design using case-base reasoning**

**Portjanski, Leonid; Nekrassov, Grigori** Annals of DAAAM for 2005 & proceedings of the 16th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Young Researches and Scientists" : 19-22nd October 2005, Opatija, Croatia 2005 / p. 313-314 : ill <https://go.gale.com/ps/i.do?id=GALE%7CA176688403&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=17269679&p=AONE&sw=w&userGroupName=anon%7Ed03ee73c&aty=open-web-entry>

### **Low-quality fingerprint recognition using three-rate hybrid Kohonen neural network [Electronic resource]**

**Astrov, Igor; Tatarly, Sergei; Tatarly, Svetlana; Rüstern, Ennu** Proceedings of the 6th International Conference on Information, Communications and Signal Processing : ICICS 2007 : Singapore, December 10-13, 2007 2007 / [5] p. [CD-ROM] <https://ieeexplore.ieee.org/document/4449586>

### **Machine learning and deep learning techniques for residential load forecasting : a comparative analysis**

**Shabbir, Noman; Kütt, Lauri; Raja, Hadi Ashraf; Ahmadiyahangar, Roya; Rosin, Argo; Husev, Oleksandr** 2021 IEEE 62nd International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON): conference proceedings 2021 / p. 1-5 <https://doi.org/10.1109/RTUCON53541.2021.9711741>

### **Matrix Profile based anomaly detection in streaming gait data for fall prevention**

Gerazov, Branislav; Hadjieva, Elena; **Krivošei, Andrei; Sanchez, Fiorella Ines Soto; Rostovski, Jakob; Kuusik, Alar; Alam, Muhammad Mahtab** 2023 30th International Conference on Systems, Signals and Image Processing (IWSSIP) 2023 / p. 1-5 <https://doi.org/10.1109/IWSSIP58668.2023.10180243>

### **Microgrid oriented modeling of space heating system based on neural networks**

**Häring, Tobias; Kull, Tuule Mall; Ahmadiyahangar, Roya; Rosin, Argo; Thalfeldt, Martin; Biechl, Helmuth** Journal of building engineering 2021 / art. 103150, 12 p. : ill <https://doi.org/10.1016/j.jobbe.2021.103150> [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 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>

**Multirate depth control of an AUV by neural network model reference controller for enhanced situational awareness**

**Astrov, Igor; Gordon, Boris** Recent researches in applied information science : proceedings of the 5th WSEAS World Congress on Applied Computing Conference (ACC '12) : proceedings of the 1st International Conference on Biologically Inspired Computation (BIC '12) : University of Algarve, Faro, Portugal, May 2-4, 2012 2012 / p. 32-37 : ill <http://www.wseas.us/e-library/conferences/2012/Algarve/BICA/BICA-04.pdf>

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

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

**Neural network control of vehicles : modeling and simulation**

**Astrov, Igor** 2022 <https://doi.org/10.52305/GXGD6357> [https://www.eester.ee/record=b5642329\\*est](https://www.eester.ee/record=b5642329*est)

**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 as the tool of knowledge extraction for fixture design**

**Portjanski, Leonid; Nekrassov, Grigori** Annals of DAAAM for 2006 & proceedings of the 17th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Mechatronics and Robotics" : 8-11th November 2006, Vienna, Austria 2006 / p. 315-316

**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 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 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

**Neural networks based system for the supervision of therapeutic exercises**

**Nõmm, Sven; Kuusik, Alar; Ovsjanski, Sergei; Malmberg, Ines; Parve, Marko;** Orunurm, Lii Neural information processing : 19th International Conference, ICONIP 2012, Doha, Qatar, November 12-15, 2012 : proceedings. Part IV 2012 / p. 364-371 : ill [https://link.springer.com/chapter/10.1007/978-3-642-34478-7\\_45](https://link.springer.com/chapter/10.1007/978-3-642-34478-7_45)

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

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

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

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

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

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

### **Noisy voice pattern recognition by three-rate hybrid neural network**

**Astrov, Igor;** Tatarly, S.; Tatarly, S. Advances in electrical and computer engineering 2006 / 2, p. 35-38  
<https://aece.ro/abstractplus.php?year=2006&number=2&article=7>

### **Novel Neural Network accelerator architectures for FPGAs = Uudsed närvivõrkude kiirendite arhitektuurid FPGAdele**

**Kerner, Madis** 2024 [https://www.eester.ee/record=b5675484\\*est](https://www.eester.ee/record=b5675484*est) <https://digikogu.taltech.ee/et/Item/3568fe35-19c3-43e6-9525-73c79371ab13>  
<https://doi.org/10.23658/taltech.16/2024>

### **On antagonism between side-channel security and soft-error reliability in BNN inference engines**

**Lai, Xinhui;** Lange, Thomas; **Balakrishnan, Aneesh;** Alexandrescu, Dan; **Jenihhin, Maksim** IFIP/IEEE 29th International Conference on Very Large Scale Integration (VLSI-SoC) 2021 / p. 1-6 <https://doi.org/10.1109/VLSI-SoC53125.2021.9606981>

### **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

### **Optimal tuning of fractional order sliding mode controller for PMSM speed using neural network with reinforcement learning**

**Zahraoui, Younes;** Zaihidee, Fardila M.; Kermadi, Mostefa; Mekhilef, Saad; Alhamrouni, Ibrahim; Seyedmahmoudian, Mehdi; Stojcevski, Alex Energies 2023 / art. 4353 <https://doi.org/10.3390/en16114353>

### **Optimization of car frontal protection system**

**Pohlak, Meelis; Majak, Jüri; Eerme, Martin** International journal for simulation and multidisciplinary design optimization 2007 / p. 31-37 [https://www.researchgate.net/publication/245491476\\_Optimization\\_of\\_car\\_frontal\\_protection\\_system](https://www.researchgate.net/publication/245491476_Optimization_of_car_frontal_protection_system)

### **PF-FEDG : an open-source data generator for frequency disturbance event detection with deep-learning reference classifiers**

Sun, Zhenglong; Ram, Machlev; Jiang, Chao; Wang, Qianchao; Michael, Perl; **Belikov, Juri;** Yoash, Levron Energy reports 2023 / p. 397-413 <https://doi.org/10.1016/j.egyrs.2022.11.182>

### **Preventing distillation-based attacks on Neural Network IP**

**Grailoo, Mahdiah; Abideen, Zain Ul; Leier, Mairo; Pagliarini, Samuel Nascimento** arXiv.org 2022 / 7 p. : ill  
<https://doi.org/10.48550/arXiv.2204.00292>

### **Processing of blurred image by the two-rate hybrid Kohonen neural network**

**Astrov, Igor;** Tatarlõ, Svetlana; **Rüstern, Ennu** Proceedings of 2nd IASTED International Multi-Conference on Automation, Control, and Information Technology - Signal and Image Processing 2005 / p. 30-35

### **Processing of distorted fingerprints with use of three-rate hybrid kohonen neural networks**

**Astrov, Igor;** Tatarly, S.; Tatarly, S.; **Rüstern, Ennu** Proceedings of the 8th International Conference on Signal Processing : ICSP'06 : Guilin, China, November 16-20, 2006 2006 / p. 2383-2386 <https://ieeexplore.ieee.org/document/4129338>

### **Processing of distorted fingerprints with use of three-rate hybrid kohonen neural networks [Electronic resource]**

**Astrov, Igor;** Tatarly, S.; Tatarly, S.; **Rüstern, Ennu** Proceedings of the 8th International Conference on Signal Processing : ICSP'06 : Guilin, China, November 16-20, 2006 2006 / [4] p. [CD-ROM] <https://ieeexplore.ieee.org/document/4129338>

### **Processing of two-dimensional data with use of two-rate Kohonen's neural networks [Electronic resource]**

**Astrov, Igor;** Tatarlõ, Svetlana; **Rüstern, Ennu** IEEE Canadian Conference on Electrical and Computer Engineering 2005 / p. 949-952 [CD-ROM] <https://ieeexplore.ieee.org/document/1557133>

### **Prototyping of a machine learning based auxiliary neurostimulation system**

**Grigorjev, Nikolai; Le Moullec, Yannick; Kuusik, Alar** 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 l.  
<https://doi.org/10.1109/BEC56180.2022.9935607>

### **QSAR study of pharmacological permeabilities**

**Karelson, Mati; Karelson, Gunnar;** Tamm, Tarmo; Tulp, Indrek; Jänes, Jaak; Tamm, Kaido; **Lomaka, Andre; Savtšenko, Deniss;** **Dobchev, Dimitar** Arkivoc 2009 / 2, p. 218-238 : ill <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=04010557f978e40f8e33b61f9570340690f7940e>

### **QSPR modeling of flash points : an update**

Katritzky, Alan R.; Stoyanova-Slavova, Iva B.; **Dobchev, Dimitar; Karelson, Mati** Journal of molecular graphics and modelling 2007 / 2, p. 529-536 : ill <https://www.sciencedirect.com/science/article/pii/S1093326307000617>

### **QSPR modeling of UV absorption intensities**

Katritzky, Alan R.; Slavov, Svetoslav; **Dobchev, Dimitar; Karelson, Mati** Journal of computer-aided molecular design 2007 / 7, p. 371-377 [https://www.researchgate.net/publication/6272883\\_QSPR\\_modeling\\_of\\_UV\\_absorption\\_intensities](https://www.researchgate.net/publication/6272883_QSPR_modeling_of_UV_absorption_intensities)

### **Qualitative detection of illegal drugs (cocaine, heroin and MDMA) in seized street samples based on SFS data and ANN : validation of method**

**Mazina, Jekaterina; Aleksejev, Valeri; Mkina, Tatjana; Kaljurand, Mihkel; Poryvkina, Larisa** Journal of chemometrics 2012 / p. 442-455 : ill  
[https://www.academia.edu/25357220/Qualitative\\_detection\\_of\\_illegal\\_drugs\\_cocaine\\_heroin\\_and\\_MDMA\\_in\\_seized\\_street\\_samples\\_based\\_on\\_SFS\\_data\\_and\\_ANN\\_validation\\_of\\_method](https://www.academia.edu/25357220/Qualitative_detection_of_illegal_drugs_cocaine_heroin_and_MDMA_in_seized_street_samples_based_on_SFS_data_and_ANN_validation_of_method)

### **Residential load forecasting using recurrent neural networks**

**Shabbir, Noman; Ahmadiyahangar, Roya; Raja, Hadi Ashraf; Kütt, Lauri; Rosin, Argo** 2020 IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) : proceedings 2020 / p. 478-481 : ill  
<https://doi.org/10.1109/CPE-POWERENG48600.2020.9161565>

### **RoCo-NAS : robust and compact neural architecture search**

Geraeinejad, Vahid; Sinaei, Sima; Modarressi, Mehdi; **Daneshtalab, Masoud** 2021 International Joint Conference on Neural Networks (IJCNN) : proceedings 2021 / 8 | <https://doi.org/10.1109/IJCNN52387.2021.9534460> [Conference Proceedings at Scopus Article at Scopus Article at WOS](#)

### **Self-organizing map, matrix reordering and multidimensional scaling as alternative and complementary methods in a semantic study**

**Kirt, Toomas; Liiv, Innar; Vainik, Ene** Proceedings of the 2007 International Conference on Artificial Intelligence : ICAI 2007. Volume 1 2007 / p. 385-390 [https://www.researchgate.net/publication/220835093\\_Self-Organizing\\_Map\\_Matrix\\_Reordering\\_and\\_Multidimensional\\_Scaling\\_as\\_Alternative\\_and\\_Complementary\\_Methods\\_in\\_a\\_Semantic\\_Study](https://www.researchgate.net/publication/220835093_Self-Organizing_Map_Matrix_Reordering_and_Multidimensional_Scaling_as_Alternative_and_Complementary_Methods_in_a_Semantic_Study)

### **Shape classification using hydrodynamic detection via a sparse large-scale 2D-sensitive artificial lateral line**

Wolf, Ben J.; Piri, Primož; **Kruusmaa, Maarja; Van Netten, Sietse M.** IEEE Access 2020 / p. 11393 - 11404  
<https://doi.org/10.1109/ACCESS.2020.2965316> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

### **Short-term PV energy generation forecasting using deep learning**

**Shabbir, Noman; Ahmadiyahangar, Roya; Rosin, Argo; Astapov, Victor; Kilter, Jako** Telematique 2022  
<https://www.provinciajournal.com/index.php/telematique/article/view/813>

### **Signal processing and machine learning techniques for predictive maintenance of rotor bars in induction machine**

**Kudelina, Karolina; Raja, Hadi Ashraf; Rjabtsikov, Viktor; Naseer, Muhammad Usman; Vaimann, Toomas; Kallaste, Ants** 2023 International Conference on Electrical Drives and Power Electronics (EDPE) 2023 / 7 p  
<https://doi.org/10.1109/EDPE58625.2023.10274030>

### **Signal spectrum-based machine learning approach for fault prediction and maintenance of electrical machines**

**Raja, Hadi Ashraf; Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Kallaste, Ants; Rassõlkin, Anton; Khang, Huynh Van** Energies 2022 / art. 9507 <https://doi.org/10.3390/en15249507> [Journal metrics at Scopus Article at Scopus Journal metrics at WOS Article at WOS](#)

### **Simulation of missile autopilot with two-rate hybrid neural network system**

**Astrov, Igor; Tatarly, Sergei; Tatarly, Svetlana** Advances in electrical and computer engineering 2007 / 1, p. 18-22 : ill  
[https://www.researchgate.net/publication/41391566\\_Simulation\\_of\\_Missile\\_Autopilot\\_with\\_Two-Rate\\_Hybrid\\_Neural\\_Network\\_System](https://www.researchgate.net/publication/41391566_Simulation_of_Missile_Autopilot_with_Two-Rate_Hybrid_Neural_Network_System)

### **Simulation of noise-cancelling in the cockpit of an aircraft using two-rate hybrid neural network**

**Astrov, Igor; Tatarly, Sergei; Tatarly, Svetlana** Advances in electrical and computer engineering 2007 / 2, p. 7-10  
[https://www.researchgate.net/publication/41391551\\_Simulation\\_of\\_Noise-Cancelling\\_in\\_the\\_Cockpit\\_of\\_an\\_Aircraft\\_Using\\_Two-Rate\\_Hybrid\\_Neural\\_Network](https://www.researchgate.net/publication/41391551_Simulation_of_Noise-Cancelling_in_the_Cockpit_of_an_Aircraft_Using_Two-Rate_Hybrid_Neural_Network)

### **Simulation of three-rate neural and neuro-fuzzy hybrid control for the multidimensional stochastic model of a fighter aircraft**

**Astrov, Igor; Pedai, Andrus; Rüstern, Ennu** SCI 2004 : the 8th World Multi-Conference on Systemics, Cybernetics and Informatics : July 18-21, 2004, Orlando, Florida, USA. Vol. 8 : proceedings 2004 / p. 351-356

### **Simulation of three-rate neural network control for stochastic model of a fighter aircraft**

**Astrov, Igor** CCECE 2003 - Canadian Conference on Electrical and Computer Engineering : Toward a Caring and Humane Technology : May 4th to 7th 2003, Montreal, Canada : proceedings. Vol. 3 2003 / p. 1711-1714 : ill

### **Simulation of two-rate adaptive hybrid control with neural and neuro-fuzzy networks for stochastic model of an experimental aircraft**

**Astrov, Igor; Pedai, Andrus; Rüstern, Ennu** Proceedings of the International Conference on Cybernetics and Information Technologies, Systems and Applications (CITSA 2004) [and] 10th International Conference on Information System Analysis and

**Simulation of two-rate adaptive hybrid control with neural and neuro-fuzzy networks for stochastic model of missile autopilot**

**Astrov, Igor; Pedai, Andrus; Rüstern, Ennu** WCICA 2004 : Fifth World Congress on Intelligent Control and Automation : June 15-19, 2004, Hangzhou, China : conference proceedings. Vol. 3 2004 / p. 2603-2607 : ill

**Simulation of two-rate adaptive neural network and fuzzy logic hybrid control for stochastic model of an experimental aircraft**

**Astrov, Igor; Pedai, Andrus; Rüstern, Ennu** Canadian Conference on Electrical and Computer Engineering 2004 = Conference canadienne en genie electrique et informatique : May 2-5, 2004, Fallsview Sheraton, Niagara Falls, Canada : proceedings. Vol. 1 2004 / p. 125-128 : ill

**Simulation of two-rate neural network control for stochastic model of an experimental aircraft**

**Astrov, Igor; Tatarly, S.; Tatarly, S.** Advances in electrical and computer engineering 2006 / 1, p. 75-83  
<https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=33c1d222839a8b7ec32792cb70adc3812139332a>

**Slope-based event-driven feature extraction for cardiac arrhythmia classification**

Duforest, Julien; Larras, Benoit; John, Deepu; **Märtens, Olev**; Frappe, Antoine 2021 IEEE Biomedical Circuits and Systems Conference 2021 / 4 | <https://doi.org/10.1109/BioCAS49922.2021.9644957>

**Some iterative regularized methods for highly nonlinear least squares problems**

**Kangro, Inga; Vaarmann, Otu** Mathematical modelling and analysis 2009 / 2, p. 179-186  
<https://www.tandfonline.com/doi/abs/10.3846/1392-6292.2009.14.179-186>

**A sophisticated modeling approach for photovoltaic systems in load frequency control**

**Bakeer, Abualkasim Ahmed Ali**; Magdy, Gaber; **Chub, Andrii**; Bevrani, Hassan International journal of electrical power and energy systems 2022 / art. 107330, 12 p. : ill <https://doi.org/10.1016/j.ijepes.2021.107330> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

**Synthesis and bioassay of improved mosquito repellents predicted from chemical structure**

Katritzky, Alan R.; Wang, Zuoquan; Slavov, Svetoslav; Tsikolia, Maia; **Dobchev, Dimitar** Proceedings of the National Academy of Sciences of the United States of America 2008 / 21, p. 7359-7364

**TAS : Ternarized Neural Architecture Search for Resource-Constrained Edge Devices**

Loni, Mohammad; Mousavi, Hamid; Riazati, Mohammad; **Daneshtalab, Masoud**; Sjödin, Mikael Proceedings of the 2022 Design, Automation & Test in Europe Conference & Exhibition (DATE 2022) 2022 / p. 1115-1118  
<https://doi.org/10.23919/DATE54114.2022.9774615>

**Technology design of composite parts**

**Karjust, Kristo; Küttner, Rein; Pohlak, Meelis** Journal of achievements in materials and manufacturing engineering 2007 / 2, p. 23-26 : ill <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=7a2f5ebd0bd5e7c08ff1cebc18a438a5c89e2231>

**3DLaneNAS : neural architecture search for accurate and light-weight 3D lane detection**

Zoljodi, Ali; Loni, Mohammad; Abadijoui, Sadegh; Alibeigi, Mina; **Daneshtalab, Masoud** Artificial Neural Networks and Machine Learning - ICANN 2022 : proceedings. Part I 2022 / p. 404-415 [https://doi.org/10.1007/978-3-031-15919-0\\_34](https://doi.org/10.1007/978-3-031-15919-0_34) [Conference Proceedings at scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

**Triple fixed-point MAC unit for deep learning**

**Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas** Proceedings of the 2021 Design, Automation & Test in Europe (DATE 2021), 1-5 February 2021 : Virtual Conference 2021 / p. 1404-1407 <https://doi.org/10.23919/DATE51398.2021.9474020>

**Using artificial neural networks to predict cell-penetrating compounds**

**Karelson, Mati**; Dobchev, Dimitar Expert opinion drug discovery 2011 / p. 783-796 : ill

**Uus tehisintellekt teeb vahet haige ja terve inimese häälal [Võrguväljaanne]**

Harrik, Airika novaator.err.ee 2021 / fot [Uus tehisintellekt teeb vahet haige ja terve inimese häälal](#)

**Where do conceptual spaces come from? An example of the Estonian emotion concepts**

**Kirt, Toomas**; Vainik, Ene The Second Baltic Conference on Human Language Technologies : April 4-5, 2005, Tallinn, Estonia : proceedings 2005 / p. 285-292 : ill [https://artiklid.elnet.ee/record=b1018478\\*est](https://artiklid.elnet.ee/record=b1018478*est)

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

**Škiparev, Vjatšeslav; Nosrati, Komeil; Tepljakov, Aleksei; Petlenkov, Eduard**; Levron, Yoash; **Belikov, Juri**; Guerrero, Joseph M. IEEE Transactions on sustainable energy 2023 / p. 1558-1568 <https://doi.org/10.1109/TSTE.2023.3237922>



