

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 / p. 165-169
<https://doi.org/10.1109/CCECE58730.2023.10288799>

APPRAISER : DNN fault resilience analysis employing approximation errors

Taheri, Mahdi; Ahmadilivani, Mohammad Hasan; Jenihhin, Maksim; Daneshtalab, Masoud; Raik, Jaan 2023 26th International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS) 2023 / p. 124–127 : ill
<https://ddec2023.taltech.ee/> <https://doi.org/10.1109/DDECS57882.2023.10139468>

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 / p. 363-368 : ill
<https://doi.org/10.1109/DSMP.2016.7583579>

Assessment of malicious tweets impact on stock market prices

Ishikawa, Tatsuki; Ben Sassi, Imen; Ben Yahia, Sadok Research Challenges in Information Science : 15th International Conference, RCIS 2021, Limassol, Cyprus, May 11–14, 2021 : proceedings 2021 / p. 330–346 https://doi.org/10.1007/978-3-030-75018-3_22 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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

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>

Deep Learning methodology for charging management applications in battery cells based on Neural Networks

Zequera, Rolando Antonio Gilbert; Rjabtšikov, Viktor; Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants IEEE Transactions on Intelligent Vehicles 2024 <https://doi.org/10.1109/TV.2024.3417216>

Development and utilization of synthetic signals for fault diagnostics of electrical machines

Raja, Hadi Ashraf; Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Rassölkin, Anton; Kallaste, Ants IEEE journal of emerging and selected topics in industrial electronics 2024 / 9 p <https://doi.org/10.1109/JESTIE.2024.3395650>

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>

An efficient FPGA-based architecture for contractive autoencoders

Kerner, Madis; Tammemäe, Kalle; Raik, Jaan; Hollstein, Thomas 2020 IEEE 28th Annual International Symposium on Field-Programmable Custom Computing Machines (FCCM), 3 – 6 May 2020, Fayetteville, Arkansas : proceedings 2020 / p. 230–230
<https://doi.org/10.1109/FCCM48280.2020.00062>

Estimating quality of transmission in a live production network using machine learning

Müller, Jasper; Fehenberger, Tobias; Patri, Sai Kireet; **Kaeval, Kaida**; Griesser, Helmut; Tikas, Marko; Elbers, Jörg-Peter 2021 Optical Fiber Communications Conference and Exhibition (OFC) : 6-10 June 2021 : San Francisco, CA, USA 2021 / paper Tu1G.2, 3 p <https://ieeexplore.ieee.org/abstract/document/9489940>

Evaluating the robustness of ML models to out-of-distribution data through similarity analysis

Lindén, Joakim; Forsberg, Håkan; **Daneshtalab, Masoud**; Söderquist, Ingemar New Trends in Database and Information Systems; ADBIS 2023 Short Papers, Doctoral Consortium and Workshops: AIDMA, DOING, K-Gals, MADEISD, PeRS, Barcelona, Spain, September 4–7, 2023, Proceedings 2023 / p. 348 - 359 https://doi.org/10.1007/978-3-031-42941-5_30

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

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

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>

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

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>

Kolmogorov-Arnold networks for algorithm design in battery energy storage system applications

Gilbert Zequera, Rolando Antonio; Rassölkin, Anton; Vaimann, Toomas; Kallaste, Ants Energy Reports 2025 / p. 2664-2677
<https://doi.org/10.1016/j.egyr.2025.02.002>

Lightweight CNN-based Microfluidic Droplet Classification for Portable Imaging Flow Cytometry

Afrin, Fariha; Le Moullec, Yannick; Pardy, Tamas; Rang, Toomas Proceedings of the Estonian Academy of Sciences 2025 / p. 302-311 <https://doi.org/10.3176/proc.2025.2S.05>

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>

Machine learning assisted methodology for multiclass classification of malignant brain tumors

Vidarthi, Ankit; Agarwal, Ruchi; Gupta, Deepak; **Sharma, Rahul; Draheim, Dirk**; Tiwari, Prayag IEEE Access 2022 / p. 50624-50640 <https://doi.org/10.1109/ACCESS.2022.3172303> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Methods of condition monitoring and fault detection for electrical machines

Kudelina, Karolina; Asad, Bilal; Vaimann, Toomas; Rassölkin, Anton; Kallaste, Ants; Khang, Huynh Van Energies 2021 / art. 7459, 20 p. : ill <https://doi.org/10.3390/en14227459> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Microfluidic droplet classification through tuned convolutional neural network on a resource constrained platform

Afrin, Fariha; Le Moullec, Yannick; Pardy, Tamas 2024 19th Biennial Baltic Electronics Conference (BEC) 2024 / 4 p
<https://doi.org/10.1109/BEC61458.2024.10737958> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Modelling of magnetization processes of 3D-Printed Fe-Si components by means of an artificial neural network implemented in a FEM scheme

Stella, Marco; Faba, Antonio; Bertolini, Vittorio; Fulginei, F. Riganti; Sabino, Lorenzo; **Tiismus, Hans; Kallaste, Ants**; Cardelli, Ermanno 2024 International Conference on Electrical Machines (ICEM) 2024 / 7 p <https://doi.org/10.1109/ICEM60801.2024.10700301>

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

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>

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](#)

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>

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>

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>

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 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

Simultaneous road edge and road surface markings detection using convolutional neural networks

Pihlak, Rene; Riid, Andri Databases and Information Systems : 14th International Baltic Conference, DB&IS 2020, Tallinn, Estonia, June 16-19, 2020 : Proceedings 2020 / p. 109-121 https://doi.org/10.1007/978-3-030-57672-1_9 [Conference proceeding at Scopus](#) [Article at Scopus](#)

Speech-based identification of children's gender and age with neural networks

Piel, Leo Kristopher; Alumäe, Tanel Human Language Technologies - the Baltic Perspective : Proceedings of the Eighth International Conference, Baltic HLT 2018 2018 / p. 104-111 <https://doi.org/10.3233/978-1-61499-912-6-104> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Zero-memory-overhead clipping-based fault tolerance for LSTM deep neural networks

Parcekani, Bahram; Nazari, Samira; Ahmadiilivani, Mohammad Hasan; Azarpeyvand, Ali; Raik, Jaan; Ghasempouri, Tara; Daneshtalab, Masoud 37th IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems, Harwell, Oxfordshire, Didcot, UK, October 8th - 10th, 2024 2024 / 4 p. : ill <https://doi.org/10.1109/DFT63277.2024.10753533> [Conference proceedings at Scopus](#) [Article at Scopus](#)

The proposal of countermeasures for deepfake voices on social media considering waveform and text embedding

Yanagi, Yuta; Orihara, Ryohei; Tahara, Yasuyuki; Sei, Yuichi; Alumäe, Tanel; Ohsuga, Akihiko Annals of emerging technologies in computing 2024 / p. 15-31 ill <https://doi.org/10.33166/AETiC.2024.02.002> [Journal metrics at Scopus](#) [Article at Scopus](#)

Trends and challenges in intelligent condition monitoring of electrical machines using machine learning

Kudelina, Karolina; Vaimann, Toomas; Asad, Bilal; Rassõlkin, Anton; Kallaste, Ants; Demidova, Galina Applied sciences 2021 / art. 2761, 19 p. : ill <https://doi.org/10.3390/app11062761> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics 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>

Wind energy forecasting using recurrent neural networks

Shabbir, Noman; Kütt, Lauri; Jawad, Muhammad; Ahmadiyahangar, Roya; Iqbal, Muhammad Naveed; Rosin, Argo 2019 Big Data, Knowledge and Control Systems Engineering (BdKCSE) 2019 / 5 p. : ill <https://doi.org/10.1109/BdKCSE48644.2019.9010593>

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

Škiparev, Vjatseslav; Nosrati, Komeil; Tepļakov, Aleksei; Petlenkov, Eduard; Lewron, 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](#)