

### **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>

### **ANN-LSTM based tool for photovoltaic power forecasting**

**Zahraoui, Younes; Korötko, Tarmo**; Mekhilef, Saad; **Rosin, Argo** 2024 4th International Conference on Smart Grid and Renewable Energy (SGRE) : proceedings 2024 / 6 p. : ill <https://doi.org/10.1109/SGRE59715.2024.10428969>

### **Artificial intelligence yesterday, today and tomorrow**

Jaakkola, Hannu; **Henno, Jaak**; Mäkelä, Jukka; Thalheim, Bernhard 2019 42nd International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO) : May 20 – 24, 2019, Opatija, Croatia : proceedings 2019 / p. 860 - 867 : ill <https://doi.org/10.23919/MIPRO.2019.8756913>

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

**Shabbir, Noman; Vassiljeva, Kristina; Hokmabad, Hossein Nourollahi; Husev, Oleksandr; Petlenkov, Eduard; Belikov, Juri** Electronics 2024 / art. 1420 <https://doi.org/10.3390/electronics13081420>

### **A data-fusion technique for forecasting of absolute sea levels in the Baltic Sea**

**Rajabi-Kiasari, Saeed; Delpeche-Ellmann, Nicole Camille; Ellmann, Artu** 2023 Machine Learning And Data Analysis In Oceanography, University of Liège, Belgium 2023 [A data-fusion technique for forecasting of absolute sea levels in the Baltic Sea](#)

### **Deep CNN based classification of the Archimedes spiral drawing tests to support diagnostics of the Parkinson's disease**

**Nömm, Sven; Zarembo, Sergei**; Medijainen, Kadri; Taba, Pille; Toomela, Aaro IFAC-Papers OnLine 2020 / p. 260-264  
<https://doi.org/10.1016/j.ifacol.2021.04.185> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Deep learning-based detection of cyberattacks in software-defined networks**

**Mirsadeghi, Seyed Mohammad Hadi; Bahsi, Hayretidin; Inbouli, Wissem** Digital forensics and cyber crime : 13th EAI international conference, ICDF2C 2022, Boston, MA, November 16-18, 2022 : proceedings 2023 / p. 341-354  
[https://doi.org/10.1007/978-3-031-36574-4\\_20](https://doi.org/10.1007/978-3-031-36574-4_20)

### **Deep-learning based blood cells classification and initial edge device implementation**

Islam, Md. Raisul; **Le Moullec, Yannick; Afrin, Fariha**; Ahmed, Faisal 2022 18th Biennial Baltic Electronics Conference (BEC) 2022 / 6 p. : ill <https://doi.org/10.1109/BEC56180.2022.9935610>

### **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>

### **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>

### **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>

### **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 learning-based depression detection using medical claims data : preprint**

**Bertl, Markus; Bignoumba, Nzamba; Ross, Peeter; Ben Yahia, Sadok; Draheim, Dirk** SSRN 2023 / p. 1-34 : ill  
<https://doi.org/10.2139/ssrn.4478987>

### **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](#)

### **Explaining the decisions of deep learning models for load disaggregation (NILM) based on XAI**

Machlev, Ram; Malka, Asaf; Perl, Michael; Levron, Yoash; **Belikov, Juri** 2022 IEEE Power & Energy Society General Meeting (PESGM) 2022 / art. 183865 , p. 1-5 : ill <https://doi.org/10.1109/PESGM48719.2022.9917049>

### Exploring deep learning based object detection architecture

Saddique, Muhammad Saddique; Raza, Ahsan; **Abideen, Zain Ul**; Khan, Shah Nawaz 2020 17th International Bhurban Conference on Applied Sciences and Technology (IBCAST), Islamabad, Pakistan, 2020 2020 / p. 255-259  
<https://doi.org/10.1109/IBCAST47879.2020.9044558>

### Forecasting of absolute dynamic topography using deep learning algorithm with application to the Baltic Sea

**Rajabi-Kiasari, Saeed; Delpeche-Ellmann, Nicole Camille; Ellmann, Artu** Computers & geosciences 2023 / art. 105406, 16 p. : ill <https://doi.org/10.1016/j.cageo.2023.105406>

### Generative adversarial networks as a data augmentation tool for CNN-based Parkinson's disease diagnostics

**Dzotsenidze, Erik; Valla, Elli; Nömm, Sven;** Medijainen, Kadri; Taba, Pille; Toomela, Aaro IFAC-Papers OnLine 2022 / p. 108-113 : ill <https://doi.org/10.1016/j.ifacol.2022.10.240> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### 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>

### Image-Based pavement type classification with convolutional neural networks

**Riid, Andri; Manna, Davide Liberato; Astapov, Sergei** INES 2020 : IEEE 24th International Conference on Intelligent Engineering Systems, July 8-10, 2020, Reykjavik, Iceland : proceedings 2020 / p. 55-60 : ill <https://doi.org/10.1109/INES49302.2020.9147199>

### 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>

### Measuring explainability and trustworthiness of power quality disturbances classifiers using XAI - explainable artificial intelligence

Machlev, Ram; Perl, Michael; **Belikov, Juri;** Levy, Kfir; Levron, Yoash IEEE transactions on industrial informatics 2022 / p. 5127-5137 <https://doi.org/10.1109/TII.2021.3126111> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Multi-stage deep learning networks for automated assessment of electricity transmission infrastructure using fly-by images

**Manninen, Henri;** Ramlal, Craig J.; Singh, Arvind; **Kilter, Jako; Landsberg, Mart** Electric power systems research 2022 / art. 107948 <https://doi.org/10.1016/j.epsr.2022.107948> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### Non-determinism in nowadays computing and IT

**Henno, Jaak;** Jaakkola, Hannu; Mäkelä, Jukka 2020 43rd International Convention on Information, Communication and Electronic Technology (MIPRO), 28 Sept.-2 Oct. 2020, Opatija, Croatia : proceedings 2020 / p. 794-801  
<https://doi.org/10.23919/MIPRO48935.2020.9245377>

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

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

### Object detection for rescue operations by high-altitude infrared thermal imaging collected by unmanned aerial vehicles

Polukhin, Andrii; Gordienko, Yuri; **Jervan, Gert;** Stirenko, Sergii Pattern Recognition and Image Analysis : 11th Iberian Conference, IbPRIA 2023, Alicante, Spain, June 27-30, 2023 : proceedings 2023 / p. 490-504 [https://doi.org/10.1007/978-3-031-36616-1\\_39](https://doi.org/10.1007/978-3-031-36616-1_39)

### Pavement defect segmentation in orthoframes with a pipeline of three convolutional neural networks

**Lõuk, Roland; Riid, Andri; Pihlak, Rene; Tepļakov, Aleksei** Algorithms 2020 / art. 198, 27 p. : ill <https://doi.org/10.3390/a13080198>  
[Journal metrics at scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### PPCSA: Partial Participation-Based Compressed and Secure Aggregation in Federated Learning

Moustafa, Ahmed; Asad, Muhammad; Shaukat, Saima; **Norta, Alexander** Advanced Information Networking and Applications : Proceedings of the 35th International Conference on Advanced Information Networking and Applications (AINA-2021), Volume 2 2021 / p. 345-357 [https://doi.org/10.1007/978-3-030-75075-6\\_28](https://doi.org/10.1007/978-3-030-75075-6_28) [Conference proceedings at Scopus](#) [Article at Scopus](#)

### Quantification of hydrodynamic model sea level bias utilizing deep learning and synergistic integration of data sources

**Jahanmard, Vahidreza;** Hordoir, Robinson; **Delpeche-Ellmann, Nicole Camille; Ellmann, Artu** Ocean modelling 2023 / art. 102286 : ill., map <https://doi.org/10.1016/j.ocemod.2023.102286>

### Reanalysis of ocean model-based dynamic topography utilizing deep neural network and geoid-referenced observations

**Jahanmard, Vahidreza; Delpeche-Ellmann, Nicole Camille; Ellmann, Artu** 2023 Machine Learning And Data Analysis In Oceanography, University of Liège, Belgium 2023 / 1 p [Reanalysis of ocean model-based dynamic topography utilizing deep neural network and geoid-referenced observations](#)

### **Residential DC load forecasting using long short-term memory network (LSTM)**

**Shabbir, Noman; Ahmadiyahangar, Roya; Rosin, Argo; Husev, Oleksandr; Jalakas, Tanel; Martins, Joao** 2023 IEEE 11th International Conference on Smart Energy Grid Engineering (SEGE) 2023 / p. 131-136  
<https://doi.org/10.1109/SEGE59172.2023.10274596>

### **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>

### **Review of state-of-the-art microwave filter tuning techniques and liplementation of a novel tuning algorithm using expert-based hybrid learning**

**Sekhri, Even; Kapoor, Rajiv; Tamre, Mart** Wireless personal communications 2024 / 57 p <https://doi.org/10.1007/s11277-024-10894-x>

### **A robust pathological voices recognition system based on DCNN and scattering transform**

**Souli, Sameh; Amam, Rimah; Ben Yahia, Sadok** Applied acoustics 2021 / art. 107854 : ill  
<https://doi.org/10.1016/j.apacoust.2020.107854> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **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 I <https://doi.org/10.1109/IJCNN52387.2021.9534460> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

### **Scene parsing using Fully Convolutional Network for Semantic Segmentation**

**Ali, Nisar; Ijaz, Ali Zeeshan; Ali, Raja Hashim; Abideen, Zain Ul; Bais, Abdul** 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Regina, SK, Canada, 2023 2023 / p. 180-185 <https://doi.org/10.1109/CCECE58730.2023.10288934>

### **Sensor-location-specific joint acquisition of peripheral artery bioimpedance and photoplethysmogram for wearable applications**

**Metshein, Margus; Abdullayev, Anar; Gautier, Antoine; Larras, Benoit; Frappe, Antoine; Cardiff, Barry; Annus, Paul; Land, Raul; Märten, Olev** Sensors 2023 / art. 7111 <https://doi.org/10.3390/s23167111>

### **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>

### **Smart healthcare : disease prediction using the cuckoo-enabled deep classifier in IoT framework**

**Kumar, Ashwani; Reddy, S. Sai Satyanarayana; Mahommad, Gouse Baig; Khan, Baseem; Sharma, Rahul** Scientific Programming 2022 <https://doi.org/10.1155/2022/2090681> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Stacking deep-learning model, stories and drawing properties for automatic scene generation**

**Elloumi, Samir; Nzamba, Bignoumba** International journal of advanced computer science and applications 2023 / p. 894-911  
<https://doi.org/10.14569/IJACSA.2023.0140197> <https://thesai.org/Publications/ViewPaper?Volume=14Issue=1Code=IJACSA&SerialNo=97>

### **A survey on artificial intelligence approaches in supporting frontline workers and decision makers for the COVID-19 pandemic**

**Rasheed, Jawad; Jamil, Akhtar; Draheim, Dirk** Chaos, solitons & fractals 2020 / art. 110337, 17 p  
<https://doi.org/10.1016/j.chaos.2020.110337> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

### **Toward automated utility pole condition monitoring : a deep learning approach**

**Ramlal, Craig J.; Singh, Arvind; Rocke, Sean; Manninen, Henri; Kilter, Jako; Landsberg, Mart** Proceedings of 2020 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe), 26-28 October, 2020 2020 / p. 255-259 <https://doi.org/10.1109/ISGT-Europe47291.2020.9248797>

### **Toward automatic condition assessment of high-voltage transmission infrastructure using deep learning techniques**

**Manninen, Henri; Ramlal, Craig J.; Singh, Arvind; Rocke, Sean; Kilter, Jako; Landsberg, Mart** International journal of electrical power & energy systems 2021 / art. 106726 <https://doi.org/10.1016/j.ijepes.2020.106726> [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>

### **Universal XR framework architecture based on open-source XR tools**

**Bondarenko, Yevhen; Kuts, Vladimir; Pizzagalli, Simone Luca; Nutonen, Karle; Murray, Niall; O'Connell, Eoin** XR and

