

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>

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](#)

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>

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>

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>

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](#)

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>

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](#)

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.ester.ee/record=b2150914*est

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 2022 / p. 187-191 <https://doi.org/10.1109/TSP55681.2022.9851384>

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](#)

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 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>

Real time data communication for intelligent extended reality applications

Köse, Ahmet; Tepljakov, 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 localization and visualization of a sound source for virtual reality application

Köse, Ahmet; Tepljakov, Aleksei; Astapov, Sergei 2017 25th International Conference on Software, Telecommunications and Computer Networks (SoftCOM) : Split, Croatia, September 21-23, 2017 2017 / p 219-224 : ill
<https://doi.org/10.23919/SOFTCOM.2017.8115577> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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

Alsaleh, Saleh Ragheb Saleh; Tepljakov, 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](#)

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](#)

Supply air temperature control in air handling unit based on federated learning

Eik, Marika; Nourollahi Hokmabad, Hossein; Köse, Ahmet; Husev, Oleksandr; Belikov, Juri 2024 IEEE Power and Energy Society General Meeting, PESGM 2024, Seattle, 21 July 25 July, 2024 2024 / 5 p. : ill
<https://doi.org/10.1109/PESGM51994.2024.10688759> [Conference proceedings at Scopus](#) [Article at Scopus](#)

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>

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 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 = Džnaamilised 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>

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](#)