

Advanced ICT solutions in a distance vocational education and training in the field of robotics

Pilat, Zbigniew; Arapi, Polyxeni; Pappas, Nikos; Omieljanowicz, Mirosław; Prokopiuk, Norbert; Tamre, Mart The 16th International Conference "Mechatronic Systems and Materials" : MSM 2021 July 1, 2021 - July 2, 2021 : abstract book 2021 / p. 62-63
<https://vb.vgtu.lt/object/elaba:100810507/100810507.pdf>

AR/VR Digital Twin for simulation and data collection of robotic environments

Martins, João G.; Nutonen, Karle; Costa, Paulo; Kuts, Vladimir; Otto, Tauno; Sousa, Armando; Petry, Marcelo R. 2025 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC) 2025 / 6 p
<https://doi.org/10.1109/ICARSC65809.2025.10970158>

Development of virtual reality interface for remote robot control

Lees, Üleri; Hudjakov, Robert; Tamre, Mart Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 247-250 : ill

Digital Twin : concept of hybrid programming for industrial robots - use case

Kuts, Vladimir; Sarkans, Martinš; Otto, Tauno; Tähemaa, Toivo; Bondarenko, Yevhen ASME 2019 International Mechanical Engineering Congress and Exposition : conference proceedings 2019 / Paper No: IMECE2019-10583, V02BT02A005; 8 pages
<https://doi.org/10.1115/IMECE2019-10583>

Digital Twin : industrial robot kinematic model integration to the virtual reality environment

Kuts, Vladimir; Cherezova, Natalia; Sarkans, Martinš; Otto, Tauno Journal of machine engineering 2020 / p. 53–64
<https://doi.org/10.36897/jme/120182> [Journal metrics at Scopus](#) [Article at Scopus](#)

Digital twin as industrial robots manipulation validation tool

Kuts, Vladimir; Marvel, Jeremy A.; Aksu, Murat; Pizzagalli, Simone Luca; Sarkans, Martinš; Bondarenko, Yevhen; Otto, Tauno Robotics 2022 / art. 113 <https://doi.org/10.3390/robotics11050113> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Digital twin based synchronised control and simulation of the industrial robotic cell using virtual reality

Kuts, Vladimir; Otto, Tauno; Tähemaa, Toivo; Bondarenko, Yevhen Journal of machine engineering 2019 / p. 128–145 : ill
<https://doi.org/10.5604/01.3001.0013.0464> [Journal metrics at Scopus](#) [Article at Scopus](#)

Digital twin for FANUC robots: Industrial robot programming and simulation using virtual reality

Garg, Gaurav; Kuts, Vladimir; Anbarjafari, Gholamreza Sustainability (Switzerland) 2021 / Art. 10336
<https://doi.org/10.3390/su131810336> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Digitalization of engineering education : from e-learning to smart education

Makarova, Irina; Shubenkova, Ksenia; Antov, Dago; Pashkevich, Anton Smart Industry & Smart Education : proceedings of the 15th International Conference on Remote Engineering and Virtual Instrumentation 2019 / p. 32–41 https://doi.org/10.1007/978-3-319-95678-7_4 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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>

Enabling the teaching factory leveraging a virtual reality system based on the digital twin

Kuts, Vladimir; Otto, Tauno; Caldarola, Enrico G.; Modoni, Gianfranco E.; Sacco, Marco The Industrial Track of EuroVR 2018: Proceedings of the 15th Annual EuroVR Conference 2018 / p. 26–31 : ill <https://www.vtt.fi/inf/pdf/technology/2018/T339.pdf>

Enhancing cyber defense situational awareness using 3D visualizations

Kullman, Kaur; Cowley, Jennifer; Ben-Ashe, Noam 13th International Conference on Cyber Warfare and Security (ICWS 2018), Washington, DC, USA, 8 – 9 March 2018 2018 / p. 369-378 <http://toc.proceedings.com/38822webtoc.pdf>

Exploiting factory telemetry to support virtual reality simulation in robotics cell

Kuts, Vladimir; Modoni, Gianfranco E.; Terkaj, Walter; Tähemaa, Toivo; Sacco, Marco; Otto, Tauno Augmented Reality, Virtual Reality, and Computer Graphics : 4th International Conference, AVR 2017, Ugento, Italy, June 12–15, 2017 : proceedings. Part I 2017 / p. 212-221 : ill https://doi.org/10.1007/978-3-319-60922-5_16 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Extended reality technologies in small and medium-sized European industrial companies : level of awareness, diffusion and enablers of adoption

Jalo, Henri; Pirkkalainen, Henri; Torro, Osku; Pessot, Elena; Zangiacomi, Andrea; Tepljakov, Aleksei Virtual Reality 2022 / p. 1745 - 1761 <https://doi.org/10.1007/s10055-022-00662-2> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Haptic smart glove for augmented and virtual reality

Vu, Trieu Minh; Moezzi, Reza; Katushin, Nikita Sensor letters 2019 / p. 358-364 <https://doi.org/10.1166/sl.2019.4070>

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](#)

Light at the end of the tunnel : Visitors' virtual reality (versus in-person) attraction site tour-related behavioral intentions during and post-COVID-19

Itani, Omar S.; Hollebeek, Linda Desiree Tourism Management 2021 / art. 104290 <https://doi.org/10.1016/j.tourman.2021.104290>
[Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Motion tracking glove for augmented reality and virtual reality

Vu, Trieu Minh; Katushin, Nikita; Pumwa, John Paladyn, journal of behavioral robotics 2019 / p. 160–166 : ill
<https://doi.org/10.1515/pjbr-2019-0012> [Journal metrics at Scopus](#) [Article at Scopus](#)

Operator impressions of 3D visualizations for cybersecurity analysts

Kullman, Kaur; Ben-Asher, Noam; Sample, Char Abstracts and conference materials for the 18th European Conference on Cyber Warfare and Security, University of Coimbra Portugal, 4-5th July 2019 2019 / p. 31-32 <https://www.academic-conferences.org/conferences/eccws/eccws-future-and-past/>

Operator impressions of 3D visualizations for cybersecurity analysts

Kullman, Kaur; Ben-Asher, Noam; Sample, Char Proceedings of the 18th European Conference on Cyber Warfare and Security, University of Coimbra Portugal, 4-5th July 2019 2019 / p. 257–266
https://www.researchgate.net/publication/334226184_Operator_Impressions_of_3D_Visualizations_for_Cybersecurity_Analysts

A pilot feasibility study on the use of virtual reality simulation training for parent-teacher consultations to enhance self-efficacy in pre-service teachers

Parish, Karen; Warnatsch, Rahel; Torgersen, Leanne N.S.; Lugo, Ricardo Gregorio Journal of Teacher Education and Educators 2024 / p. 29-47 <https://dergipark.org.tr/en/pub/jtee/issue/84503/1441602#article-authors-list>

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](#)

ROS-based Augmented and Virtual Reality path planning interface for industrial robotic arms : a preliminary assessment

Pizzagalli, Simone Luca; Bondarenko, Yevhen; Kuts, Vladimir; O'Connell, Eoin; Murray, Niall; Otto, Tauno ICRSA '23: Proceedings of the 2023 6th International Conference on Robot Systems and Applications 2024 / p. 38-48 : ill
<https://doi.org/10.1145/3655532.3655538>

A small-scale, low-budget semi-immersive virtual environment for scientific visualization and research

Pastorelli, Emiliano; Herrmann, Heiko 2013 International Conference on Virtual and Augmented Reality in Education 2013 / p. 14-22 <https://doi.org/10.1016/j.procs.2013.11.003> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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.ester.ee/record=b2150914*est

Synchronizing physical factory and its digital twin through an IIoT middleware : a case study

Kuts, Vladimir; Modoni, Gianfranco E.; Otto, Tauno; Sacco, Marco; Tähemaa, Toivo; Bondarenko, Yevhen; Wang, Ruxin Proceedings of the Estonian Academy of Sciences 2019 / p. 364–370 : ill http://www.kirj.ee/32660/?tpl=1061&c_tpl=1064
<https://doi.org/10.3176/proc.2019.4.03> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The concept of using AR and VR technologies in the vocational training system in robotics and automation

Falkowski, Piotr; Pilat, Zbigniew; Arapi, Polyxeni; **Tamre, Mart;** Dulencin, Peter; Homza, Jozef Robotics in education : methodologies and technologies 2021 / p. 318-325 https://doi.org/10.1007/978-3-030-67411-3_29

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 artificial intelligence driven immersive environments in virtual reality for industrial applications

Alsaleh, Saleh Ragheb Saleh; Tepljakov, Aleksei; Tamre, Mart; Petlenkov, Eduard 44th International Conference on Telecommunications and Signal Processing (TSP) 2021 / p. 340-345 <https://doi.org/10.1109/TSP52935.2021.9522676>

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](#)

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 metaverse : proceedings of the 8th international XR-metaverse conference 2023, Las Vegas, USA 2024 / p. 87-98 https://doi.org/10.1007/978-3-031-50559-1_7 [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Upper extremity movement evaluation using markerless motion capture system

Gavriljuk, Marietta; **Kuts, Vladimir**; Gapeyeva, Helena; **Otto, Tauno; Pizzagalli, Simone Luca** EuroVR 2020 Application, exhibition & demo track : proceedings of the virtual conference 2020 / p. 83-86 <https://doi.org/10.32040/2242-122X.2020.T381>

User interactions in Virtual Data Explorer

Kullman, Kaur; Engel, Don Augmented Cognition : 16th International Conference, AC 2022, Held as Part of the 24th HCI International Conference, HCII 2022. Virtual Event, June 26 - July 1, 2022, proceedings 2022 / p. 333-347 https://doi.org/10.1007/978-3-031-05457-0_26 [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

User-centred design in industrial collaborative automated systems

Pizzagalli, Simone Luca; Kuts, Vladimir; Otto, Tauno Proceedings of the Estonian Academy of Sciences 2021 / p. 436-443 : ill <https://doi.org/10.3176/proc.2021.4.10> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Virtual laboratories: engineers' training for automotive industry

Makarova, Irina; Boyko, Aleksey; Shubenkova, Ksenia; **Pashkevich, Anton**; Giniyatullin, Ilmur 17 International Conference on Emerging Learning Technologies and Applications, November 21-22, 2019 Stary Smokovec, The High Tatras Slovak Republic : proceedings 2019 / 7 p. : ill <https://doi.org/10.1109/ICETA48886.2019.9040074>

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](#)

Virtual reality simulators for inclusion and participation : broadening perspectives on accessible cities and public space

Kern, Leyla; **Dembski, Fabian**; Obst, Thomas; Bisinger, Laura; Falk, Benedict; Wössner, Uwe Mobility, Knowledge and Innovation Hubs in Urban and Regional Development : proceedings of REAL CORP 2022, 27th International Conference on Urban Development, Regional Planning and Information Society 2022 / p. 1025-1031 <https://doi.org/10.48494/REALCORP2022.2039>

Virtual reality through the customer journey : framework and propositions

Hollebeek, Linda Desiree; Clark, Moira K.; Andreassen, Tor W.; Sigurdsson, Valdimar; Smith, Dale L.G. Journal of retailing and consumer services 2020 / art. 102056 <https://doi.org/10.1016/j.jretconser.2020.102056> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Virtual reality visualization for photogrammetric 3d reconstructions of cultural heritage

Herrmann, Heiko; Pastorelli, Emiliano Augmented and Virtual Reality First International Conference, AVR 2014, Lecce, Italy, September 17–20, 2014 : Revised Selected Papers 2014 / p. 283-295 : ill https://doi.org/10.1007/978-3-319-13969-2_21 [Conference proceeding at Scopus](#) [Article at Scopus](#) [Conference proceeding at WOS](#) [Article at WOS](#)