

Augmented reality interface for industrial robot control and teleoperation

Ordile, Laura; Bondarenko, Yevhen; Pizzagalli, Simone Luca; Kuts, Vladimir; Otto, Tauno EuroXR 2021: Proceedings of the Virtual EuroXR Conference 2021 / p. 15-19 <https://sarjaweb.vtt.fi/pdf/technology/2021/T395.pdf> <https://doi.org/10.32040/2242-122X.2021.T395>

Development of an AR-based application for assembly assistance and servicing

Mahmood, Kashif; Pizzagalli, Simone Luca; Otto, Tauno; Symotiuk, Ivan Procedia CIRP 2024 / p. 638-643 <https://doi.org/10.1016/j.procir.2024.04.017> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Development of an AR-based application for assembly assistance and servicing

Mahmood, Kashif; Pizzagalli, Simone Luca; Otto, Tauno; Symotiuk, Ivan 34th CIRP Design Conference CIRP2024, 3-5 June 2024, Cranfield University, UK : [programme] 2024 / 1 p <https://cranfield.shorthandstories.com/cirp-2024/index.html>

Digital Twin : universal user interface for online management of the manufacturing system

Kuts, Vladimir; Bondarenko, Yevhen; Gavriljuk, Marietta; Partyshev, Andriy; Jegorov, Sergei; Pizzagalli, Simone Luca; Otto, Tauno Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition 2021 / paper no: IMECE2021-69092, 7 p <https://doi.org/10.1115/IMECE2021-69092>

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 learning from demonstration system for industrial robots

Bondarenko, Yevhen; Pizzagalli, Simone Luca; Kuts, Vladimir; Petlenkov, Eduard; Otto, Tauno ASME 2023 International Mechanical Engineering Congress and Exposition (IMECE2023) : proceedings. Vol. 3 2024 / art. IMECE2023-113240, V003T03A081 <https://doi.org/10.1115/IMECE2023-113240>

Evaluation of virtual reality interface interaction methods for digital twin industrial robot programming and control, a pilot study

Pizzagalli, Simone Luca; Kuts, Vladimir; Bondarenko, Yevhen; Otto, Tauno Proceedings of the ASME 2021 International Mechanical Engineering Congress and Exposition 2021 / paper no: IMECE2021-69408, 9 p <https://doi.org/10.1115/IMECE2021-69408>

Extended Reality for I5.0 : towards human centricity in human-robot interaction = Laiendatud reaalsus Tööstus 5.0 jaoks : inimesekeskse lähenemiseni inimese-roboti suhtluses

Pizzagalli, Simone Luca 2024 https://www.ester.ee/record=b5694235*est <https://digikogu.taltech.ee/et/Item/c2c7e80f-6a3c-49fc-8311-6b8f13e75270> <https://doi.org/10.23658/taltech.42/2024>

Extended reality interface for human robot interaction

Pizzagalli, Simone Luca 22nd International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology III : Pärnu, Estonia, August 23-26, 2023 2023 / p. 27-28 : ill https://www.ester.ee/record=b5570906*est

Forestry crane immersive user interface for control and teleoperation

Pizzagalli, Simone Luca; Bondarenko, Yevhen; Baykara, Baris Cem; Niidas, Alar; Kuts, Vladimir; Kerm, Margus; Otto, Tauno Proceedings of ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), 2B: Columbus, Ohio, USA, October 30 - November 3, 2022 2022 / art. IMECE2022-94975 <https://doi.org/10.1115/IMECE2022-94975>

A framework for the design and use of virtual labs in digital engineering education

Terkaj, Walter; Pessot, Elena; Kuts, Vladimir; Bondarenko, Yevhen; Pizzagalli, Simone Luca; Kleine, Kari Modern Materials and Manufacturing 2023 : Tallinn, Estonia, 2-4 May 2023 2024 / art. 030003 <https://doi.org/10.1063/5.0189669> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Industrial collaborative robot digital twin integration and control using robot operating system

Diachenko, Danyl; Partyshev, Andriy; Pizzagalli, Simone Luca; Bondarenko, Yevhen; Otto, Tauno; Kuts, Vladimir Journal of Machine Engineering 2022 / p. 57 - 67 <https://doi.org/10.36897/jme/148110> [Journal metrics at Scopus](#) [Article at Scopus](#)

Language of driving for autonomous vehicles

Kalda, Krister; Pizzagalli, Simone Luca; Soe, Ralf-Martin; Sell, Raivo; Bellone, Mauro Applied sciences 2022 / art. 5406 <https://doi.org/10.3390/app12115406> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Pneumatics laboratory interactive educational experience development

Sandyk, Ivanna; Müür, Margus; Kuts, Vladimir; Bondarenko, Yevhen; Pizzagalli, Simone Luca; Rüttmann, Tiia The 19th international CDIO conference, Trondheim, Norway, 26-29 June 2023 : proceedings - full papers 2023 / p. 144-154 <http://www.cdio.org/knowledge-library/documents/pneumatics-laboratory-interactive-educational-experience-development> [Conference proceedings at Scopus](#) [Article at Scopus](#)

Pneumatics-case : enhancing learning through augmented reality and digital twin technology

Boychuk, Rostyslav; Symotiuk, Ivan; Röbnikov, Daniil; Kuts, Vladimir; Mahmood, Kashif; Pizzagalli, Simone Luca; Otto, Tauno EuroXR 2024 : proceedings of the 21st EuroXR international conference 2024 / p. 261-266 <https://doi.org/10.32040/2242-122X.2024.T432>

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>

Unified interface for programming and control of industrial robots

Bondarenko, Yevhen; Pizzagalli, Simone Luca; Kuts, Vladimir; Otto, Tauno EuroXR 2023 : Proceedings of the 20th EuroXR International Conference 2023 / p. 182-185 <https://doi.org/10.32040/2242-122X.2023.T422> <https://publications.vtt.fi/pdf/technology/2023/T422.pdf>

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 experience during an immersive virtual reality-based cognitive task : a comparison between Estonian and Italian older adults with MCI

Mondellini, Marta; Arlati, Sara; Gapeyeva, Helena; Lees, Kairi; Märitz, Ingrid; Pizzagalli, Simone Luca; Otto, Tauno; Sacco, Marco; Teder-Braschinsky, Anneli Sensors 2022 / art. 8249 <https://doi.org/10.3390/s22218249> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

User-centered design for Human-Robot Collaboration systems

Pizzagalli, Simone Luca; Kuts, Vladimir; Otto, Tauno IOP conference series : materials science and engineering 2021 / art. 012011, 7 p.: ill <https://doi.org/10.1088/1757-899X/1140/1/012011>

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 reality digital twin interfaces in human-robot collaboration

Pizzagalli, Simone Luca 20th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tallinn, Estonia, September 8-10, 2021 2021 / p. 23-24 https://www.ester.ee/record=b5457278*est

A workflow for extended reality-based learning in engineering education

Kuts, Vladimir; Otto, Tauno; Boychuk, Rostyslav; Mahmood, Kashif; Pizzagalli, Simone Luca Proceedings of the Estonian Academy of Sciences 2025 / p. 103-108 <https://doi.org/10.3176/proc.2025.2.03>