

Autonomous driving validation and verification using digital twins

Pikner, Heiko; Malayjerdi, Mohsen; Bellone, Mauro; Baykara, Baris Cem; Sell, Raivo Proceedings of the 10th International Conference on Vehicle Technology and Intelligent Transport Systems - VEHITS ; Vol. 1 2024 / p. 204-211
<https://doi.org/10.5220/0012546400003702> [Conference Proceeding at Scopus](#) [Article at Scopus](#)

Autonomous vehicle shuttle in Smart City testbed

Sell, Raivo; Soe, Ralf-Martin; Wang, Ruxin; Rassölkin, Anton Intelligent System Solutions for Auto Mobility and Beyond : Advanced Microsystems for Automotive Applications 2020 2021 / p. 143–157 https://doi.org/10.1007/978-3-030-65871-7_11

AutoRIO : an indoor testbed for developing autonomous vehicles

Loni, Mohammad; Daneshtalab, Masoud; Sjödin, Mikael 2018 Proceedings of the Japan-Africa Conference on Electronics, Communications, and Computations (JAC-ECC) : December 16-18, 2018 Alexandria, Egypt 2018 / p. 69-72 : ill
<https://doi.org/10.1109/JEC-ECC.2018.8679543>

Blockchain technology on the way of autonomous vehicles development

Narbayev, Saltanat; Bakibayev, Timur; Abeshev, Kuanysh; Makarova, Irina; Shubenkova, Ksenia; Pashkevich, Anton Transportation research procedia 2020 / p. 168–175 <https://doi.org/10.1016/j.trpro.2020.02.024> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Concept of the test Bench for electrical vehicle propulsion drive data acquisition

Rassölkin, Anton; Rjabtsikov, Viktor; Vaimann, Toomas; Kallaste, Ants; Kuts, Vladimir 2020 XI International Conference on Electrical Power Drive Systems (ICEPDS), Saint-Petersburg, Russia, October 4-7, 2020 2020 / p. 35-42 : ill
<https://doi.org/10.1109/ICEPDS47235.2020.9249078>

A cross-country comparison of user experience of public autonomous transport

Bellone, Mauro; Ismailogullari, Azat; Kantala, Tommi; Mäkinen, Sami; Soe, Ralf-Martin; Kyrrö, Milla Aman European transport research review 2021 / art. 19 <https://doi.org/10.1186/s12544-021-00477-3> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development case study of the first Estonian self-driving car, ISEAUTO

Rassölkin, Anton; Sell, Raivo; Leier, Mairo Scientific Journal of Riga Technical University. Electrical, control and communication engineering 2018 / p. 81-88 : ill <https://doi.org/10.2478/ecce-2018-0009>

Development of a validation regime for an autonomous campus shuttle

Medrano-Berumen, Christopher; Malayjerdi, Mohsen; Ilhan Akbas, Mustafa; **Sell, Raivo** IEEE SoutheastCon 2020, Raleigh, NC, 28-29 March 2020 : IEEE Region 3's annual conference : virtual : proceedings 2020 / 8 p
<https://doi.org/10.1109/SoutheastCon44009.2020.9249692>

Hyperspectral imaging for vehicle traction effort prediction: ISEAUTO case study

Valme, Daniil; Rassölkin, Anton; Liyanage, Dhanushka Chamara 2023 IEEE 17th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG) 2023 / 5 p <https://doi.org/10.1109/CPE-POWERENG58103.2023.10227463>

Intelligent functions development on autonomous electric vehicle platform

Wang, Ruxin; Sell, Raivo; Rassölkin, Anton; Otto, Tauno; Malayjerdi, Ehsan Journal of machine engineering 2020 / p. 114-125
<https://doi.org/10.36897/jme/117787> [Journal metrics at Scopus](#) [Article at Scopus](#)

Mobility in smart cities : will automated vehicles take it over?

Soe, Ralf-Martin Smart governance for cities : perspectives and experiences 2020 / p. 189-216 https://doi.org/10.1007/978-3-030-22070-9_10

A model-based LQR control of an obstacle avoidance maneuver of a self-driving car

Astrov, Igor; Udal, Andres; Pikner, Heiko; Malayjerdi, Ehsan 2022 IEEE 20th Jubilee World Symposium on Applied Machine Intelligence and Informatics (SAMI) : Poprad, Slovakia, 2-5 March 2022 2022 / p. 473-478 : ill
<https://doi.org/10.1109/SAMI54271.2022.9780755>

Novel digital twin concept for industrial application. Study case: propulsion drive system

Jegorov, Sergei; Rassölkin, Anton; Rjabtsikov, Viktor; Mohamed, Mahmoud Ibrahim Hassanin; Kuts, Vladimir Proceedings of ASME 2022 International Mechanical Engineering Congress and Exposition (IMECE2022), 2B: Columbus, Ohio, USA, October 30 - November 3, 2022 2022 / art. IMECE2022-97243, V02BT02A011, 6 p. <https://doi.org/10.1115/IMECE2022-97243>

Parametric digital twin of autonomous electric vehicle transmission

Rassölkin, Anton; Rjabtsikov, Viktor; Kuts, Vladimir; Kudelina, Karolina; Vaimann, Toomas; Kallaste, Ants; Partyshev, Andriy Journal of machine engineering 2021 / p. 131-140 : ill <https://doi.org/10.36897/jme/134435> [Journal metrics at Scopus](#) [Article at Scopus](#)

Polyverif : an open-source environment for autonomous vehicle validation and verification research acceleration

Razdan, Rahul; Akbas, Mustafa Ilhan; **Sell, Raivo; Bellone, Mauro**; Menase, Mahesh; **Malayjerdi, Mohsen** IEEE Access 2023 / p. 28343-28354 <https://doi.org/10.1109/ACCESS.2023.3258681> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Preliminary sensors selection for reconfigurable continuous track robot obstacle detection

Valme, Daniil; Kudelina, Karolina; Rassölkin, Anton 2021 IEEE Open Conference of Electrical, Electronic and Information Sciences (eStream): proceedings of the conference, April 22, 2021, Vilnius, Lithuania 2021 / 5 p. : ill <https://doi.org/10.1109/eStream53087.2021.9431394>

Real-life experiences in using open source for autonomy applications

Malayjerdi, Mohsen; Sell, Raivo; Malayjerdi, Ehsan; Akbas, Mustafa Ilhan; **Razdan, Rahul** Engineering Proceedings 2024 / art. 19 <https://doi.org/10.3390/engproc2024079019> [Journal metrics at Scopus](#) [Article at Scopus](#)

ROS middle-layer integration into Unity3D as an interface option for propulsion drive simulations of autonomous vehicles

Kuts, Vladimir; Rassölkin, Anton; Jegorov, Sergei; Rjabtšikov, Viktor Proceedings of the Estonian Academy of Sciences 2021 / p. 392-398 : ill <https://doi.org/10.3176/proc.2021.4.04> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Scenario-based Validation for Autonomous Vehicles with Different Fidelity Levels

Malayjerdi, Mohsen; Kaljavesi, Gemb; Diermeyer, Frank; **Sell, Raivo** 2023 IEEE Conference on Intelligent Transportation Systems (ITSC 2023) 2023 / 6 p <https://doi.org/10.1109/ITSC57777.2023.10422403>

Situational awareness in autonomous shuttle buses

Kalda, Krister; Koskinen, Kari M.; **Sarv, Lill; Sell, Raivo** Proceedings of the Estonian Academy of Sciences 2025 / p. 212-216 <https://doi.org/10.3176/proc.2025.2.23> https://kirj.ee/wp-content/plugins/kirj/pub/proc-2-2025-212-216_20250519131011.pdf?v=a57b8491d1d8

Sustainable data governance for cooperative, connected and automated mobility in the European Union

Andraško, Jozef; **Hamulak, Ondrej**; Mesarčik, Matuš; **Kerikmäe, Tanel; Kajander, Aleks Oskar Johannes** Sustainability 2021 / art. 10610, 25 p <https://doi.org/10.3390/su131910610> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

The digital development of the European Union : data governance aspects of cooperative, connected and automated mobility

Andraško, Jozef; Mesarčik, Matuš; **Hamulak, Ondrej** IDP: Revista d'Internet, Dret i Política 2021 / p. 1-16 <https://doi.org/10.7238/idp.v0i34.387494>

3DLaneNAS : neural architecture search for accurate and light-weight 3D lane detection

Zoljodi, Ali; Loni, Mohammad; Abadijou, Sadegh; Alibeigi, Mina; **Daneshtalab, Masoud** Artificial Neural Networks and Machine Learning - ICANN 2022 : proceedings. Part I 2022 / p. 404-415 https://doi.org/10.1007/978-3-031-15919-0_34 [Conference Proceedings at scopus](#) [Article at Scopus](#) [Conference Proceedings at WOS](#) [Article at WOS](#)

A Two-layered approach for the validation of an operational autonomous shuttle

Malayjerdi, Mohsen; Goss, Quentin A.; Akbas, Mustafa Ilhan; **Sell, Raivo; Bellone, Mauro** IEEE Access 2023 / p. 89124–89137 <https://doi.org/10.1109/ACCESS.2023.3306602> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Unsettled impacts of integrating automated electric vehicles into a mobility-as-a-service ecosystem and effects on traditional transportation and ownership

Taiber, Joachim; **Sell, Raivo** 2019 <https://doi.org/10.4271/EPR2019004>

Unsettled technology areas in autonomous vehicle test and validation

Razdan, Rahul; Akbas, Mustafa Ilhan; Sargolzaei, Arman; Alanser, Ala Jamil 2019 <https://doi.org/10.4271/EPR2019001> <https://rancis-lab.com/our-research-report-on-autonomous-vehicles-is-published-by-sae/>

Unsettled topics concerning autonomous public transportation systems

Razdan, Rahul 2020 <https://saemobilus.sae.org/content/epr2020020>

Use case of Autonomous Vehicle shuttle and passenger acceptance analysis

Kalda, Krister; Sell, Raivo; Soe, Ralf-Martin Proceedings of the Estonian Academy of Sciences 2021 / p. 429-436 : ill <https://doi.org/10.3176/proc.2021.4.09> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)