

Adaptive industrial robots using machine vision

Kuts, Vladimir; Otto, Tauno; Tähemaa, Toivo; Bukhari, Khuldoon; Pataria, Tengiz ASME 2018 International Mechanical Engineering Congress and Exposition, Pittsburgh, Pennsylvania, USA, November 9–15, 2018 2018 / Paper No. IMECE2018-86720, pp. V002T02A093, 8 p. : ill <https://doi.org/10.1115/IMECE2018-86720>

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://sarjweb.vtt.fi/pdf/technology/2021/T395.pdf> <https://doi.org/10.32040/2242-122X.2021.T395>

Collaborative work between human and industrial robot in manufacturing by advanced safety monitoring system

Kuts, Vladimir; Sarkans, Martinš; Otto, Tauno; Tähemaa, Toivo Annals of DAAAM for 2017 and proceedings of the 28th International DAAAM Symposium "Intelligent Manufacturing & Automation" : 8-11 November 2017, Zadar, Croatia 2017 / p. 0996-1001 : ill <https://dx.doi.org/10.2507/28th.daaam.proceedings.138>

Demopäev tutvustas nelja kasulikku tööstusrobotit

Pödersalu, Heiko Mente et Manu 2022 / lk. 56-57 : fot https://www.ester.ee/record=b1242496*est

Development of digital twin-based learning from demonstration system for industrial robots

Bondarenko, Yevhen 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. 19-20 : ill https://www.ester.ee/record=b5457278*est

Development of intelligent manufacturing cell structure for SME digital manufacturing hub = Intelligentse robot-tootmise struktuuri arendus väike- ja keskmise suurusega ettevõtete digitaalsete töökohtade tarbeks

Kangru, Tavo 2021 https://www.ester.ee/record=b5396857*est <https://digikogu.taltech.ee/et/Item/999c711f-5ccf-4195-9188-c919894cc7ce> <https://doi.org/10.23658/taltech.7/2021>

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 : 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 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](#)

Dokoritöö ulatab robottöökohti loovatele ettevõtetele abikäe [Võrguväljaanne]

Harrik, Airika; Kangru, Tavo novaator.err.ee 2021 / fot [Dokoritöö ulatab robottöökohti loovatele ettevõtetele abikäe](#)

A Dual-arm robot for collaborative vision-based object classification

Zahavi, Ali; Najafi Haeri, Shahriar; Chamara Liyanage, Dhanushka; Tamre, Mart 2020 17th Biennial Baltic electronics conference, Tallinn, Estonia, October 6-8, 2020 : proceedings 2020 <https://doi.org/10.1109/BEC49624.2020.9277067>

Efficiency management of robotic production processes at automotive industry

Makarova, Irina; Khabibullin, Rifat; Mukhametdinov, Eduard; Pashkevich, Anton; Shubenkova, Ksenia 17th Mechatronics 2016 : proceedings of the 2016 17th International Conference on Mechatronics - Mechatronika (ME) 2016 : Prague, Czech Republic, December 7-9, 2016 2016 / p. 35-42 : ill <http://ieeexplore.ieee.org/document/7827790/>

Energy efficient trajectory planning of industrial robots

Auväär, Aivar; Lehtla, Tõnu 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 89-92

Energy saving possibilities in the industrial robot IRB 1600 control [Electronic resource]

Rassõlkin, Anton; Hõimoja, Hardi; Teemets, Raivo CPE 2011 : 7th International Conference-Workshop Compatibility and Power Electronics : June 1-3, 2011, Tallinn, Estonia : conference guide 2011 / p. 226-229 [CD-ROM]
https://www.researchgate.net/publication/252015731_Energy_saving_possibilities_in_the_industrial_robot_IRB_1600_control

Fault diagnosis system of Cartesian robot for various belt tension

Autsou, Siarhei; Vaimann, Toomas; Rassõlkin, Anton; Kudelina, Karolina 2022 International Conference on Diagnostics in Electrical Engineering (Diagnostika) 2022 / 4 | <https://doi.org/10.1109/Diagnostika55131.2022.9905111>

Global descripttors [i.e descriptors] application in object recognition

Kupriyanov, Dmitry; Shvarts, Dmitry; Musalimov, Victor; Tamre, Mart Shaping the Future by Engineering : 58th IWK, Ilmenau Scientific Colloquium, Technische Universität Ilmenau, 8-12 September 2014 : proceedings 2014 / p. 1-6 : ill

Implementation of industrial robots in instruction at Tallinn University of Technology

Müür, Margus 13th International Symposium "Topical Problems in the Field of Electrical and Power Engineering." Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 14-19, 2013 2013 / p. 197-200 : ill

Implementation of robot welding cells using modular approach

Sarkans, Martinš; Roosimölder, Lembit Estonian journal of engineering 2010 / 4, p. 317-327 : ill

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](#)

Industrial robot training in the simulation using the machine learning agents

Nutonen, Karle 21st International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Pärnu, Estonia, June 15-18, 2022 2022 / p. 13-14 : ill https://www.ester.ee/record=b5504019*est

Industry 4.0 laboratory

Vaher, Kristo; Vainola, Vello; Otto, Tauno IV International Scientific Conference, Industry 4.0. Summer session, 24-27.06.2019, Burgas, Bulgaria : proceedings. Vol. 1/5 2019 / p. 52-53 ; ill <https://industry-4.eu/winter/sbornik/1-2019.pdf>

Industry 4.0 laboratory

Vaher, Kristo; Vainola, Vello; Otto, Tauno International Scientific Journal Industry 4.0 2019 / p. 210-211 : ill
<https://stumejournals.com/journals/i4/2019/5/210>

Intelligent decision making approach for performance evaluation of a robot-based manufacturing cell

Kangru, Tavo; Riives, Jüri; Otto, Tauno; Pohlak, Meelis; Mahmood, Kashif ASME 2018 International Mechanical Engineering Congress and Exposition : Pittsburgh, Pennsylvania, USA, November 9–15, 2018 2018 / Paper No. IMECE2018-86666, pp. V002T02A092; 10 p. : ill <http://doi.org/10.1115/IMECE2018-86666>

Kallis robot õpetab tehnikatudengeid : [TTÜ robotispetsialistide õpetamiseks lasti käiku miljonikroonine tööstusrobot]

Vill, Ants Linnaleht 2008 / 9. sept., lk. 2

Knowledge-driven based performance analysis of robotic manufacturing cell for design improvement

Kangru, Tavo; Mahmood, Kashif; Otto, Tauno; Moor, Madis; Riives, Jüri ASME 2020 : International Mechanical Engineering Congress and Exposition, November 16–19, 2020 : Virtual, Online : proceedings 2020 / Paper No: IMECE2020-23541, V006T06A032 ; 8 p <https://doi.org/10.1115/IMECE2020-23541>

Kuidas Eesti rahvas tööstusrobotitega tuttavaks sai

Reedik, Vello Inseneeria 2010 / 3, lk. 26-27 : fot

Methodology for configuration of robot welding cell for SMEs under conditions of small and medium sized production using MIG/MAG process

Talalaev, Robert; Sarkans, Martinš; Laansoo, Andres; Veinthal, Renno Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 591-596 : ill

Modern robot integrated manufacturing cell according to the needs of Industry 4.0

Moor, Madis; Vaher, Kristo; Riives, Jüri; Kangro, Tavo; Otto, Tauno IOP conference series : materials science and engineering 2021 / art. 012034, 5 p. : ill <https://doi.org/10.1088/1757-899X/1140/1/012034>

Modern robot-integrated manufacturing cell according to the needs of Industry 4.0

Moor, Madis; Vaher, Kristo; Riives, Jüri; Kangro, Tavo; Otto, Tauno Proceedings of the Estonian Academy of Sciences 2021 / p. 407-412 : ill <https://doi.org/10.3176/proc.2021.4.06> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Multitier digital twin approach for agile supply chain management

Ševtšenko, Eduard; Mahmood, Kashif; Karaulova, Tatjana; Raji, Oluwole Ibrahim ASME 2020 : International Mechanical Engineering Congress and Exposition, November 16–19, 2020 : Virtual, Online : proceedings 2020 / Paper No: IMECE2020-23760, 10 p <https://doi.org/10.1115/IMECE2020-23760>

Müürirobot

Strandberg, Marek Inseneeria 2015 / lk. 6

Novel digital twin development methodology for the robot cell connectivity in a smart industry environment = Uudne digitaalsete kaksikute arendusmeetodika robottootmisrakkude sidustamiseks targa tööstuse keskkonnas

Kuts, Vladimir 2019 <https://digi.lib.ttu.ee/i/?12252> Tehnikaülikooli doktoritöö tõhustas robotijuhtimist virtuaalkaksikuga

Nutika tootmise uus tase paintootmissüsteemide ja robotika demokeskuse abil

Karjust, Kristo; Otto, Tauno Mente et Manu 2017 / lk. 36-37 : fot http://www.ester.ee/record=b1242496*est

Optimisation of decision-making process in industrial robot selection

Kangru, Tavo; Riives, Jüri; Otto, Tauno; Kuts, Vladimir; Moor, Madis Journal of the machine engineering 2020 / p. 70–81 <https://doi.org/10.36897/jme/117788> [Journal metrics at scopus](#) [Article at Scopus](#)

Positioning error correction of autonomously movable robot arm

Vaher, Kristo; Otto, Tauno; Riives, Jüri Journal of the machine engineering 2020 / p. 152-160 : ill <https://doi.org/10.36897/jme/129013> [Journal metrics at Scopus](#) [Article at Scopus](#)

Possibilities of integrating the industrial robot systems to smart grids

Beldjajev, Viktor; Lehtla, Tõnu EPE-PEMC 2010 : 14th International Power Electronics and Motion Control Conference : 6-8 September 2010, Ohrid, Republic of Macedonia 2010

Preparation of industrial robot systems for work in intelligent power networks

Beldjajev, Viktor; Lehtla, Tõnu 8th International Symposium "Topical Problems in the Field of Electrical and Power Engineering" : Doctoral School of Energy and Geotechnology. II : [Pärnu, January 11-16, 2010 : proceedings] 2010 / p. 71-74

Robot manipulator usage for measurement in production areas

Kuts, Vladimir; Tähemaa, Toivo; Otto, Tauno; Sarkans, Martinš; Lend, Henri Journal of machine engineering 2016 / p. 57-67 : ill http://www.not.pl/wydawnictwo/2016JOM/V1/6_KUTS.pdf

Robot tööstuses

Reedik, Vello; Unt, A. Tehnika ja Tootmine 1985 / lk. 2-3 https://www.ester.ee/record=b1073047*est

Roboti PM-01 tarkvarasüsteem ARPS1

Lehtla, Tõnu Tehnika ja Tootmine 1988 / lk. 14-16 https://www.ester.ee/record=b1073047*est

Robotite rakendamine tootmisse - see on lihtne?

Reedik, Vello Horisont 1986 / lk. 2-4 : ill., foto https://www.ester.ee/record=b1072243*est <https://www.digar.ee/arhiiv/et/periodika/70119>

Robotitehnika

Lehtla, Tõnu 2008 http://www.ester.ee/record=b2364709*est

Robotitehnika

Lehtla, Tõnu; Risthein, Endel 2008 http://www.ester.ee/record=b2364692*est

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 2023 IEEE International Conference on Computers and Automation (CompAuto 2023) 2023

Simulation based feasibility analysis of autonomously movable robot arm

Vaher, Kristo; Mahmood, Kashif; Otto, Tauno; Riives, Jüri IOP conference series : materials science and engineering 2021 / art. 012055, 6 p. : ill <https://doi.org/10.1088/1757-899X/1140/1/012055>

Simulation based feasibility analysis of autonomously movable robot arm

Vaher, Kristo; Mahmood, Kashif; Otto, Tauno; Riives, Jüri Proceedings of the Estonian Academy of Sciences 2021 / p. 422-428 : ill <https://doi.org/10.3176/proc.2021.4.08> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Studing the impact of gearbox faults on the operations of the cartesian robot

Autsou, Siarhei 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. 17-18 : ill https://www.ester.ee/record=b5570906*est

Suitability analysis of using industrial robots in manufacturing

Kangru, Tavo 19th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. III" : Tartu, Estonia, January 14-17, 2020 2020 / p. 87-88 : ill https://www.ester.ee/record=b5291755*est

Suitability analysis of using industrial robots in manufacturing

Kangru, Tavo; Riives, Jüri; Mahmood, Kashif; Otto, Tauno Proceedings of the Estonian Academy of Sciences 2019 / p. 383–388 : ill http://www.kirj.ee/32687/?tpl=1061&c_tpl=1064 <https://doi.org/10.3176/proc.2019.4.06> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Sügisest saavad Eesti ettevõtted head nõu tööstuses tehisintellekti ja robotika kasutamiseks

Mente et Manu 2021 / lk. 6 https://www.ester.ee/record=b1242496*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](#)

Tallinna Tehnikaülikooli Virumaa kolledžis näidatakse tööstusrobotid [Võrguväljaanne]

virumaateataja.postimees.ee 2022 ["Tallinna Tehnikaülikooli Virumaa kolledžis näidatakse tööstusrobotid"](https://www.ester.ee/record=b1242496*est)

Teleoperation of the industrial robot : augmented reality application

Chung, Xue Er Shamaine; Qiao, Yuansong; **Kuts, Vladimir**; Henry, John; McNevin, Ken; Murray, Niall MMSys '22: Proceedings of the 13th ACM Multimedia Systems Conference 2022 / p. 299–303 <https://doi.org/10.1145/3524273.3532901>

TTÜ esitles ABB tööstusrobotit

Elektriala 2008 / 6, lk. 32-33 : fot

TTÜ mehhatroonikud said omale YuMi

Inseneeria 2016 / lk. 34 : fot

Tööstus 4.0 ja selle mõjud Eesti tööstusele ja haridusele

Riives, Jüri Riigikogu Toimetised 2015 / lk. 42-50

Tööstusrobot PM-01

Lehtla, Tõnu Tehnika ja Tootmine 1988 / lk. 19-22 https://www.ester.ee/record=b1073047*est

Tööstusrobot TYP-10

Lehtla, Tõnu Tehnika ja Tootmine 1985 / lk. 10-12 : ill https://www.ester.ee/record=b1073047*est

Tööstusrobotid

Tiismus, Hugo; Lehtla, Tõnu Tehnika ja Tootmine 1982 / lk. 9-12 https://www.ester.ee/record=b1073047*est

Tööstusrobotid : ajamid ja nende elemendid

Tiismus, Hugo; Lehtla, Tõnu 1987 https://www.ester.ee/record=b1263046*est

Tööstusrobotid : otstarve ja ehitus

Lehtla, Tõnu 1985 https://www.ester.ee/record=b1233814*est

Tööstusrobotid ja robottehnilised süsteemid : skeemid ja joonised = Промышленные роботы и робототехнические системы : схемы и рисунки

1989

Tööstusrobotite valik ja ratsionaalne kasutamine

Riives, Jüri Tehnika ja Tootmine 1985 / lk. 12-14 : ill https://www.ester.ee/record=b1073047*est

Unified interface for programming and control of industrial robots

Bondarenko, Yevhen 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. 13-14 : ill https://www.ester.ee/record=b5570906*est

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://publications.vtt.fi/pdf/technology/2023/T422.pdf> <https://doi.org/10.32040/2242-122X.2023.T422>

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](#)

Uudne digikaksik tõstab robotijuhtimise uuele tasemele

Horisont 2020 / lk. 4 : fot https://www.ester.ee/record=b1072243*est

Uus samm robotitehnika arengus Eestis : [uue tööstusroboti IRB1600 esitlus TTÜs]

Beldjajev, Viktor Studioosus 2008 / okt., lk. 11: fot https://www.ester.ee/record=b1558644*est

Valuroboti mikroprotsessorjuhtimisega manipulaatori uurimine : elektriseadmed : magistritöö

Kulmar, Lembit 1992 https://www.ester.ee/record=b2630339*est

Welding robot cell implementation in SME-s using modular approach - case study

Sarkans, Martinš; Roosimölder, Lembit Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [III] 2010 / p. 578-583

Алгоритм решения обратной кинематической задачи для промышленного робота "Гранат-10"

Кукаренко Е.П.; Пашкевич А.П.; Корзун А.Н. Тезисы докладов семинара "Новые направления научных исследований в области электромеханики" 1991 / с. 63-64

Выбор промышленных роботов

Riives, Jüri Экспресс-информация. Технология машиностроения 1985 / с. 21-27

Пневматические системы обработки технологической информации для промышленных роботов

Reedik, Vello; Unt, Andres 3rd Seminar on industrial robots : Győr, 6-8 june, 1984 1984 / с. 133-142

Промышленный робот ТУР-10 : методическое пособие к лабораторным работам для студентов специальности 0628

1987 https://www.ester.ee/record=b1273285*est

Промышленный робот Универсал-5 : методическое пособие для студентов специальности 0628

1982 https://www.ester.ee/record=b1265857*est

Система off-line программирования робототехнического комплекса вязки жгутов, на базе робота РМ-01

Кукаренко Е.П.; Хмель Д.Е. Тезисы докладов семинара "Новые направления научных исследований в области электромеханики" 1991 / с. 76-79

Управление приводами литейного робота

Kulmar, Lembit; Lehtla, Tõnu; Tiismus, Hugo Тезисы докладов семинара "Новые разновидности электропривода и возможности их применения" 1990 / с. 107-108