

Adaptive industrial robots using machine vision

Kuts, Vladimir; Otto, Tauno; Tähemaa, Toivo; Bukhari, Khuldoon; Patariaia, 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>

Advanced dynamic models for evaluation of accuracy of machining on lathes

Arjassov, Gennadi; Otto, Tauno; Gromova, Svetlana Proceedings of the Estonian Academy of Sciences. Engineering 2004 / 4, p. 270-280 : ill

Advanced e-curriculum and mobile tools for interdisciplinary modular study

Sell, Raivo; Otto, Tauno 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 246-248 : ill

Advancement in production engineering education through Virtual Learning Factory Toolkit concept

Mahmood, Kashif; Otto, Tauno; Kuts, Vladimir Proceedings of the Estonian Academy of Sciences 2021 / p. 374-382 : ill
<https://doi.org/10.3176/proc.2021.4.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

AI functionalities in cobot-based manufacturing for performance improvement in quality control application

Moor, Madis; Sarkans, Martinš; Kangru, Tavo; **Otto, Tauno; Riives, Jüri** Journal of machine engineering 2024 / p. 5-16
<https://doi.org/10.36897/jme/189169> [Journal metrics at Scopus](#) [Article at Scopus](#)

An IoT-based approach to digitalize a manufacturing system

Mahmood, Kashif; Otto, Tauno; Karaulova, Tatjana; Ševtšenko, Eduard 17th International Symposium “Topical Problems in the Field of Electrical and Power Engineering”. Doctoral school of energy and geotechnology. III : Kuressaare, Estonia, January 15-20, 2018 2018 / p. 257-261 : ill http://ise.elnet.ee/record=b2950215~S2*est

Analysis of Industry 4.0 capabilities: a perspective of educational institutions and needs of industry

Mahmood, Kashif; Otto, Tauno; Kristensen, Jesper H.; Heidemann Lassen, Astrid; Brunoe, Thomas D.; Schou, Casper; Christiansen, Lasse; Laursen, Esben Skov Towards Sustainable Customization : Bridging Smart Products and Manufacturing Systems : proceedings of the 8th Changeable, Agile, Reconfigurable and Virtual Production Conference (CARV2021) and the 10th World Mass Customization & Personalization Conference (MCPC2021), Aalborg, Denmark, October/November 2021 2022 / p. 887–894 https://doi.org/10.1007/978-3-030-90700-6_101 [Conference proceedings at Scopus](#) [Article at Scopus](#)

Analysis of lathe vibration influence on blank roughness

Arjassov, Gennadi; Otto, Tauno; Gromova, Svetlana Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 120-123 : ill

An approach to analyze the performance of advanced manufacturing environment

Mahmood, Kashif; Otto, Tauno; Golova, Jelena; Kangru, Tavo; Kuts, Vladimir Procedia CIRP 2020 / p. 628–633
<https://doi.org/10.1016/j.procir.2020.04.042> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

An approach to develop a digital twin for industry 4.0 systems : manufacturing automation case studies

Guerra-Zubiaga, David; **Kuts, Vladimir; Mahmood, Kashif; Bondar, Alex;** Nasajpour-Esfahani, Navid; **Otto, Tauno** International Journal of Computer Integrated Manufacturing 2021 / p. 933-949 : ill <https://doi.org/10.1080/0951192X.2021.1946857> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

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>

Business-aid networking in production

Riives, Jüri; Otto, Tauno; Olt, Madis Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 249-252 : ill

CCD IK implementatsion in unity for finding the angles of industrial robots' links

Nutonen, Karle; Kuts, Vladimir; Otto, Tauno ASME International Mechanical Engineering Congress and Exposition, Proceedings (IMECE) ; vol. 2 2024 / art. IMECE2024-142320, V002T03A072 ; 5 p. <https://doi.org/10.1115/IMECE2024-142320>

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

Company's strategy based formation of e-workplace performance in the engineering industry = E-töökoha võimekuse kujundamine lähtuvalt masinatööstusettevõtte tegevusstrateegiast

Lõun, Kaia 2013 <https://digi.lib.ttu.ee/i/?922> https://www.ester.ee/record=b2969741*est

Cooperation models between companies and universities : a case study

Randmaa, Merili; Otto, Tauno 14th International Symposium "Topical problems in the field of electrical and power engineering. Doctoral school of energy and geotechnology. II" : Pärnu, Estonia, January 13-18, 2014 2014 / p. 261-263 : ill

DAAAM Baltic - samm-sammult suuremate eesmärkide poole

Otto, Tauno Tallinna Tehnikaülikooli aastaraamat 2012 2013 / lk. 264-265

DAAAM konverents : [4. rahvusvaheline konverents "Innovatsioon tootmiskorralduses kui väike- ja keskmiste ettevõtete konkurentsieelis" 29.-30. apr. 2004 TTÜs]

Otto, Tauno Mente et Manu 2004 / 13. mai, lk. 1 : fot https://www.ester.ee/record=b1242496*est

DAAAM toob Eestisse tööstuse innovatsioonipotentsiaali tõstjaid

Otto, Tauno Tallinna Tehnikaülikooli aastaraamat 2010 2011 / lk. 275-276

Data mining in production management and manufacturing

Matsi, Birthe; Otto, Tauno; Lõun, Kaia; Roosimölder, Lembit DAAAM International Scientific Book 2009 2009 / p. 97-106

Data mining in production management and manufacturing

Matsi, Birthe; Lõun, Kaia; Otto, Tauno; Roosimölder, Lembit Annals of DAAAM for 2008 & proceedings of the 19th International DAAAM Symposium : Intelligent Manufacturing & Automation : Focus on Next Generation of Intelligent Systems and Solutions 2008 / p. 827-828

Development and implementation of enterprise information management systems for interoperability = Ettevõtte infohaldussüsteemide arendamine ja juurutamine koostalitlusvõime jaoks

Lemmik, Rivo 2018 <https://digi.lib.ttu.ee/i/?10624> https://www.ester.ee/record=b5151053*est

Development of a smart workstation by using AR technology

Värno, Kätlin; Otto, Tauno; Mahmood, Kashif; Kuts, Vladimir The application track, posters and demos of EuroVR : Proceedings of the 16th Annual EuroVR Conference - 2019 2019 / p. 19-22 : ill <https://doi.org/10.32040/2242-122X.2019.T357>
<https://www.vttresearch.com/sites/default/files/pdf/technology/2019/T357.pdf>

Development of a smart workstation by using AR technology

Värno, Kätlin; Mahmood, Kashif; Otto, Tauno; Kuts, Vladimir Proceedings of the 30th International DAAAM Symposium : Intelligent Manufacturing & Automation, 23-26th October 2019, Zadar, Croatia 2019 / 1061-1067 : ill
<https://doi.org/10.2507/30th.daaam.proceedings.148>

Development of additive manufacturing based on functional requirements = Funktsionaalsete vajaduste põhine kihtlisandustootmise arendus

Sonk, Kaimo 2015 https://www.ester.ee/record=b4494974*est

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>

Development of cyber-physical production systems based on modelling technologies

Mahmood, Kashif; Karaulova, Tatjana; Otto, Tauno; Ševtšenko, Eduard Proceedings of the Estonian Academy of Sciences 2019 / p. 348-355 : ill http://www.kirj.ee/32601/?tpl=1061&c_tpl=1064 <https://doi.org/10.3176/proc.2019.4.02> [Journal metrics at Scopus](#)
[Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Development of database of business processes for SME on the base of quality system

Karaulova, Tatjana; Otto, Tauno Annals of DAAAM for 2005 & proceedings of the 16th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Young Researches and Scientists" : 19-22nd October 2005, Opatija, Croatia 2005 / p. 179-180 : ill <https://www.thefreelibrary.com/Development+of+database+of+business+processes+for+SME+on+the+base+of+...-a0176688336>

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.estet.ee/record=b5396857*est <https://digikogu.taltech.ee/et/item/999c711f-5ccf-4195-9188-c919894cc7ce>
<https://doi.org/10.23658/taltech.7/2021>

Development of virtual learning factory toolkit for production engineering education

Mahmood, Kashif; Otto, Tauno; Kuts, Vladimir; Terkaj, Walter; Urgo, Marcello; Haidegger, Geza IOP conference series : materials science and engineering 2021 / art. 012039, 8 p <https://doi.org/10.1088/1757-899X/1140/1/012039>

Diagnostics of machining and assembly systems by networked nodes

Preden, Jürjo-Sören; Sarkans, Martinš; Otto, Tauno Machine engineering 2007 / 1/2, p. 68-77

A digital measuring module for tool wear estimation

Otto, Tauno; Kurik, Lembit Annals of DAAAM for 2002 & proceedings of the 13th International DAAAM Symposium "Intelligent Manufacturing & Automation : Learning from Nature" : Vienna University of Technology, 23-26th October 2002, Vienna, Austria, European Union 2002 / p. 397-398 : ill

A digital measuring module for tool wear estimation

Otto, Tauno; Kurik, Lembit; Papstel, Jüri DAAAM international scientific book 2003 2003 / p. 435-444

A digital measuring system for robot welding quality estimation

Otto, Tauno; Kurik, Lembit; Naams, Invar Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 128-129 : ill

Digital Object Memory based monitoring solutions in manufacturing processes

Aruväli, Tanel; Maass, Wolfgang; Otto, Tauno Procedia engineering 2014 / p. 449-458 : ill <https://doi.org/10.1016/j.proeng.2014.03.011>
[Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Digital Object Memory integration into indirect surface roughness measurement in turning

Aruväli, Tanel; Otto, Tauno 4th Mechanical and Manufacturing Engineering : selected, peer reviewed papers from the 4th International Conference on Mechanical and Manufacturing Engineering (ICME 2013), December 17-18, 2013, Bangi-Putrajaya, Malaysia 2014 / p. 764-768 <https://doi.org/10.4028/www.scientific.net/AMM.465-466.764> [Article at Scopus](#) [Article at WOS](#)

Digital tool wear measuring video system

Otto, Tauno; Kurik, Lembit Proceedings of the 2nd International Conference, 27-29th April 2000, Tallinn, Estonia / DAAAM International Vienna, DAAAM National Estonia 2000 / p. 144-146 : 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 : 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>

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](#)

Digitootmise tehnoloogiate arendusest töötlevale tööstusele

Küttner, Rein; Karjust, Kristo; Otto, Tauno; Riives, Jüri Teadusmõte Eestis (X). Tehnikateadused. 3 : [artiklikogumik] 2019 / lk.

Eessõna

Otto, Tauno Eesti Masinatööstuse Liit. Tallinna Tehnikaülikooli mehaanikateaduskond 80 2016 / lk. 5-6
https://www.ester.ee/record=b4577314*est

Eessõna

Otto, Tauno Rein Küttner : bibliograafia 2015 / lk. 7-9 https://www.ester.ee/record=b4523385*est

Eesti ettevõtete suunalise uuringu raport

Lõun, Kaia; Riives, Jüri; Küttner, Rein; Otto, Tauno; Höbemägi, Aleksei; Lelumees, Tõnu; Halling, Jaanus 2008
https://www.ester.ee/record=b2393158*est

Eesti tulevik sõltub võimetest ja oskusest luua õigeid asju

Otto, Tauno sirp.ee 2025 <https://www.sirp.ee/eesti-tulevik-soltub-voimetest-ja-oskusest-luua-oigeid-asju/>

Effect of vibrations on character of microroughness of machined details

Arjassov, Gennadi; Otto, Tauno Proceedings of the 21th International Conference Mathematical Modelling in Mechanics of Solid and Structures by Boundary & FEM. 2 2006 / p. 42-49

e-Laborite modulariseerimine tööstussektori oskusvajaduste monitooringu põhjal : [e-labori kasutamisest TTÜs erialaainetes Pneumaatika/Hüdraulika]

Otto, Tauno; Sarkans, Martinš Mente et Manu 2005 / 5. mai, lk. 5 https://www.ester.ee/record=b1242496*est

E-manufacturing as a web-based decision-making support for collaborating SME-s in machine-building cluster

Lõun, Kaia; Riives, Jüri; Otto, Tauno Annals of DAAAM for 2007 & proceedings of the 18th International DAAAM Symposium : Intelligent Manufacturing & Automation : Focus on Creativity, Responsibility, and Ethics of Engineers : Zadar (Croatia), 24-27th October 2007 2007 / p. 427-428

E-manufacturing concept solution for tooling sector

Lõun, Kaia; Otto, Tauno; Riives, Jüri Estonian journal of engineering 2009 / 2, p. 108-120 : ill

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>

E-solutions for innovative manufacturing

Matsi, Birthe; Otto, Tauno; Pääsuke, Kaarel Annals of MTeM for 2009 & proceedings of the 9th International Conference Modern Technologies in Manufacturing : 8th-10th October 2009 2009 / p. 165-168 : ill

E-solutions for innovative manufacturing

Matsi, Birthe; Otto, Tauno; Pääsuke, Kaarel Academic journal of manufacturing engineering 2009 / 3, p. 42-47 : ill

E-tootmine vähendab kulusid

Riives, Jüri; Lõun, Kaia; Otto, Tauno Ärielu 2008 / 44, lk. 52-53

Evaluation of geometrical precision and surface roughness quality for the additively manufactured radio frequency quadrupole prototype

Torims, Toms; Cherif, A.; Delerue, Nicholas; Foppa Pedretti, M.; Gruber, Samira; Krogere, Dagnija; Lopez, Elena Torres; **Otto, Tauno;** Pikurs, Guntis; Pozzi, Matteo; Ratkus, A.; Thielmann, Michael; Vedani, Maurizio; Vretenar, Maurizio; Wagenblast, Philipp C. 13th International Particle Accelerator Conference (IPAC'22) 12 - 17 June 2022, Bangkok, Thailand 2023 / art. 012089
<https://doi.org/10.1088/1742-6596/2420/1/012089> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

Evaluation of Geometrical Precision and Surface Roughness Quality for the Additively Manufactured Radio Frequency Quadrupole Prototype

Torims, Toms; Ratkus, G.; Pikurs, D.; Krogere, D.; Vretenar, M.; Cherif, A.; Gruber, S.; Lopez, E.; Pozzi, M.; **Otto, Tauno** 13th International Particle Accelerator Conference, June 12-17, 2022 : conference proceedings 2022 / p. 787-791 : ill
<https://doi.org/10.18429/JACoW-IPAC2022-TUOXSP3> <https://accelconf.web.cern.ch/ipac2022/papers/IPAC2022-proceedings.pdf>

Evaluation of the operation expedience of technological resources in a manufacturing network

Lõun, Kaia; Riives, Jüri; Otto, Tauno Estonian journal of engineering 2011 / 1, p. 51-65 : ill

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>

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 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>

Fault tolerance in integration interfaces of business software

Lemmik, Rivo; **Karjust, Kristo;** **Otto, Tauno** International Journal Of Scientific Knowledge (Computing and Information Technology) IJSK 2014 / p. 35-43 : ill

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>

Foreword

Otto, Tauno Proceedings of the Estonian Academy of Sciences 2019 / p. 347 http://www.kirj.ee/public/proceedings_pdf/2019/issue_4/proc-2019-4-347.pdf

Foreword : [selected papers of the 9th International DAAAM Baltic Conference "Industrial Engineering"]

Otto, Tauno Proceedings of the Estonian Academy of Sciences 2015 / p. 535

A framework for developing educational industry 4.0 activities and study materials

Christiansen, Lasse; Edvardsen Hvidsten, Tommy; Hemdrup Kristensen, Jesper; Gebhardt, Jonas; **Mahmood, Kashif;** **Otto, Tauno;** Heidemann Lassen, Astrid; Ditlev Brunoe, Thomas; Schou, Casper; Skov Laursen, Esben Education Sciences 2022 / art. 659 <https://doi.org/10.3390/educsci12100659> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Framework for extended use of technological resources in the network of enterprises

Lõun, Kaia; **Riives, Jüri;** **Otto, Tauno** Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 316-321

From industry-university cooperation to research brokering in Estonia

Zahharov, Roman; **Karaulova, Tatjana;** **Otto, Tauno;** Boccato, Giorgio The innovation competence broker : bridging firms and R&D institutions 2012 / p. 67-82 : ill https://www.ester.ee/record=b2884623*est

From product centred design to value centred design : understanding the value-system

Randmaa, Merili; Howard, Thomas; **Otto, Tauno** Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 548-554 : ill

Handling industrial hazards by pre-emptive model checking [Electronic resource]

Kuusik, Alar; **Otto, Tauno;** **Vain, Jüri** 4th International Conference on Industrial Automation : June 9-11, 2003, Montreal, Canada : proceedings 2003 / [4] p. : ill. [CD-ROM] https://www.academia.edu/17640340/Handling_Industrial_Hazards_by_Pre_emptive_Model_Checking

Heade mõtete tööstus : Tartus kraaditi tööstuse tulevikku

Otto, Tauno Mente et Manu 2024 / lk. 56-57 : fot https://www.ester.ee/record=b1242496*est

High performance workplace design model

Lõun, Kaia; **Lavin, Jaak;** **Riives, Jüri;** **Otto, Tauno** Estonian journal of engineering 2013 / p. 47-61 : ill https://artiklid.elnet.ee/record=b2605340*est <https://doi.org/10.3176/eng.2013.1.05> [Article at Scopus](#)

Human resources development process in the company, based on competence charts

Riives, Jüri; **Otto, Tauno;** **Lõun, Kaia** Innovative development of human resources in enterprise and in society 2007 / p. 22-37? : ill

Improvement of business process for SME on the basis of quality system

Karaulova, Tatjana; **Otto, Tauno** DAAAM International Scientific Book 2006 2006 / p. 329-340 <https://go.gale.com/ps/i.do?id=GALE%7CA178715977&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=17269687&p=AONE&sw=w&userGroupName=anon%7E5dad6b6a&aty=open-web-entry>

In memoriam Lembit Roosimõlder : 05.09.1942-06.07.2011

Otto, Tauno Tallinna Tehnikaülikooli aastaraamat 2011 2012 / lk. 377-378

Increasing of rapid prototyping performance by 3D printing technologies

Sonk, Kaimo; Matsi, Birthe; Otto, Tauno; Roosimölder, Lembit Journal of machine engineering 2009 / 1S, p. 121-129

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 agent

Nutonen, Karle; Kuts, Vladimir; Otto, Tauno Procedia computer science 2023 / p. 446-455
<https://doi.org/10.1016/j.procs.2022.12.240> [Conference Proceedings at Scopus](#) [Article at Scopus](#)

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>

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>

INNOMET II jätkuprojekti avakoosolek : [13.-14. okt. Riias]

Otto, Tauno Mente et Manu 2005 / 19. okt., lk. 2 https://artiklid.elnet.ee/record=b2350503*est

INNOMET system functionality and software description

Riives, Jüri; Otto, Tauno; Keerman, Markus Innovative development of human resources in enterprise and in society 2007 / p. 38-46? : ill

Innovation capacity estimation in product development

Matsi, Birthe; Otto, Tauno; Roosimölder, Lembit Manufacturing : Focus on the Future : IMC 24 : The International Manufacturing Conference : 29th-31th August 2007, Irland. 2 2007 / p. 703-710

Innovative development of human resources in enterprise and in society

2007 https://www.ester.ee/record=b2243830*est

Innovative study kit for advanced mechatronic experiments

Seiler, Sven; Köhn, Carsten; **Sell, Raivo; Otto, Tauno** 9th International Workshop on Research and Education in Mechatronics : Bergamo, Italy, 2008 2008 / [5] p. : ill

In-process deterring of the working mode in CNC turning

Aruväli, Tanel; Serg, Risto; Preden, Jürjo-Sören; Otto, Tauno Estonian journal of engineering 2011 / 1, p. 4-16 : ill
https://www.kirj.ee/public/Engineering/2011/issue_1/eng-2011-1-4-16.pdf

In-process vibration monitoring on CNC lathe

Aruväli, Tanel; Serg, Risto; Otto, Tauno 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering". Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 2011 / p. 174-178 : ill

Insenerialasid tuleb õppima üha enam neidusid : [räägivad Tauno Otto, Enno Lend]

Otto, Tauno; Lend, Enno Inseneeria 2012 / lk. 23 https://artiklid.elnet.ee/record=b2543165*est

Integrated human resources development and monitoring system

Riives, Jüri; Otto, Tauno Proceedings of the 5th International Conference of DAAAM Baltic : Industrial Engineering - Adding Innovation Capacity of Labour Force and Entrepreneur : 20-22 April 2006, Tallinn, Estonia 2006 / p. 219-224 : ill

Integration of autonomous vehicles and Industry 4.0

Sell, Raivo; Rassõlkin, Anton; Wang, Ruxin; Otto, Tauno Proceedings of the Estonian Academy of Sciences 2019 / p. 389-394 : ill <https://doi.org/10.3176/proc.2019.4.07> http://www.kirj.ee/32705/?tpl=1061&c_tpl=1064 [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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>

Intelligent functions development on autonomous electric vehicle platform

Wang, Ruxin; Sell, Raivo; Rassõlkin, 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](#)

Kas tehisintellekt on väikeriigi demokraatia ja julgeoleku tugi või oht?

Vaaks, Eveliis Trialoog 2025 <https://trialoog.taltech.ee/kas-tehisintellekt-on-vaikeriigi-demokraatia-ja-julgeoleku-tugi-voi-oht/>

Knowledge management in the framework of technological resources network

Otto, Tauno; Papstel, Jüri; Riives, Jüri Machine engineering 2004 / 1/2, p. 21-28

Knowledge management systems for service desk environment

Lemmik, Rivo; Otto, Tauno; Küttner, Rein Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 139-144

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 selja sirgu saab? Insenerid ja arstid arendasid välja nutikorseti!

Vill, Ants director.ee 2022 <https://director.ee/2022/07/14/kuidas-selja-sirgu-saab-insenerid-ja-arstid-arendasid-valja-nutikorseti/>

Layout planning and analysis of a Flexible Manufacturing System based on 3D Simulation and Virtual Reality

Mahmood, Kashif; Otto, Tauno; Chakraborty, A. Procedia CIRP 2023 / p. 201-206 <https://doi.org/10.1016/j.procir.2023.08.036>
[Conference proceedings at Scopus](#) [Article at Scopus](#)

Machine cell modeling and monitoring

Karaulova, Tatjana; Papstel, Jüri; Otto, Tauno Proceedings of the 3rd International Conference Industrial Engineering - New Challenges to SME : 25-27 April 2002, Tallinn, Estonia 2002 / p. 92-95 : ill

Machinery utilization monitoring and pause identification prototype model design

Aruväli, Tanel; Serg, Risto; Otto, Tauno Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 1 2012 / p. 256-261 : ill

Masinad, mis prindivad mudeleid : [ruumilisest printimisest]

Melioranski, Martin; Otto, Tauno Eesti Ekspress 2007 / 17. mai, Homme 4, lk. 44-45
<https://ekspress.delfi.ee/artikkel/69113595/masinad-mis-prindivad-mudeleid>

Mehaanikainseneri käsiraamat

2012 https://www.ester.ee/record=b2860301*est

Mehaanikainseneri käsiraamat

2015

Mehaanikainseneri käsiraamat

2013 https://www.ester.ee/record=b3007631*est

Mehaanikainseneri käsiraamat

Gomeringer, Roland; Heinzler, Max; Kilgus, Roland 2022 https://www.ester.ee/record=b5469119*est

Mehaanikainseneride koolitus 1998-2016

2016 https://www.ester.ee/record=b4640989*est

Mehaanikainseneride koolitusest : [TTÜs]

Kulu, Priit; Otto, Tauno Mehaanikateaduskond 2008 2008 / lk. 14-19

Mehaanikateaduskond - vaade tulevikku

Otto, Tauno Tallinna Tehnikaülikooli aastaraamat 2010 2011 / lk. 27-28

Mehaanikateaduskond 75 : [ettekanne juubeliaktusel 30. septembril TTÜ aulas]

Otto, Tauno; Kulu, Priit Tallinna Tehnikaülikooli aastaraamat 2011 2012 / lk. 37-45

Mehaanikateaduskond 2011

Otto, Tauno; Kulu, Priit TTÜ mehaanikateaduskond. Eesti Masinatööstuse Liit 2011 / lk. 26-32
http://www.ester.ee/record=b2720689*est

Mehaanikateaduskonna hetkeseisust ja tulevikust : [ettekanne mehaanikainseneride päeval 27. septembril 2013 TTÜs]

Otto, Tauno; Sergejev, Fjodor Tallinna Tehnikaülikooli aastaraamat 2013 2014 / lk. 191-193

Mehhanotehnika ja metallide käsiraamat

2012 http://www.ester.ee/record=b2860365*est

Metalli- ja masinatööstuse ettevõtete motiveerimise võimalused rohepöörde elluviimise kontekstis : uuringu aruanne
Gerstlberger, Wolfgang Dieter; Küttim, Merle; Niine, Tarvo; Hurt, Ulrika; Hartšenko, Jelena; Tuisk, Tarmo; Kotov, Arseni; Kristjuhan-Ling, Kadri; Otto, Tauno 2023 <https://doi.org/10.11590/taltech.metal.industry.report.2023>

Method for increasing innovation capacity in development of casing type details

Matsi, Birthe; Otto, Tauno; Sarkans, Martinš; Roosimölder, Lembit Virtual and Rapid Manufacturing : Advanced Research in Virtual and Rapid Prototyping 2007 / p. 747-752 <https://www.taylorfrancis.com/chapters/edit/10.4324/9780203931875-119/method-increasing-innovation-capacity-development-casing-type-details-matsi-sarkans-otto-roosim%C3%B6lder>

Methodology for reconfigurable cobot-based quality control system for SME production

Moor, Madis; Sarkans, Martinš; Riives, Jüri; Otto, Tauno; Vano, Jaime Masia International Journal of Engineering and Technology (IJET) 2024 / p. 113-119 <https://doi.org/10.7763/IJET.2024.V16.1265>

Methods for enhancing productivity and work efficiency in the workshop

Riives, Jüri; Otto, Tauno; Lõun, Kaia Journal of machine engineering 2007 / 2, p. 86-95

Mida toob Euroopa tehnoloogiavaldkonna tippkonverents Manufuture 2017 Tallinna Tehnikaülikoolis

Otto, Tauno Mente et Manu 2017 / lk. 40-41 https://www.ttu.ee/public/m/mente-et-manu/MM_05_2017/mobile/index.html
https://artiklid.elnet.ee/record=b2827016*est

Mida tähendab meile neljas tööstusrevolutsioon?

Riives, Jüri; Otto, Tauno Mente et Manu 2017 / lk. 44-45 : fot https://www.ttu.ee/public/m/mente-et-manu/MM_05_2017/mobile/index.html
https://artiklid.elnet.ee/record=b2827020*est

Mika Salmi: jätkusuutlik tootmine vajab uute pädevustega inimesi

Salmi, Mika digi.geenius.ee 2024 [Mika Salmi: jätkusuutlik tootmine vajab uute pädevustega inimesi](https://www.ttu.ee/public/m/mente-et-manu/MM_05_2017/mobile/index.html)

Mika Salmi: jätkusuutlik tootmine vajab uute pädevustega inimesi

Salmi, Mika Mente et Manu 2023 / lk. 30-31 : portr https://www.ester.ee/record=b1242496*est

Milline on parim hiir? : [TTÜ tootearenduse tudengid testisid arvutihiiri]

Toon, Triin; Matsi, Birthe; **Otto, Tauno** Arvutikasutaja 2005 / 8, lk. 34-37 : ill https://artiklid.elnet.ee/record=b1050729*est

Model checking for planning resource-sharing production

Vain, Jüri; Otto, Tauno; Kuusik, Alar Proceedings 20th International Conference on CAD/CAM, Robotics and Factories of the Future : July 21, 22 and 23, 2004, San Cristobal - Venezuela 2004 / p. 151-158
https://www.academia.edu/17640325/Model_Checking_for_Planning_Resource_Sharing_Production

Model checking in planning resource-sharing based manufacturing

Otto, Tauno; Vain, Jüri Information Control Problems in Manufacturing 2006 : a proceedings volume from the 12th IFAC International Symposium : St.Etienne, France. 2 2006 / p. 523-528 <https://www.sciencedirect.com/science/article/pii/S1474667015359991>

Model checking in planning resource-sharing based manufacturing

Otto, Tauno; Vain, Jüri 12th IFAC Symposium on Information Control Problems in Manufacturing : preprints. Vol. II, Industrial Engineering 2006 / p. 535-540 <https://www.sciencedirect.com/science/article/pii/S1474667015359991>

Models for monitoring of technological process and production systems = Tehnoloogiliste protsesside ja tootmissüsteemide monitooringu mudelid

Otto, Tauno 2006 https://www.ester.ee/record=b2179106*est

Modern Materials and Manufacturing 2019 : 12th International DAAAM Baltic Conference and 27th International Baltic Conference BALTMATTRIB 2019. Selected, peer reviewed papers from the conference Modern Materials and Manufacturing 2019 (MMM 2019), April 24-26, 2019, Tallinn, Estonia

2019 https://www.ester.ee/record=b5235278*est <https://doi.org/10.4028/www.scientific.net/KEM.799>

Modern Materials and Manufacturing (MMM 2021), 27th-29th April 2021, Tallinn, Estonia

2021 <https://iopscience.iop.org/issue/1757-899X/1140/1>

Modern monitoring opportunities in shopfloor

Aruväli, Tanel; Otto, Tauno; Preden, Jürjo-Sören Annals of DAAAM for 2010 & proceedings of the 21st International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Interdisciplinary Solutions" : 20-23rd October 2010, Zadar, Croatia 2010 / p. 989 - 990 : ill https://www.daaam.info/Downloads/Pdfs/proceedings/proceedings_2010/24167_Symp_1_head.pdf

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](#)

Monitoring of energy efficiency in industrial pneumatic machines

Parik, Ellen; Otto, Tauno Annals of DAAAM for 2012 & Proceedings of the 23rd International DAAAM Symposium : Intelligent Manufacturing & Automation 2012 / p. 0985-0988 : ill [CD-ROM]
https://www.researchgate.net/publication/283474506_Monitoring_of_energy_efficiency_in_industrial_pneumatic_machines

Monitoring of manufacturing machinery using smart dust applications

Aruväli, Tanel; Serg, Risto; Otto, Tauno; Preden, Jürjo-Sören 9th International Symposium "Topical problems in the field of electrical and power engineering". Doctoral school of energy and geotechnology. II : Pärnu, Estonia, June 14-19, 2010 2010 / p. 209-213 : ill

Monitoring of technological competences

Otto, Tauno; Riives, Jüri Annals of DAAAM for 2006 & proceedings of the 17th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Mechatronics and Robotics" : 8-11th November 2006, Vienna, Austria 2006 / p. 279-280

Monitoring of technological resources for extended usage

Riives, Jüri; Otto, Tauno; Papstel, Jüri Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 272-275 : ill

Monitoring system framework and architecture over supply chain

Aruväli, Tanel; Serg, Risto; Körbe Kaare, Kati; Otto, Tauno Annals of DAAAM for 2012 & Proceedings of the 23rd International DAAAM Symposium : Intelligent Manufacturing & Automation 2012 / 1, p. 0661-0666 : ill [CD-ROM]
https://www.daaam.info/Downloads/Pdfs/proceedings/proceedings_2012/155.pdf

Moving up the Value Chain : Manufuture 2017, Tallinn : 24-25 October, 2017 Tallinn University of Technology

Otto, Tauno 2017 https://www.ester.ee/record=b4747139*est

Necessity for e-manufacturing model in tooling cluster and its essence

Lõun, Kaia; Riives, Jaan; Otto, Tauno Proceedings of the 6th International Conference of DAAAM Baltic "Industrial Engineering" : 24-26th April 2008, Tallinn, Estonia. [2] 2008 / p. 345-350 : ill https://www.researchgate.net/publication/290349485_Necessity_for_e-manufacturing_model_in_tooling_cluster_and_its_essence

Network monitoring of educational and industrial needs for the mechanical engineering sector

Riives, Jüri; Papstel, Jüri; Otto, Tauno DAAAM international scientific book 2003 2003 / p. 507-518 : ill

Network monitoring of technological equipment and processes

Otto, Tauno; Papstel, Jüri Machine engineering 2003 / 1/2, Manufacturing flexibility design and development, p. 161-167 : ill

New approach to knowledge transfer environment development

Hurt, Ulrika; Otto, Tauno; Körbe Kaare, Kati; Koppel, Ott Procedia engineering 2014 / p. 273-281 : ill
<https://doi.org/10.1016/j.proeng.2014.02.232> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

New approach to knowledge-driven factory development [Electronic resource]

Hurt, Ulrika; Otto, Tauno; Körbe Kaare, Kati; Koppel, Ott Annals of DAAAM for 2013 ; Vol. 24 2013 / p. 1-8 [CD-ROM]

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

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

Nutika tootmise uus tase paindootmissüsteemide ja robotika demokeskuse abil

Karjust, Kristo; Otto, Tauno Mente et Manu 2017 / lk. 36-37 : fot http://www.ester.ee/record=b1242496*est
https://artiklid.elnet.ee/record=b2830874*est

Nutikas ortoos hakkab jälgima oma kandjat

Mente et Manu 2021 / lk. 12 : fot https://www.ester.ee/record=b1242496*est

Nutikorsett aitab vildakselgsust ravida

Imeline Teadus 2022 / lk. 23 https://www.ester.ee/record=b2747925*est

Nüüdistootmine : kõrgkooliõpik

Hermaste, Aigar; Karjust, Kristo; Kirolein, Indrek; **Küttner, Rein; Lavin, Jaak;** Lõun, Kaia; Mooste, Tarmo; Naams, Invar; **Otto, Tauno; Pohlak, Meelis; Riives, Jüri;** Sarkons, Martinš; Talkop, Adolf; **Tähemaa, Toivo** 2023

<https://digikogu.taltech.ee/et/Item/2ec35c39-f345-4ae8-9fb6-395e039cd43a> https://www.ester.ee/record=b5537809*est

Olematu innovatsiooniteadlikkus : [oma arvamus Eestis tehtud leiutiste ja patentide kohta avaldab dotsent Tauno Otto]

Aksli, Marje; **Otto, Tauno** Eesti Päevaleht 2007 / 24. jaan., Ärileht, lk. 10 <https://arileht.delfi.ee/artikkel/51072624/olematu-innovatsiooniteadlikkus>

Online CAD library applications and pitfalls

Sonk, Kaimo; Otto, Tauno 10th International Symposium "Topical Problems in the Field of Electrical and Power Engineering".

Doctoral School of Energy and Geotechnology II : Pärnu, Estonia, January 10-15, 2011 / p. 179-182 : ill

Online engineering for future factory

Sell, Raivo; **Otto, Tauno** Annals of DAAAM for 2009 & proceedings of the 20th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Theory, Practice and Education" : 25-28th November 2009, Vienna, Austria 2009 / p. 1695-1696 : ill https://www.researchgate.net/publication/259503657_Online_Engineering_for_Future_Factory

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](#)

Overview of e-manufacturing practices and possibilities

Sonk, Kaimo; Otto, Tauno 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. 208-211 : ill

Performance analysis of a flexible manufacturing system (FMS)

Mahmood, Kashif; Karaulova, Tatjana; Otto, Tauno; Ševtšenko, Eduard Procedia CIRP 2017 / p. 424-429 : ill

<https://doi.org/10.1016/j.procir.2017.03.123> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Performance evaluation by using overall equipment effectiveness (OEE) : an analyzing tool

Mahmood, Kashif; Otto, Tauno; Ševtšenko, Eduard; Karaulova, Tatjana International Conference on Innovative Technologies :

IN-TECH 2016 : Prague : proceedings 2016 / p. 185-188 : ill http://www.in-tech.info/download/INTECH_2016_proceedings.pdf

A Performance evaluation concept for production systems in an SME network

Mahmood, Kashif; Lanz, Minna; Toivonen, Ville; Otto, Tauno Procedia CIRP 2018 / p. 603-608 : ill

<https://doi.org/10.1016/j.procir.2018.03.182> [Conference Proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

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

Boyчук, Rostyslav; Symotiuk, Ivan; Rõbnikov, 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-](https://doi.org/10.32040/2242-122X.2024.T432)

[122X.2024.T432](https://doi.org/10.32040/2242-122X.2024.T432)

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 and limitations of three dimensional printing at digital factory

Sonk, Kaimo; Otto, Tauno; Eerme, Martin Proceedings : 10th International Conference on the Modern Information Technology in the Innovation Processes of the Industrial Enterprises : MITIP 2008 : Prague, Czech Republic, 12-14 November 2008 2008 / p. 187-192 : ill

Possibilities of the INNOMET system for human resources development in enterprises

Riives, Jüri; Papstel, Jüri; Otto, Tauno Proceedings of the 4th International Conference Industrial Engineering - New Challenges to SME : 29-30 April 2004, Tallinn, Estonia 2004 / p. 276-278 : ill

Power consumption based online condition monitoring in milling machine

Serg, Risto; Aruväli, Tanel; Otto, Tauno Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 193-197 : ill

Preface

Küttner, Rein; Otto, Tauno Estonian journal of engineering 2010 / p. 263

Preface

Küttner, Rein; Otto, Tauno Estonian journal of engineering 2011 / 1, p. 3

Preface. Selected papers of the 8th International Conference on Industrial Engineering, DAAAM Baltic 2012
Otto, Tauno Estonian journal of engineering 2013 / p. 3

Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 1

2012 https://www.ester.ee/record=b3050171*est

Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2

2012 http://www.ester.ee/record=b3050171*est

Proceedings of the 9th Baltic Mechatronics Symposium, Tallinn, May 15, 2024

2024 <https://aaltodoc.aalto.fi/server/api/core/bitstreams/6903c9fa-3834-4eb4-8a37-13efc0e5b2d2/content>

Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia

2014 http://www.ester.ee/record=b3050171*est

Proceedings of the 10th International Conference of DAAAM Baltic Industrial Engineering, 12-13th May 2015, Tallinn, Estonia

2015 http://www.ester.ee/record=b3050171*est

Proceedings of the 11th International Conference of DAAAM Baltic Industrial Engineering : 20-22th April 2016, Tallinn, Estonia

2016 <http://innomet.ttu.ee/daaam/>

Proceedings of the Estonian Academy of Sciences

2019 <http://www.kirj.ee/32590/> https://www.ester.ee/record=b2355998*est

Product Development Gala 2005, ehk, Tudengite tootarendusprojekt Soome moodi : projektist üldiselt. TTÜ tudengid aitasid leiutada jalgratast. TTÜ tudengid on projektist vaimustuses

Otto, Tauno; Laidre, Andri; **Maripuu, Raul;** Sternfeld, Rainer; Sternfeld, Ervin; Toon, Triin; Matsi, Birthe; Annus, Ivar Mente et Manu 2005 / lk. 4 : ill https://www.ester.ee/record=b1242496*est

Productivity improvement through monitoring of human resources competence level

Otto, Tauno; Riives, Jüri; Lõun, Kaia DAAAM international scientific book 2008 2008 / p. 565-576 : ill

https://www.researchgate.net/publication/237781414_Productivity_Improvement_through_Monitoring_of_Human_Resources_Competence_Level

Productivity in innovation and new product development

Matsi, Birthe; Otto, Tauno; Roosimõlder, Lembit Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [I] 2010 / p. 142-147 : ill

Promotion of technology-based innovation and entrepreneurship

Lõun, Kaia; Otto, Tauno; Riives, Jüri Annals of DAAAM for 2009 & proceedings of the 20th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Theory, Practice and Education" : 25-28th November 2009, Vienna, Austria 2009 / p. 1853-1854 : ill

Raalprojekteerimis- ja -tootmisüsteemid mööblitööstuses. Puidutööstuse digitaliseerimine

Erik, Tauno; Jüriorg, Urmas; Kallisaar, Sander; **Kers, Jaan;** Link, Lauri; Muru, Meelis; Nool, Priit; **Otto, Tauno;** Riistop, Märt; Tammeväli, Siim; Vahemäe, Siim Puidutöötlemise õpik 2025 / lk. 603-669 : ill https://www.ester.ee/record=b5714083*est
<https://digikogu.taltech.ee/et/Item/32f67368-0b3f-4f3d-9c57-26b8d9d7bc93>

Reconfigurable manufacturing based on autonomously moving collaborative robot solutions = Autonomooselt teiseldataval koostööroboti lahendusel põhinev ümberseadistatav tootmine

Vaher, Kristo 2025 https://www.ester.ee/record=b5574954*est <https://digikogu.taltech.ee/et/Item/6ebaeab4-0171-4da1-8e5b-4e44663dc679>
<https://doi.org/10.23658/taltech.40/2025>

Rein Küttner - 75

Otto, Tauno Eesti Päevaleht 2015 / Metallileht, lk. 8

Reliability management approach for a virtual enterprise of SMEs in a manufacturing domain = Usaldusväarsuse juhtimise raamistik tootmisvaldkonna väikese ja keskmise suurusega virtuaalettevõtetele

Mahmood, Kashif 2019 <https://digi.lib.ttu.ee/i/211235>

Research of innovation capacity monitoring methodology for engineering industry = Innovatsioonivõimekuse monitooringu metoodika töötlevale tööstusele

RFID rack assembly development for mobile platform

Randmaa, Merili; Otto, Tauno; Kuusik, Alar Annals of DAAAM for 2009 & proceedings of the 20th International DAAAM Symposium "Intelligent Manufacturing & Automation : Focus on Theory, Practice and Education" : 25-28th November 2009, Vienna, Austria 2009 / p. 1697-1698 : ill

Riiklike tehnikaprofessuuride ees seisab rida väljakutseid

Kers, Jaan TööstusEST 2023 / lk. 32-34 : ill https://www.ester.ee/record=b4481084*est

Riiklike tehnikaprofessuuride väljakutsed roheleppe, ringmajanduse ja digiteerimise valguses

Kers, Jaan Mente et Manu 2022 / lk. 26-27 https://www.ester.ee/record=b1242496*est

Risk assessment approach for a virtual enterprise of small and medium-sized enterprises

Mahmood, Kashif; Ševtšenko, Eduard; Karaulova, Tatjana; Otto, Tauno Proceedings of the Estonian Academy of Sciences 2018 / p. 17-27 : ill <https://doi.org/10.3176/proc.2017.4.27> http://www.ester.ee/record=b2355998*est [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

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

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>

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](#)

Smart dust applications in production environment

Aruväli, Tanel; Serg, Risto; Preden, Jürjo-Sören; Otto, Tauno Proceedings of the 7th International Conference of DAAAM Baltic Industrial Engineering : 22-24th April 2010, Tallinn, Estonia. [II] 2010 / p. 572-577 : ill

Smart dust based modular laboratory kit for monitoring workshop machinery

Sarkans, Martinš; Preden, Jürjo-Sören; Otto, Tauno; Reinson, Taavi 8th International Workshop on Research and Education in Mechatronics 2007 : 14-15 June 2007, Tallinn, Estonia 2007 / p. 299-304 : ill

Smart health care monitoring technologies to improve employee performance in manufacturing

Kõrbe Kaare, Kati; Otto, Tauno Procedia engineering 2015 / p. 826-833 : ill <https://doi.org/10.1016/j.proeng.2015.01.437> [Conference proceedings at Scopus](#) [Article at Scopus](#) [Article at WOS](#)

Smart health care monitoring technologies to improve employee performance in manufacturing [Electronic resource]

Kõrbe Kaare, Kati; Otto, Tauno Annals of DAAAM International for 2014 & Collection of Working Papers for 25th DAAAM International Symposium 2014 / p. 1-6. [CD-ROM]

SmartIC teaduse teekaardil - uus metalli 3D-printimise süsteem

Otto, Tauno Mente et Manu 2017 / lk. 38 http://www.ester.ee/record=b1242496*est https://artiklid.elnet.ee/record=b2830875*est

Soojusarvestid

Otto, Tauno 2010 https://www.ester.ee/record=b2545007*est

Study of surface parameters of vacuum dried wood

Otto, Tauno; Kaps, Tiit; Reiska, Rein Programme and proceedings of Baltic Polymer Symposium 2005 : Tallinn, October 19-21, 2005 2005 / p. 51

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](#)

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](#)

TalTechDigital sai diginõukoja

Aaviksoo, Jaak; Gil, Gerlin; Helm, Marek; **Jervan, Gert;** Krimmer, Robert Johannes; Lackman, Seth; **Otto, Tauno;** Saar, Kirke; Sulling, Anne; **Tammet, Tanel** Mente et Manu 2017 / lk. 26-30 http://www.ester.ee/record=b1242496*est
https://artiklid.elnet.ee/record=b2830872*est

TalTechi 3D prinditud plastist käe- ja seljatoed on õhkuläbilaskvad ning esteetiliselt kaunid [Võrguväljaanne]

tervis.postimees.ee 2021 / fot [TalTechi 3D prinditud plastist käe- ja seljatoed on õhkuläbilaskvad ning esteetiliselt kaunid](#)

Tauno Otto: Eesti peaks olema rohkem avatud välistalentidele

Otto, Tauno aripaev.ee 2024 [Tauno Otto: Eesti peaks olema rohkem avatud välistalentidele](#)

Tauno Otto: tootmine mingu järjest nutikammaks

Otto, Tauno TööstusEST 2021 / lk. 6-10 : fot http://www.ester.ee/record=b4481084*est <https://toostusest.ee/uudis/2021/05/25/tauno-otto-tootmine-mingu-jarjest-nutikamaks/>

Teadlaste ja inseneride vähesus viib Eesti näitajad alla

Otto, Tauno Mente et Manu 2013 / lk. 12-13 : fot https://artiklid.elnet.ee/record=b2645232*est

Tehnikaülikoolis kirjutatakse ravirobotitele uut tarkvara

Imeline Teadus 2021 / lk. 20 : fot https://www.ester.ee/record=b2747925*est

Tehnoloogiapargid külas : [14.-15. mail külastasid TTÜd Portugali, Kreeka ja Rumeenia tehnoloogiaparkide ja ülikoolide esindajad]

Otto, Tauno Mente et Manu 2009 / 22. mai, lk. 2 https://www.ester.ee/record=b1242496*est

Tehnoloogiaplatvorm Manufuture

Küttner, Rein; **Otto, Tauno;** Riives, Jüri TTÜ mehaanikateaduskond. Eesti Masinatööstuse Liit 2011 / lk. 133-140 : ill http://www.ester.ee/record=b2720689*est

Tenniseharrastus Tallinna tehnikaülikoolis. Tennis on au sees : [kommenteerivad Tauno Otto ja Viveeth Govind]

Sulling, Andres; **Otto, Tauno;** **Govind, Vineeth** Mente et Manu 2013 / lk. 26-27 : fot

Test results of practical value-centric business development methodology

Randmaa, Merili; **Otto, Tauno;** Howard, Thomas J. Proceedings of NordDesign 2014 Conference 2014 / p. 642-651 : ill

The mobility of robotised work cells in manufacturing

Vaher, Kristo; Kangru, Tavo; **Otto, Tauno;** Riives, Jüri Proceedings of the 30th International DAAAM Symposium : Intelligent Manufacturing & Automation, 23-26th October 2019, Zadar, Croatia 2019 / p. 1049-1055 : ill <https://doi.org/10.2507/30th.daaam.proceedings.146>

Tolmuga tööstust jälgimas : [TTÜ automaatikainstituudi ja masinaehituse instituudi koostöös loodud sensorvõrkude laborist]

Preden, Jürjo-Sören; **Otto, Tauno** Eesti Ekspress 2007 / 15. veebr., lk. 44-46

Tool life modeling

Otto, Tauno Proceedings of the First National DAAAM Conference in Estonia : Science '95 1996 / p. 24-28: ill

TTÜ 94. aastapäeva intervjuu dekaan Tauno Ottoga

Otto, Tauno; Vähi, Kersti Mente et Manu 2012 / lk. 7 : fot https://www.ester.ee/record=b1242496*est

TTÜ aastal 2020 : töögrupi vahearuanne

Ernits, Juhan-Peep; Goi, Anna; **Jervan, Gert;** Leibak, Alar; **Randma-Liiv, Tiina;** **Otto, Tauno;** Rosin, Argo; **Sarmiento Guerin, Maria Cecilia** Mente et Manu 2009 / 16. veebr., lk. 4 : fot https://www.ester.ee/record=b1242496*est

TTÜ masinaehituse instituut : tööstuse konkurentsivõime tõstmine

Otto, Tauno; Lavrentjev, Jüri; **Majak, Jüri** TTÜ mehaanikateaduskond. Eesti Masinatööstuse Liit 2011 / lk. 33-42 : ill., fot http://www.ester.ee/record=b2720689*est

TTÜ mehaanikateaduskond 2011

Otto, Tauno; Kulu, Priit Inseneeria 2011 / lk. 10-13 : ill https://www.ester.ee/record=b1519314*est

Tuleviku tootearendus Tallinna Tehnikaülikoolis : [1. märtsil TTÜs toimunud konverentsist "Tuleviku tootearendus" : Tauno Otto kommentaaridega]

Otto, Tauno Mente et Manu 2007 / lk. 2 : fot https://www.ester.ee/record=b1242496*est

Tööstus 4.0

Otto, Tauno Eesti Masinatööstuse Liit. TTÜ mehaanika ja tööstustehnika instituut 85 2021 / lk. 43-48 : ill

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>

Unustage saag ja kirves – metsas teevad nüüd tööd droonid ja tehisintellekt

Kartau, Mari ohtuleht.ee 2024 [Unustage saag ja kirves – metsas teevad nüüd tööd droonid ja tehisintellekt](#)

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](#)

Uudne digikaksik tõstab robotijuhtimise uuele tasemele

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

Uued inimesed ja positsioonid

Läanelaid, Siim; Otto, Tauno; Krumme, Andres; Oja Acik, Ilona; Kallaste, Ants; Tomberg, Hanno Mente et Manu 2020 / lk. 54-58 : portr <https://dea.digar.ee/cgi-bin/dea?a=is&oid=AKmenteetmanu202011&type=staticpdf>

Uuenduslik tootmine : käsiraamat

Riives, Jüri; Lumiste, Rünno; Reedik, Vello; Roosimölder, Lembit; Karjust, Kristo; Kers, Jaan; Kiolein, Indrek; Kokla, Margo; Küttner, Rein; Lavin, Jaak; Lavrentjev, Jüri; Lõun, Kaia; Mõtus, Leo; Naams, Invar; Otto, Tauno; Pohlak, Meelis; Raba, Karl; Saks, Alo; Talkop, Adolf; Tähemaa, Toivo; Veinthal, Renno 2011 http://www.ester.ee/record=b2736534*est

Uus teaduse teekaardi objekt toetab Tööstus 4.0 arenguid

Otto, Tauno Mente et Manu 2017 / lk. 23-25 : ill http://www.ttu.ee/public/m/mente-et-manu/MM_01_2017/index.html
https://artiklid.elnet.ee/record=b2811465*est

Value centric business development for Estonian manufacturing small and medium sized enterprises = Väärtuskeskne ettevõtte arendus Eesti väike- ja keskmise suurusega tootmisettevõtetele

Kukuškin, Merili 2015 https://www.ester.ee/record=b4496512*est

Value-centric business : an in-depth analysis of one case company

Randmaa, Merili; Otto, Tauno Proceedings of the 9th International Conference of DAAAM Baltic Industrial Engineering, 24-26th April 2014, Tallinn, Estonia 2014 / p. 169-174

Value-centric business development : descriptive and prescriptive research into five different companies

Kukuškin, Merili; Otto, Tauno; Howard, Thomas J. Proceedings of the Estonian Academy of Sciences 2015 / p. 543-557 : ill https://artiklid.elnet.ee/record=b2750884*est <https://doi.org/10.3176/proc.2015.4S.02> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

Veebipõhise kursuse rakendamisest "Pneumaatika" mooduli näitel Tallinna Tehnikaülikoolis

Otto, Tauno Õppimine ja õpetamine avatud ülikoolis 2005 / lk. 380-381

Vibrodiagnostics of the processing accuracy of machined details in metal

Arjassov, Gennadi; Otto, Tauno Mechanics & Materials in Design : 5th International Conference on Mechanics & Materials in Design : Portugal, 24-26 July 2006 2006 / p. 211-212

Wireless real-time monitoring of machining processes = Juhtmevaba reaalajas lõiketöötuse monitooring

Aruväli, Tanel 2015 http://www.ester.ee/record=b4446057*est

Virtuaalreaalsuse olevik ja tulevik

Otto, Tauno; Kuts, Vladimir Mente et Manu 2019 / lk. 26-27 : fot https://www.ttu.ee/public/m/mente-et-manu/MM_05_2019/mobile/index.html https://www.ester.ee/record=b1242496*est

Virtual learning factory toolkit development

Otto, Tauno 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. 59-60 : ill https://www.ester.ee/record=b5291755*est

Virtual simulations environment development for autonomous vehicles interaction

Malayjerdi, Mohsen; Kuts, Vladimir; Sell, Raivo; Otto, Tauno; Baykara, Baris Cem ASME 2020 : International Mechanical Engineering Congress and Exposition, November 16–19, 2020 : Virtual, Online : proceedings 2020 / Paper No: IMECE2020-23362, V02BT02A009; 5 p <https://doi.org/10.1115/IMECE2020-23362>

Visualization of strain distribution around the edges of a rectangular foreign object inside the woven carbon fibre specimen

Herranen, Henrik; Allikas, Georg; Eerme, Martin; Vene, Karl-Kristo; Otto, Tauno; Gregor, Andre; Kirs, Maarjus; Mädamürk, Karl Estonian journal of engineering 2012 / p. 279-287 : ill https://artiklid.elnet.ee/record=b2527774*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>

Workplace performance and capability optimization in the integrated manufacturing

Lõun, Kaia; Riives, Jüri; Otto, Tauno Proceedings of the 8th International Conference of DAAAM Baltic Industrial Engineering, 19-21st April 2012, Tallinn, Estonia. 2 2012 / p. 518-523 : ill

Ülikool ja tootmine digistumise kontekstis

Otto, Tauno Mente et Manu 2018 / lk. 4-5 : fot <https://www.ttu.ee/ttu-uudised/ajaleht-mente-et-manu/mente-et-manu/> http://www.ester.ee/record=b1242496*est https://artiklid.elnet.ee/record=b2835995*est