

Resume – Vladimir Kuts

Engineer, researcher, lecturer, and project manager in various fields, from manufacturing to industrial and scientific research. Enthusiastic about the world of digitization and robotization, especially in VR/AR technologies. Have experience in entrepreneurship and sales in a worldwide international company. Also, have experience leading and participating in both domestic and international research and collaborative projects and conferences as a part of the research team.

General information

Name Vladimir Kuts

Personal Contacts

Phone +372 55527468

E-mail vladimir.kuts@hotmail.com

Website <https://www.linkedin.com/in/vladimir-kuts/>
https://www.etis.ee/CV/Vladimir_Kuts/eng?lang=ENG

Company/Institution and occupation

Period	Description
1.09.2017–...	<p><i><u>Head of Industrial VR/AR Laboratory.</u></i></p> <p><u>Main responsibilities:</u> Project Management, Contacts network development (Conferences, media, speeches, sales, negotiations), R&D management</p> <p><i>Head of the industrial virtual and augmented reality laboratory (www.ivar.taltech.ee). Project management in VR, AR, and simulations field for research and enterprise collaborators in the field of production engineering, education, and medicine (simulators, rehabilitation).</i></p>
22.08.2016–...	<p>Tallinn University of Technology, School of Engineering, Department of Mechanical and Industrial Engineering,</p> <p><i><u>Researcher / Early Stage Research / Engineer</u> (Started as an engineer and proceeded to research activities as Early and now full researcher)</i></p> <p><u>Main responsibilities:</u></p> <ul style="list-style-type: none"> • <i>Research in the fields of industrial robotics and digital twins (programming, simulations (VR/AR)). Research papers writing and presentations on international conferences.</i> • <i>Lecturer in courses: Hydraulics and pneumatics, Production Digitalization, Digital manufacturing.</i> • <i>Since the Year 2017 were supervised 22 BSc, and 1 MSc grade students with their final work.</i> • <i>Writing and Participation in R&D projects.</i>

1.10.2019–...	<p>NutiParkla OÜ, <u>Founder, COO</u></p> <p><u>Main responsibilities:</u> Daily operations management of the company. Customer/Partner relationships and business development.</p> <p><i>NutiParkla provides real-time and historical parking occupancy data as a product to navigation providers and parking operators.</i></p>
1.02.2018–...	<p>NoSoySauce Games OÜ, <u>Member of the board, CEO</u></p> <p><u>Main responsibilities:</u> budget/accountancy, project management, sales, level design.</p> <p><u>Main project:</u> <i>we are building a multiplayer melee sword-fighting game called Everfight VR, where you can engage in action-filled PvP battles on arenas lost across different dimensions.</i></p> <p><u>Side projects:</u> <i>the company has experience in outsourcing game development for AR, VR, PC, and mobile platforms.</i></p>
01.04.2018– 31.08.2019	<p>IMECC Ltd, <u>Project coordinator /Development engineer</u></p> <p><u>Main responsibilities:</u> Project Management</p> <p><i>L4MS (https://www.l4ms.eu/l4ms/ Horizon2020) project Technical team managing and coordination in the field of internal logistics (mobile robots, IoT sensors)</i></p>
01.08.2018– 30.09.2019	<p>GameLab MTÜ, <u>Member of the board</u></p> <p><u>Main responsibilities:</u> event organization (sponsors, host facilities, catering, speakers)</p> <p><i>GameLab is a non-commercial organization, which is a game development club, designed to unite people with a passion for creating video games</i></p>
01.03.2017– 30.09.2019	<p>Wiser Robotics OÜ, <u>Member of the board, CEO Startup – inactive now.</u></p> <p><u>Main responsibilities:</u> sales, budget, customer relationships.</p> <p><i>Custom industrial automation projects. Delivered custom build positioning robots to the manufacturing customer.</i></p>
01.09.2018– 31.08.2019	<p>TTÜ Üliõpilasküla MTÜ, <u>Member of the board</u></p> <p><u>Main responsibilities:</u> residents well-being</p> <p><i>Elected students representative in University campus board from Autumn 2018.</i></p>
01.02.2017– 01.06.2017	<p>The Institute of Industrial Technologies and Automation (ITIA) of the National Research Council of Italy (CNR), <u>Guest Researcher</u></p> <p><u>Main responsibilities:</u> Research</p> <p><i>Four-month Guest Researcher program (in Milano, Italy) in Virtual Reality, industrial robotics, and the Internet of Things fields.</i></p>

01.09.2016– 31.12.2016	TalTech Mektory Nanosatellite program, <i>Mechanics area coordinator</i> <u>Main responsibilities:</u> Project Management <i>Coordinating student Nanosatellite program project part in mechanical engineering.</i>
03.03.2014– 12.08.2016	Inducont OÜ, <i>Sales and Application engineer</i> <u>Main responsibilities:</u> Project management, Technical Sales, Budget, Customer/Partner relationships <i>The representative of the Danfoss Power Solutions product group in Estonia. Leading technical projects and sales in the mobile hydraulics field in Estonia. Hydraulic system design and development.</i>
10.09.2012– 28.02.2014	Ektaco AS, <i>Technician</i> <u>Main responsibilities:</u> Software Trainer (Estonia, Latvia), technical maintenance provider <i>Technical works with the Point of Sales and Accountant systems. Training people of using company software and hardware. Solving technical issues. Project management.</i>
1.12.2010– 7.09.2012	Transcom Estonia OÜ, <i>Customer support specialist</i> <u>Main responsibilities:</u> Technical Support (IT related) <i>Solving an IT, technical and other problems by phone and e-mail for different companies (Tele2 Eesti AS, Sertifitseerimiskeskus AS, Ühendatud Piletite AS, Webmedia Group AS)</i>

Education

Period	Description
2015–2019	Mechanical Engineering (Ph.D.), Tallinn University of Technology
2012–2015	Product development and Production Engineering (MSc), Tallinn University of Technology
2008–2012	Mechatronics (BSc), Tallinn University of Technology

R&D related managerial and administrative work

Period	Description
2020–...	IEEE Transactions on Systems, Man and Cybernetics: Systems - Reviewer
2020–...	Journal of Computational Science (Elsevier) - Reviewer
2020–...	International Conference on Advanced Computer Information Technologies (IEEE) - Reviewer
2020–...	MDPI Journal of Applied Sciences - Reviewer Board member
2020–...	IEEE IES PEMC20 - Reviewer
2020–...	Journal of Mechatronics (Elsevier) - Reviewer
2020–...	IEEE MFI2020 Conference - Reviewer
2019–...	ASME IMECE2019 - Digital Twin aspects session organizer
2019–...	EuroVR Conference Proceedings - Reviewer
2019–...	International Journal of Computer Integrated Manufacturing - Reviewer
2019–...	Applied Sciences Journal (MDPI) - Reviewer
2018–...	ASME IMECE Proceedings - Reviewer
2017–...	Tallinn University of Technology. Department of Mechanical and Industrial Engineering - Head of Industrial Virtual and Augmented reality lab
2019	EuroVR2019 - Industrial chair member
2018	Koo-Met OÜ - Mechatronics, level 4, qualification giving expert committee member
2018–2019	Tallinn University of Technology, School of Engineering - Member of Doctoral Studies Curriculum Board of Mechanical Engineering
2018–2019	TTÜ ÜLIÕPILASKÜLA MTÜ - board member
2017–2019	Tallinn University of Technology - Member of Board of School of Engineering
2016–2018	Tallinn University of Technology - Member of council
2016	Tallinn University of Technology, Faculty of Mechanical Engineering - Chairman of marketing committee
2016	Estonian Quality Agency for Higher and Vocational Education - Engineering, manufacturing and technology area evaluation committee member
2014–2015	Tallinn University of Technology - Member of council
2014–2015	Tallinn University of Technology - Member of Board of Faculty of Mechanical Engineering

Projects in progress

- VERT18042 "Virtual Learning Factory Toolkit (1.09.2018–30.08.2021)", Tauno Otto, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- 3-5/VERT18066 "Transforming Educational Programmes For Future Industry 4.0 Capabilities (1.09.2018–30.08.2021)", Tauno Otto, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- VIR19004 "Innovation Framework for Challenge Oriented Intelligent Manufacturing (INforM) (1.01.2019–1.07.2021)", Kristo Karjust, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- LEP18082EM "Applied research on system of sensors and software algorithms for safety and driver assistance on remotely operated ground vehicles for off-road applications (1.10.2018–30.04.2021)", Raivo Sell, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- AR17141 "Young Engineer Programme (3.04.2017–30.09.2020)", Karin Käär, Riina Arvisto, Tallinn University of Technology , School of Engineering, Department of Civil Engineering and Architecture, Tallinn University of Technology , School of Engineering, Department of Electrical Power Engineering and Mechatronics, Tallinn University of Technology , School of Engineering, Department of Energy Technology, Tallinn University of Technology , School of Engineering, Department of Materials and Environmental Technology, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- AR16077 "Smart Industry Centre (1.01.2017–30.06.2019)", Tauno Otto, Tallinn University of Technology , Faculty of Mechanical Engineering, Department of Mechanical and Industrial Engineering , Chair of Production Engineering.

Completed projects

- VERT17065 "Innovative methods for implementing interdisciplinarity in career counseling (1.09.2016–28.02.2019)", Eduard Ševtšenko, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- VFP17063 "Strategic investments in European manufacturing to win global challenges (1.09.2016–31.03.2018)", Tauno Otto, Tallinn University of Technology , School of Engineering, Department of Mechanical and Industrial Engineering .
- VA16047 "Regional Digital Innovation Hub in Robotics in Estonia (1.09.2016–31.05.2017)", Tauno Otto, Tallinn University of Technology , Faculty of Mechanical Engineering, Department of Mechanical and Industrial Engineering , Chair of Production Engineering.
- VA16045 "ADMADP. Advanced Materials Doctoral Programme - ADMA-DP for Doctoral Education (1.01.2016–31.12.2016)", Veiko Karu, Tallinn University of Technology , School of Science, Department of Geology.

Publications

2020

Kangru, T.; Riives, J.; Otto, T.; Kuts, V.; Moor, M. (2020). Optimisation of decision-making process in industrial robot selection. *Journal of Machine Engineering*, 20 (1), 70–81.10.36897/jme/117788.

Kuts, V.; Cherezova, N.; Sarkans, M.; Otto, T. (2020). Digital Twin: industrial robot kinematic model integration to the virtual reality environment.. *Journal of Machine Engineering*, 20 (2), 53–64.10.36897/jme/120182.

Mahmood, K.; Otto, T.; Kangru, T.; Kuts, V. (2020). An Approach to Analyze the Performance of Advanced Manufacturing Environment. *Procedia CIRP*, 93 (The 53rd CIRP Conference on Manufacturing Systems (CIRP CMS 2020) Chicago, IL, USA, July 1 - 3, 2020), 628–633.10.1016/j.procir.2020.04.042.

Kuts, V.; Otto, T.; Bondarenko, Y.; Yu, F. (2020). Digital Twin: Collaborative Virtual Reality Environment for Multi-Purpose Industrial Applications. *ASME 2020 International Mechanical Engineering Congress and Exposition, November 16-19, 2020, Portland, OR, USA*. ASME, [forthcoming].

Malayjerdi, M.; Kuts, V.; Sell, R.; Otto, T.; Baykara, B. (2020). Virtual Simulations Environment Development for Autonomous Vehicles Interaction. *ASME 2020 International Mechanical Engineering Congress and Exposition, November 16-19, 2020, Portland, OR, USA*. ASME, [forthcoming].

Rassõlkin, A.; Rjabtšikov, V.; Vaimann, T.; Kallaste, A.; Kuts, V. (2020). Concept of the Test Bench for Electrical Vehicle Propulsion Drive Data Acquisition. In: *Proceeding of International Conference on Electrical Power Drive Systems ICEPDS2020*. IEEE.

Rassõlkin, A.; Rjabtšikov, V.; Vaimann, T.; Kallaste, A.; Kuts, V.; Andriy P. (2020). Digital Twin of an Electrical Motor Based on Empirical Performance Model. In: *Proceeding of International Conference on Electrical Power Drive Systems ICEPDS2020*. IEEE.

2019

Kuts, V.; Otto, T.; Tähemaa, T.; Bondarenko, Y. (2019). Digital twin based synchronised control and simulation of the industrial robotic cell using virtual reality. *JOURNAL OF MACHINE ENGINEERING*, 19 (1), 128–145.2010.5604/01.3001.0013.0464.

Kuts, V.; Modoni, G. E.; Otto, T.; Sacco, M.; Tähemaa, T.; Bondarenko, Y.; Wang, R. (2019). Synchronizing physical factory and its Digital Twin through an IIoT middleware: a case study. *Proceedings of the Estonian Academy of Sciences*, 68 (4), 364–370.10.3176/.

Kuts, V.; Sarkans, M.; Otto, T.; Tähemaa, T.; Bondarenko, Y. (2019). Digital Twin: Concept of Hybrid Programming for Industrial Robots - Use Case. *ASME 2019 International Mechanical Engineering Congress and Exposition, 2B: ASME 2019 International Mechanical Engineering Congress and Exposition, IMECE2019, November 8-14, 2018, Salt Lake City, Utah, USA*. ASME,. (V02BT02A005).10.1115/IMECE2019-10583.

Rassõlkin, A.; Kuts, V.; Kallaste, A.; Vaimann, T. (2019). Digital twin for propulsion drive of autonomous electric vehicle. *2019 IEEE 60th International Scientific Conference on Power and Electrical Engineering of Riga Technical University (RTUCON), Riga, October 7-9, 2019*. Riga, Latvia: IEEE.

Värno, K.; Mahmood, K.; Otto, T. Kuts, V. (2019). Development of a Smart Workstation by Using AR Technology. In: B. Katalinic (Ed.). Proceedings of the 30th DAAAM International Symposium (1061–1067). Vienna, Austria: DAAAM International.10.2507/30th.daaam.proceedings.148.

Värno, K.; Otto, T.; Mahmood, K.; Kuts, V. (2019). Development of a Smart Workstation by Using AR Technology. *The application track, posters and demos of EuroVR Proceedings of the 16th Annual EuroVR Conference - 2019: EuroVR2019, October 23-25 Tallinn, Estonia*. Ed. Helin, K.; Perret, J.; Kuts, V. VTT Technical Research Centre of Finland, 19–22.10.32040/2242-122X.2019.T357.

2018

Kuts, V.; Otto, T.; Tähemaa, T.; Bukhari, K.; Pataraiia, T. (2018). Adaptive industrial robots using machine vision. *ASME 2018 International Mechanical Engineering Congress and Exposition, 2: IMECE2018, November 9-15, 2018, Pittsburgh, PA, USA*. ASME,.10.1115/IMECE2018-86720.

Kuts, V.; Otto, T.; Caldarola, E. G.; Modoni, G. E.; Sacco, M. (2018). Enabling the Teaching Factory leveraging a Virtual Reality system based on the Digital Twin. In: K. Helin, M. Poyade, M. D'Cruz, R. Eastgate (Ed.). *The Industrial Track of EuroVR 2018: Proceedings of the 15th Annual EuroVR Conference (26–31)*. VTT Technical Research Centre of Finland.

2017

Shevtshenko, E.; Karaulova, T.; Igavens, M.; Strods, G.; Tandzegolskienė, I.; Tütlys, V.; Seyed, T.; Kuts, V. (2017). Implementing interdisciplinarity in career guidance for secondary school students in forestry and wood, metal and machinery, agriculture and food sectors of industry. *HOLISTIC LEARNING*, 3, 53–60.10.7220/2351-7409.3.5.

Kuts, V.; Modoni, G. E.; Terkaj, W.; Tähemaa, T.; Sacco, M.; Otto, T. (2017). Exploiting factory telemetry to support Virtual Reality simulation in robotics cell. *Augmented Reality, Virtual Reality, and Computer Graphics, 1: 4th International Conference, AVR 2017, Ugento, Italy, June 12-15, 2017*. Ed. L. Tommaso De Paolis, P. Bourdot, A. Mongelli. Springer, 212–221. (Lecture Notes in Computer Science; 10324).10.1007/978-3-319-60922-5_16.

Kuts, V.; Sarkans, M.; Otto, T.; Tähemaa, T. (2017). Collaborative work between human and industrial robot in manufacturing by advanced safety monitoring system. In: B. Katalinic (Ed.). *DAAAM International (0996–1001)*. Vienna, Austria: Curran Proceedings.10.2507/28th.daaam.proceedings.138.

Shevtshenko, E.; Karaulova, T.; Igavens, M.; Strods, G.; Tandzegolskiene, I.; Tutlys, V.; Tavahodi, S.; Kuts, V. (2017). Dissemination of Engineering Education at Schools and its Adjustment to Needs of Enterprises. In: B. Katalinic (_EditorsAbbr). *DAAAM International (44–53)*. Vienna, Austria: Curran Proceedings.10.2507/28th.daaam.proceedings.006.

2016

Kuts, V.; Tähemaa, T.; Otto, T.; Sarkans, M.; Lend, H. (2016). Robot manipulator usage for measurement in production areas. *Journal of the Machine Engineering*, 16 (1), 57–67.