

Radovi u serijalnim izdanjima (Publications in edited books / volume series)

1. **Karabegović, I.**, Mahmić, M., Karabegović, E., Husak, E., 2025, Optimization and Increase of Production Efficiency by Using Service Robots for Maintenance, Inspection and Logistics. In: Karabegović, I., Kovačević, A., Mandžuka, S. (Eds), *New Technologies, Development and Application VIII- NT 2025. Lecture Notes in Networks and Systems*, **1482**. Springer, Heidelberg. 3-18. https://doi.org/10.1007/978-3-031-95194-7_1.
2. Subašić, S., Banjanović-Mehmedović, L., Subašić, H., **Karabegović, I.**, Husak, E. (2025). Vision Transformer-Based Multimodal Fusion of Gesture and Object Classification in Human-Robot Collaboration. In: Jovanović, K., Rodić, A., Raković, M. (Eds) *Advances in Service and Industrial Robotics. RAAD 2025. Mechanisms and Machine Science*, **190**. Springer, Cham. pp. 505-512. https://doi.org/10.1007/978-3-032-02106-9_56
3. Dreković, E., Teofilović, Ž., **Karabegović, I.**, 2025, The Application of Disruptive Technologies in the Aviation Industry. *Ibidem*: 602-611. https://doi.org/10.1007/978-3-031-95194-7_63.
4. Jovanović Doleček, G.J., **Karabegović, I.**, 2025, Decreasing Passband Deviation in Low-Power Comb Decimation Filter With High Alias Rejection. *Ibidem*: 100-108. https://doi.org/10.1007/978-3-031-95197-8_12.
5. Subašić, H., Banjanović-Mehmedović, L., Subašić, S., **Karabegović, I.**, Prljača, N. (2025). Deep Reinforcement Learning for Adaptive Object Sorting in Collaborative Robotics. *Ibidem*: 3-11. https://doi.org/10.1007/978-3-031-95197-8_1.
6. Tonkonogy, V., Holofieieva, M., Morozov, Y., Usov, A., **Karabegović, I.**, 2024, Simulation of processes in composite materials under thermometrical control taking into account their heterogeneity. In: Tonkonogy, V., Ivanov, V., Trojanowska, J., Oborskyi, G. (Eds), *Advanced Manufacturing Processes VI. Interpartner 2024. Lecture Notes in Mechanical Engineering*, Springer, Heidelberg. 746–753. https://doi.org/10.1007/978-3-031-82746-4_66.
7. Derevianchenko, O., Fomin, O., Volkova, N., Tataryn, O., **Karabegović, I.**, 2024, A combined approach for determining tool cutting part states using machine learning models. *Ibidem*: 154–165. https://doi.org/10.1007/978-3-031-82746-4_14.
8. **Karabegović, I.**, Mahmić, M., Karabegović, E., Husak, E., 2024, Advanced robotics as the drive of innovation: The role of the implementation of advanced robotics in Industry 4.0. In: Karabegović, I., Kovačević, A., Mandžuka, S., (Eds), *New Technologies, Development and Application VII - NT 2024. Lecture Notes in Networks and Systems*, **1069**. Springer, Heidelberg. https://doi.org/10.1007/978-3-031-66268-3_1.
9. Jovanović Dolecek, G., **Karabegović, I.**, 2024, Improving passband in cosine-based CIC decimation filter with improved worst-case aliasing attenuation. *Ibidem*: 32–38. https://doi.org/10.1007/978-3-031-66271-3_4.
10. Bičo Ćar, M., **Karabegović, I.**, Šestić, M., Šahić, E., Hodžić, S., Stupar, S., 2024, Industry 4.0 in micro, small and medium sized enterprises of the Sarajevo Canton. In: Karabegović, I., Kovačević, A., Mandžuka, S. (Eds), *New Technologies, Development and Application VII- NT 2024. Lecture Notes in Networks and Systems*, **1070**. Springer, Heidelberg. 255–270. https://doi.org/10.1007/978-3-031-66271-3_28.
11. Bratovčić, A., **Karabegović, I.**, 2024. Development of new sensors for use in smart clothing. *Ibidem*: 480–488. https://doi.org/10.1007/978-3-031-66271-3_52.
12. **Karabegović, I.**, Husak, E., Karabegović, E., Mahmić, M., 2024, China is the leading country in the world in the implementation of robotic technology as the basic technology of Industry 4.0. In: Rackov, M., Miltenović, A., Banić, M. (Eds), *Machine and Industrial Design in Mechanical Engineering - KOD 2024. Mechanisms and Machine Science*, **174**. Springer, Heidelberg. 612–621. https://doi.org/10.1007/978-3-031-80512-7_60.
13. **Karabegović, I.**, Banjanović-Mehmedović, L., Husak, E., 2023, Using service robots as the base technology of Industry 4.0 for global management of the COVID-19 pandemic. In: Badnjević, A., Gurbeta Pokvić, L. (Eds), *MEDICON'23 and CMBEBIH'23. IFMBE Proc.*, **94**. Springer, Heidelberg. 479–492. https://doi.org/10.1007/978-3-031-49068-2_50.
14. Bovnegra, L., Pavlyshko, A., Nemchuk, O., Strelbitskyi, V., **Karabegović, I.**, 2023, Experimental study of longevity in the metallic structure of boom for a portal crane of

- seaport. In: Tonkonogy, V., Ivanov, V., Trojanowska, J., Oborskyi, G., Pavlenko, I. (Eds), *Advanced Manufacturing Processes V. Interpartner 2023. Lecture Notes in Mechanical Engineering*, Springer, Heidelberg. 432–439. https://doi.org/10.1007/978-3-031-42778-7_40.
15. Kokhanov, A., Prokopovich, I., Sikach, T., Dyadyura, I., **Karabegović, I.**, 2023, Standardization of scanning protocols and measurements for additive manufacturing quality assurance. *Ibidem*: 359–368. https://doi.org/10.1007/978-3-031-42778-7_33.
 16. **Karabegović, I.**, Husak, E., Karabegović, E., Mahmić, M., 2023, Robotictchnology as the basis of implementation of Industry 4.0 in production processes in China. In: Karabegović, I. (Ed), *New Technologies, Development and Application VI– NT 2023. Lecture Notes in Networks and Systems*, **687**. Springer, Heidelberg. 3–18. https://doi.org/10.1007/978-3-031-31066-9_1.
 17. **Karabegović, I.**, Bičo Ćar, M., Stupar, S., Šestić, M., 2023, Industry 4.0 readiness assessment: Human resource readiness and active role of government administration for transitional context of Bosnia and Herzegovina. *Ibidem*: 389–395. https://doi.org/10.1007/978-3-031-31066-9_43.
 18. Bičo Ćar, M., Stupar, S., Šestić, M., **Karabegović, I.**, 2023, Assessment of the readiness of companies for the application of Industry 4.0 with the help of an expert system. *Ibidem*: 556–568. https://doi.org/10.1007/978-3-031-34721-4_60.
 19. **Karabegović, I.**, Karabegović, E., Mahmić, M., Husak, E., 2022, Application of service robots for logistics during the COVID-19 pandemic accelerates the implementation of Industry 4.0. In: Karabegović, I., Kovačević, A., Mandžuka, S. (Eds), *New Technologies, Development and Application V – NT 2022. Lecture Notes in Networks and Systems*, **472**. Springer, Heidelberg. 3–17. https://doi.org/10.1007/978-3-031-05230-9_1.
 20. Yakimov, A., **Karabegović, I.**, Uminsky, S., Strelbitskyi, V., Shichireva, J. 2021, Stability of the quality parameters for the surface layer of parts during circular grinding operations. In: Tonkonogy, V., Ivanov, V., Trojanowska, J., Oborskyi, G., Edl, M., Kuric, I., Pavlenko, I., Dašić, P. (Eds), *Advanced Manufacturing Processes II. Interpartner 2020. Lecture Notes in Mechanical Engineering*, Springer, Heidelberg. 464–476. https://doi.org/10.1007/978-3-030-68014-5_46.
 21. **Karabegović, I.**, Husak, E., Isić, S., Karabegović, E., Mahmić, M., 2021, Service robots and artificial intelligence for faster diagnostics and treatment in medicine. In: Karabegović, I. (Ed), *New Technologies, Development and Application IV - NT 2021. Lecture Notes in Networks and Systems*, **233**. Springer, Heidelberg. 3–20. https://doi.org/10.1007/978-3-030-75275-0_1.
 22. Jovanović Doleček, G., **Karabegović, I.**, 2021, Comb-based decimation filter with improved aliasing rejection in all folding bands. *Ibidem*: 615–623. https://doi.org/10.1007/978-3-030-75275-0_67.
 23. **Karabegović, I.**, Karabegović, E., Mahmić, M., Husak, E., Dašić, P., 2021, The implementation of Industry 4.0 supported by service robots in production processes. In: Ivanov, V., Trojanowska, J., Pavlenko, I., Zajac, J., Peraković, D. (Eds), *Advances in Design, Simulation and Manufacturing IV - DSMIE 2021. Lecture Notes in Mechanical Engineering*, **1**. Springer, Heidelberg. 193–202. https://doi.org/10.1007/978-3-030-77719-7_20.
 24. **Karabegović, I.**, Husak, E., Isić, S., Banjanović - Mehmedović, L., Badnjević, A., 2021, Implementation of service robots for space disinfection in medical institutions: A review of control of coronavirus infection. In: Badnjević, A., Gurbeta Pokvić, L. (Eds), *Proceedings IFMBE - CMBEBIH 2021*, **84**. Springer, Heidelberg. 921–928. https://doi.org/10.1007/978-3-030-73909-6_102.
 25. **Karabegović, I.**, Karabegović, E., Mahmić, M., Husak, E., 2020, Dissemination of patents of the base technologies of the Fourth Industrial Revolution – Industry 4.0. In: Karabegović, I. (Ed), *New Technologies, Development and Application III - NT 2020. Lecture Notes in Networks and Systems*, vol. **128**. Springer, Heidelberg. 3–15. https://doi.org/10.1007/978-3-030-46817-0_1.
 26. Jovanović Doleček, G., **Karabegović, I.**, 2020, Green technology approach to comb-based decimators design. *Ibidem*: 469–477. https://doi.org/10.1007/978-3-030-46817-0_54.

27. **Karabegović, I.**, Turmanidze, R., Dašić, P. 2020, Robotics and automation as a foundation of the Fourth Industrial Revolution – Industry 4.0. In: Tonkonogy, V., Ivanov, V., Trojanowska, J., Oborskyi, G., Pavlenko, I. (Eds), *Advanced Manufacturing Processes - Interpartner 2019. Lecture Notes in Mechanical Engineering*, Springer, Heidelberg. 128–136. https://doi.org/10.1007/978-3-030-40724-7_13.
28. **Karabegović, I.**, Karabegović, E., Mahmić, M., Husak, E., 2020, Implementation of Industry 4.0 and industrial robots in the manufacturing processes. In: Karabegović, I. (Ed), *New Technologies, Development and Application II - NT 2019. Lecture Notes in Networks and Systems*, **76**. Springer, Heidelberg. 3–14. https://doi.org/10.1007/978-3-030-18072-0_1.
29. Isić, S., Mehremić, S., **Karabegović, I.**, Husak, E., 2020. Systems for passive and active vibration damping. *Ibidem*: 96–104. https://doi.org/10.1007/978-3-030-18072-0_10.
30. Husak, E., Kovačević, A., **Karabegović, I.**, 2019, Calculation of clearances in twin-screw compressors. *IOP Conf. Series: Materials Science and Engineering*, 604, 012001. Presented at: *Int. Conf. on Compressors and their Systems 2019*, 9–11 September 2019, City, University of London. **604**, 012001: 1–10. <https://doi.org/10.1088/1757-899X/604/1/012001>.
31. **Karabegović, I.**, and Mirza, R., 2018, Automation of the welding process by use of industrial robots. In: Karabegović, I. (Ed), *New Technologies, Development and Application - NT 2018. Lecture Notes in Networks and Systems*, **42**. Springer, Heidelberg. 3–17. https://doi.org/10.1007/978-3-319-90893-9_1.
32. Nezirić, E., Isić, S., **Karabegović, I.**, Voloder, A., 2018, FEM model of misaligned rotational system with rotating looseness. *Ibidem*: 135–143. https://doi.org/10.1007/978-3-319-90893-9_16.
33. Babić, M., **Karabegović, I.**, Martinčić, S.I., Varga, G., 2018, New method of sequences spiral hybrid using machine learning systems and its application to engineering. *Ibidem*: 227–237. https://doi.org/10.1007/978-3-319-90893-9_28.
34. Jovanović Doleček, G., **Karabegović, I.**, 2018, Comb-based decimator for multiples-of-five decimation factors. *Ibidem*: 423–428. https://doi.org/10.1007/978-3-319-90893-9_50.
35. **Karabegović, I.**, 2017, Research and development of new generation service robots for medical application. In: Hadžikadić, M., Avdaković, S. (Eds), *Advanced Technologies, Systems, and Applications II - IAT 2017. Lecture Notes in Networks and Systems*, **28**. 979–991. Springer, Heidelberg. https://doi.org/10.1007/978-3-319-71321-2_82.
36. Husak, E., **Karabegović, I.**, 2017, Heuristic optimization methods in industrial robotics. *Ibidem*: 1000–1006. https://doi.org/10.1007/978-3-319-71321-2_84.
37. Mehremić, S., **Karabegović, I.**, 2017, Comparison of numerical and experimental results of measuring vehicle movement kinematic parameters integrated into advanced mechatronic systems. *Ibidem*: 1026–1036. https://doi.org/10.1007/978-3-319-71321-2_86.
38. **Karabegović, I.**, Doleček, V., 2016, The role of service robots and robotic systems in the treatment of patients in medical institutions. In: M. Hadžikadić and S. Avdaković, (Eds), *Advanced technologies, systems, and applications - IAT 2016. Lecture Notes in Networks and Systems*, **3**. Springer, Heidelberg. https://doi.org/10.1007/978-3-319-47295-9_2.
39. **Karabegović, I.**, Ujević, D., Hodžić, D., 2008, Intelligent system for manufacturing of clothes on distance. In: *Proc. of the 86th Textile Institute World Conference: Fashion and Textiles – Heading Towards New Horizons*. Hong Kong, China, 18–21 November 2008. The Textile Institute. 928–934. <https://www.textileinstitute.org/>.
40. Ujević, D., Brlobašić, B., Hrženjak, R., **Karabegović, I.**, Petrovečki, V., 2008, Contribution to Anthropometric Surveys and Principal Comaprasons of the garment size system. *Ibidem*: 103–109. <https://www.textileinstitute.org/>.
41. **Karabegović, I.**, Vojić, S., Doleček, V., 2006, *3D Vision for Industrial Robots*. In: K. Jezernik (Ed), *Proc. of the 12th Int. Power Electronics and Motion Control Conference - EPE-PEMC 2006*, Portorož, Slovenia, 30 August – 1 September 2006. IEEE, 213–218. <https://www.proceedings.com/content/000/000625webtoc.pdf>.
42. Jovanović-Doleček, G., Doleček, V., **Karabegović, I.**, 2005, One method for FIR minimum-phase-multiplier-free filter design based on cosine and RRS filters. In: Teplinsky, A., Flynn,

- R., Feely, O. (Eds), *Proc. of the European Conf. on Circuit Theory and Design - ECCTD 2005*, University CollegeCork, Ireland, 29 August – 2 September 2005. IEEE Catalog No. 05EX1052C. 275–279. <https://doi.org/10.1109/ECCTD.2005.1523146>
43. Jovanović-Doleček, G., Doleček, V., Karabegović, I. 2003, Design of lowpass narrow band FIR filters using IFIR and modified RRS filter. In: Khosraw-Pour, M. (Ed), *Proceedings of the Managing Modern Organizations Through Information Technology: Information Resources Management Association Int. Conf. 2003*, 18–21 May 2003. IGI Global, Philadelphia, USA. ISBN: 1-59140-066-X: 744–745.
 44. Ujević, D., Rogale, D., **Karabegović, I.** 2003, New methodological application for production of technical documentation through computer applying in the process of clothes producing. In: *Proc. of the World Textile Conf. 4th Conf. Civiltex - AUTEX 2003*, Technical University of Lodz, Poland. ISBN 83-89003-32-5: 468–474.
 45. Ujević, D., Kovačević, S., Hadina, J., **Karabegović, I.**, 2002, Impact of Joined Place on the Fabric Intended for Manufacturing Car Seat Covers. In: *Proc. of the World Textile Conf., 2nd Conf.: Textile Engineering at the Dawn of a New Millennium – An Exciting Challenge – AUTEX 2002*, 1–3 July 2002, Brugge, Belgium. ISBN: 978-1-84569-627-6: 353–354.
 46. Jovanović-Doleček, G., Doleček, V., **Karabegović, I.**, 2002, A Method for Narrowband HP FIR Filter Design Using Fewer Multiplications. In: Khosrow-Pour, M. (Ed), *Proc. of the Information Technology & Organizations: Trends, Issues, Challenges & Solutions*. Hershey, PA: Idea Group Publishing. ISBN: 1-59140-078-X: 354–355. <https://www.irma-international.org/proceeding/information-technology-organizations/31506/>.
 47. Ujević, D., Skoko, M., Mijović, B., **Karabegović, I.**, 2001, Investigation of the Impact of Sewing Needle Penetration Force on Knitted Fabric Damages. In: Araujo, M. (Ed), *Proc. of the 1st AUTEX Conf. – TEX-ED & R2001: Textile Education and Research: Strategies for the New Millennium*, Póvoa de Varzim, Portugal, 26–29 June 2001, Póvoa de Varzim: University of Minho. 221–224. <https://www.croris.hr/crosbi/publikacija/prilog-skup/482171>.
 48. Ujević, D., **Karabegović, I.**, 2001, Contemporary Development Trends in Sewing Machines for Garment Industry. In: *Proc. of the 11th Annual Int. TANDEC Nonwovens Conference*, Knoxville, Tennessee, SAD, 6–8 November 2001, 3.5.1–3.5.6.
 49. Mijović, B., **Karabegović, I.**, Mesić, S., 1998. Head Injury by Missile. In: *Proc. of the Third World Congress of Biomechanics*, 2–8 August 1998, Sapporo, Japan. Sapporo: Thokai University, 19.