

Konya Technical University
Electrical-Electronics Engineering
Faculty of Engineering and Natural Sciences
Konya, Selcuklu-42075
Turkiye

akifdurdu@gmail.com
Phone: [00903322051735]
Mobile: [00905053186467]
Fax: [00903322410635]
Website: www.rac-lab.com

Assoc. Prof. Dr. Akif Durdu

ORCID: <https://orcid.org/0000-0002-5611-2322>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=55364612200>

Web of Science: <https://www.webofscience.com/wos/author/record/AAQ-4344-2020>

ResearchGate: <https://www.researchgate.net/profile/Akif-Durdu>

Google Scholar: <https://scholar.google.com/citations?user=4wHq7iwAAAAJ&hl=tr&oi=ao>

Research Interests

Broad topics: Autonomous systems (UAV, UGV), Intelligent Transportation Systems (ITS) and AI Applications.

In particular: Path Planning, GPS-Denied Systems, Intelligent Traffic Control, Swarm Systems, Decision Support, Fleet Management, Robot Operating System (ROS), Artificial Intelligence and Deep Learning Applications, PLC Programming, Control Theory, Robotics (Mobile and Cognitive) Motion Planning, Localization and Navigation, SLAM (Simultaneous Localization and Mapping), Visual SLAM, Intelligent and Nonlinear Control Systems, Image Processing, Sensor Fusion, Extended Kalman Filtering

Education

Ph.D. Electrical and Electronics Engineering, 2012, Middle East Technical University, Turkiye
Thesis: Robotic System Design for Reshaping Estimated Human Intention in Human-Robot Interaction.

B.S. Electrical and Electronics Engineering, 2001, Selcuk University, Turkiye

Research Experience

May 2020 – present

Assoc. Prof. Dr.

Konya Technical University, Department of Electrical and Electronics Engineering (Faculty of Engineering and Natural Sciences)
Konya, Turkiye

July 2019 – July 2020

Visiting Postdoctoral Researcher

Ohio State University, Photogrammetric Computer Vision Lab. (PCVLab)
Ohio, United States

<i>May 2018 – May 2020</i>	Assist. Prof. Dr. Konya Technical University, Department of Electrical and Electronics Engineering (Faculty of Engineering and Natural Sciences) Konya, Türkiye
<i>Feb 2013 – May 2018</i>	Assist. Prof. Dr. Selcuk University, Department of Electrical and Electronics Engineering (Faculty of Engineering) Konya, Türkiye
<i>Jan 2011 – Jan 2012</i>	Visiting Scholar Researcher Ohio State University, Photogrammetric Computer Vision Lab. (PCVLab) Ohio, United States
<i>Sep. 2002 – Feb. 2013</i>	Research and Teaching Assistant Middle East Technical University, Department of Electrical and Electronics Engineering Ankara, Türkiye
<i>Nov. 2001 – Sept. 2002</i>	Research and Teaching Assistant Selcuk University, Department of Electrical and Electronics Engineering Konya, Türkiye

Industrial Experience

<i>May 2020 – Present</i>	Elfatek Electronics R&D Center Consultant Fevzi Çakmak Mahallesi, Modesa Sanayi Sitesi 10735 Sk. N0 : 10, 42050 Selçuklu Konya, Türkiye
<i>May 2021 – Present</i>	MPG (Makine Prodüksiyon Grubu) R&D Center Consultant Büyükkayacık OSB Mah. Evrenköy Cad. No:14/1 Selçuklu Konya, Türkiye
<i>May 2015 – Present</i>	MOSAŞ Group R&D Center Consultant Büyükkayacık OSB Mah. 422. Sk. No:13, 42160 Selçuklu Konya, Türkiye
<i>June 2023 – Present</i>	Agrovisio Official Consultant Ostim 1308. Sokak, ODTÜ Teknokent No:6, 06370 Yenimahalle Ankara, Türkiye
<i>October 2024 – Present</i>	Önallar Agricultural Machinery Design Center Consultant Konya Organize Sanayi Bölgesi Evrenköy Cd. 3. Nolu Sk., No:4 Selçuklu Konya, Türkiye

Projects

1. Proposing a Satellite Controlled Incentive System for Sustainable Sugar Beet Production
Supported by ERA-NET Cofund ICT-AGRI-FOOD
Role: Project Coordinator **Duration:** April 2022 – Ongoing **Project Budget:** €180.000
2. Data Processing and Traffic Analysis for Intelligent Intersection Transportation Technologies
Supported by KOSGEB R&D Program
Role: Advisor **Duration:** November 2024 – Ongoing **Project Budget:** ₺406.562
3. Optimization of Artificial Intelligence-Supported Autonomous Mobile Robots and Fleet Management Based on the Internet of Things (IoT)
Supported by KOSGEB R&D Program
Role: Advisor **Duration:** April 2024 – Ongoing **Project Budget:** ₺2.018.000
4. Development of an Autonomous Task Robot and Electronic Control Unit
Supported by KOSGEB Innovation R&D Program
Role: Advisor **Duration:** April 2024 – Ongoing **Project Budget:** ₺1.448.000
5. Development of Smart Autonomous Spraying Technologies and Agricultural Field Mapping
Supported by TÜBİTAK 1507 SME R&D Program
Role: Advisor **Duration:** April 2024 – Ongoing **Project Budget:** ₺2.400.000
6. Digital Twin Technology and Solutions in Smart Intersection Systems
Supported by TÜBİTAK 1501 Industry R&D Projects
Role: Advisor **Duration:** April 2024 – Ongoing **Project Budget:** ₺1.907.375
7. Adaptive Intelligent Control for IoT-Based Multi-Intersection Network
Supported by TÜBİTAK 1501 Industry R&D Projects
Role: Advisor **Duration:** January 2022 – May 2023 **Project Budget:** ₺451.057
8. Design and Development of Vehicle-to-Infrastructure (V2I) Module for Supporting Intelligent Transportation Systems
Supported by TÜBİTAK 1507 SME R&D Program
Role: Advisor **Duration:** March 2023 – September 2024 **Project Budget:** ₺1.777.626
9. Development of an Autonomous Task Robot and Electronic Control Unit
Supported by TÜBİTAK 1501 Industry R&D Projects
Role: Advisor **Duration:** January 2020 – May 2022 **Project Budget:** ₺1.065.885
10. Coordinated Fully Adaptive Signalization Control System (K-TASK)
Supported by TÜBİTAK 1511 Priority Areas R&D Program
Role: Advisor **Duration:** April 2018 – March 2020 **Project Budget:** ₺2.500.000

Memberships

IEEE Senior Member, IEEE Robotics and Automation Society, IFAC, IAENG, Turkish EMO
(Chamber of Electrical Engineers)

Publications

Book Chapters

1. Muhammet Fatih Aslan, Akif Durdu, Abdullah Yusefi, Kadir Sabancı, Cemil Sungur, "Chapter 7: A Tutorial: Mobile Robotics, SLAM, Bayesian Filter, Keyframe Bundle Adjustment and ROS Applications, In: Robot Operating System (ROS) Edited by Koubaa A. Studies in Computational Intelligence, vol 962. Springer, Cham. (2021)

2. Elaf Jirjees Dhulkefl, Akif Durdu, Hakan Terzioglu, "A* AND DIJKSTRA ALGORITHM", Book: Engineering Research Papers, Chapter: 6, pp. 97-116, December 2019.
3. Elaf Jirjees Dhulkefl, Akif Durdu, Hakan Terzioglu, "RAPID EXPLORING RANDOM TREES (RRT) ALGORITHM", Book: Engineering Research Papers, Chapter: 5, pp. 83-96, December 2019.
4. Akif Durdu, Ismet Erkmen, Aydan M. Erkmen and Alper Yilmaz, "Chapter13:Robotic Hardware and Software Integration for Changing Human Intentions", In:Prototyping of Robotic Systems: Applications of Design and Implementation, Edited by T. Sobh and X. Xiong, Pennsylvania: IGI Global Publisher, 2012.

Edited Proceedings

1. Ercan Yaldız, Ömer Aydoğdu, Akif Durdu, Serkan Budak, Mahmut Furkan Öztok, "25. Otomatik Kontrol Ulusal Konferansı (TOK 2024) Bildiriler Kitabı", ISBN: 978-625-7327-07-7, Konya Teknik Üniversitesi, 2024.

Refereed Indexed Journal Publications

1. Fuat YALCINLI, Bayram Akdemir, Akif DURDU, "Real-Time Performance Measurement Application via Bluetooth Signals for Signalized Intersections", Applied Sciences, Vol. 14, No. 17: 7849, 2024. <https://doi.org/10.3390/app14177849> (SCI-E) (WOS Q1) (Scopus Q2)
2. Fuat YALCINLI, Bayram Akdemir, Akif DURDU, "Adaptive Traffic Management Model for Signalised Intersections", Elektronika Ir Elektrotechnika, Vol. 30, No. 3, pp. 72-82, 2024. <https://doi.org/10.5755/j02.eie.36536> (SCI-E) (WOS Q4) (Scopus Q3)
3. Berat YILDIZ, Muhammet Fatih Aslan, Akif DURDU, and Ahmet Kayabaşı "Consensus-based virtual leader tracking swarm algorithm with GDRRT*-PSO for path-planning of multiple-UAVs", Swarm and Evolutionary Computation, Vol. 88. Article 101612, July 2024. <https://doi.org/10.1016/j.swevo.2024.101612> (SCI-E) (WOS Q1) (Scopus Q1)
4. Berat YILDIZ, Akif DURDU, and Ahmet Kayabaşı "Consensus-based virtual leader tracking algorithm for flight formation control of swarm UAVs," Turkish Journal of Electrical Engineering and Computer Sciences: Vol. 32: No. 2, Article 3, April 2024. <https://doi.org/10.55730/1300-0632.4067> (SCI-E) (WOS Q4) (Scopus Q3)
5. Abdullah Yusefi, Akif Durdu, Fırat Bozkaya, Şükrücan Tığlıoğlu, Alper Yilmaz and Cemil SUNGUR, "A Generalizable D-VIO and Its Fusion with GNSS/IMU for Improved Autonomous Vehicle Localization", IEEE Transactions on Intelligent Vehicles, Volume: 9, Issue: 1, January 2024. <https://doi.org/10.1109/TIV.2023.3316361>. (SCI-E) (WOS Q1) (Scopus Q1)
6. Muhammet Fatih Aslan, Akif DURDU, Kadir SABANCI, "Goal distance-based UAV path planning approach, path optimization and learning-based path estimation: GDRRT*, PSO-GDRRT* and BiLSTM-PSO-GDRRT*", Applied Soft Computing, Vol. 137. Article 110156, 2023. <https://doi.org/10.1016/j.asoc.2023.110156> (SCI-E) (WOS Q1) (Scopus Q1)
7. Muhammet Fatih Aslan, Akif Durdu, Abdullah Yusefi, Alper Yilmaz, "HVIONet: A deep learning based hybrid visual-inertial odometry approach for unmanned aerial system position estimation", Neural Networks, Vol. 155, pp. 461-474, 2022. <https://doi.org/10.1016/j.neunet.2022.09.001> (SCI-E) (WOS Q1) (Scopus Q1)
8. Muhammet Fatih Aslan, K. Hasikin, Abdullah Yusefi, Akif Durdu, Kadir SABANCI, M.M. Azizan, "COVID-19 Isolation Control Proposal via UAV and UGV for Crowded Indoor Environments: Assistive Robots in the Shopping Malls", Front. Public Health, Vol. 10. Article 855994, 2022. <https://doi.org/10.3389/fpubh.2022.855994> (SCI-E) (WOS Q2) (Scopus Q1)
9. Muhammet Fatih Aslan, Akif Durdu, Kadir SABANCI, "Visual-Inertial Image-Odometry Network (VIIONet): A Gaussian process regression-based deep architecture proposal for UAV pose estimation", Measurement, Vol. 194. Article 111030, 2022. <https://doi.org/10.1016/j.measurement.2022.111030> (SCI-E) (WOS Q1) (Scopus Q1)
10. Kadir SABANCI, Muhammet Fatih Aslan, Ewa Ropelewska, Muhammed Fahri ÜNLERŞEN, Akif Durdu, "A Novel Convolutional-Recurrent Hybrid Network for Sunn Pest-Damaged Wheat Grain Detection", Food Analytical Methods, Vol. 15, 1748–1760, 2022. <https://doi.org/10.1007/s12161-022-02251-0> (SCI-E) (WOS Q2) (Scopus Q2)

11. Muhammet Fatih Aslan, Kadir SABANCI, Akif Durdu, Muhammed Fahri ÜNLERŞEN, "COVID-19 diagnosis using state-of-the-art CNN architecture features and Bayesian Optimization", *Computers in Biology and Medicine*, Vol. 142, Article 105244, 2022. <https://doi.org/10.1016/j.compbimed.2022.105244> (SCI-E) (WOS Q1) (Scopus Q1)
12. Muhammet Fatih Aslan, Akif Durdu, Kadir SABANCI, Ewa Ropelewska and Seyfettin Sinan GÜLTEKİN, "A Comprehensive Survey of the Recent Studies with UAV for Precision Agriculture in Open Fields and Greenhouses", *Applied Sciences*, Vol. 12, No. 3: 1047, 2022. <https://doi.org/10.3390/app12031047> (SCI-E) (WOS Q1) (Scopus Q2)
13. Hasan Bilgehan MAKİNECİ, Hakan Karabörk and Akif Durdu, "ANN estimation model for photogrammetry-based UAV flight planning optimisation", *International Journal of Remote Sensing*, Vol. 43, Issue 15-16, pp. 5686-5708, 2022. <https://doi.org/10.1080/01431161.2021.1945159> (SCI-E) (WOS Q2) (Scopus Q1)
14. Berat Yıldız, Akif Durdu, Ahmet Kayabaşı, Mehmet Duramaz, "CNN Based Sensor Fusion Method for Real-Time Autonomous Robotics Systems", *Turk J. Elec Eng&Comp Sci*, Vol. 30 No. 1, pp. 79-93, 2022. <https://doi.org/10.3906/elk-2008-147> (SCI-E) (WOS Q4) (Scopus Q3)
15. Seyit Alperen ÇELTEK, Akif Durdu, "A Novel Adaptive Traffic Signal Control Based on Cloud/Fog/Edge Computing", *International Journal of Intelligent Transportation Systems Research*, Volume 19, pages 557-571, 2021. <https://doi.org/10.1007/s13177-021-00262-5> (E-SCI) (WOS Q3) (Scopus Q2)
16. Akif Durdu, Seyit Alperen ÇELTEK, Nuri Orhan, "Detection of Vortex Cavitation With The Method Adaptive Neural Fuzzy Networks in the Deep Well Pumps", *Journal of Tekirdag Agricultural Faculty*, Vol. 18, No. 4, pp. 613 - 624, 2021. <https://doi.org/10.33462/jotaf.769037> (E-SCI) (WOS Q3) (Scopus Q3)
17. Muzamil Gony, Akif Durdu, Seyit Alperen ÇELTEK, Alper Yilmaz, "An Adaptive Method for Traffic Signal Control Based on Fuzzy Logic with Webster and Modified Webster Formula Using SUMO Traffic Simulator", *IEEE Access*, Vol. 9, pp. 102985-102997, 2021. <https://doi.org/10.1109/ACCESS.2021.3094270> (SCI-E) (WOS Q2) (Scopus Q1)
18. Seyit Alperen ÇELTEK, Akif Durdu, Muzamil Gony, "Evaluating Action Durations for Adaptive Traffic Signal Control Based On Deep Q-Learning", *International Journal of Intelligent Transportation Systems Research*, Vol. 19, No. 3, pp. 557 - 571, 2021. <https://doi.org/10.1007/s13177-021-00262-5> (E-SCI) (WOS Q3) (Scopus Q2)
19. Sinan İlgen, Akif Durdu, Erdi Gülbahçe, & Abdullah Çakan, "Optimal Tuning of the SMC Parameters for a Two-Link Manipulator Co-Simulation Control" *Elektronika Ir Elektrotehnika*, Vol. 27, No. 5, pp. 4-10, 2021. <https://doi.org/10.5755/j02.eie.28954> (SCI-E) (WOS Q4) (Scopus Q3)
20. Mert Gürtürk, Abdullah Yusefi, Muhammet Fatih Aslan, Metin Soykan, Akif Durdu, Andrea Masiero, "The YTU Dataset and Recurrent Neural Network Based Visual-Inertial Odometry", *Measurement*, Vol. 184, Article 109878, 2021. <https://doi.org/10.1016/j.measurement.2021.109878> (SCI-E) (WOS Q1) (Scopus Q1)
21. Muhammet Fatih Aslan, Kadir SABANCI, Akif Durdu, "A CNN-based novel solution for determining the survival status of heart failure patients with clinical record data: numeric to image". *Biomedical Signal Processing and Control*, Vol. 68, Article 102716, 2021. <https://doi.org/10.1016/j.bspc.2021.102716> (SCI-E) (WOS Q1) (Scopus Q1)
22. Abdullah Yusefi, Akif Durdu, Muhammet Fatih Aslan and Cemil SUNGUR, "LSTM and Filter Based Comparison Analysis for Indoor Global Localization in UAVs," in *IEEE Access*, vol. 9, pp. 10054-10069, 2021. <https://doi.org/10.1109/ACCESS.2021.3049896>. (SCI-E) (WOS Q2) (Scopus Q1)
23. Muhammet Fatih Aslan, Muhammed Fahri ÜNLERŞEN, Kadir SABANCI, Akif Durdu, "CNN-based transfer learning-BiLSTM network: A novel approach for COVID-19 infection detection". *Applied Soft Computing*, Vol. 98, Article 106912, 2021. <https://doi.org/10.1016/j.asoc.2020.106912> (SCI-E) (WOS Q1) (Scopus Q1)
24. Kadir Sabancı, Muhammet Fatih Aslan, Akif Durdu, "Bread and Durum Wheat Classification Using Wavelet Based Image Fusion". *Journal of the Science of Food and Agriculture*, Vol. 100, No. 15, pp. 5577-5585, 2020. <https://doi.org/10.1002/jsfa.10610> (SCI-E) (WOS Q1) (Scopus Q1)
25. Muzamil Eltejani Mohammed Ali, Akif Durdu, Seyit Alperen Celtek, Seyfettin Sinan Gultekin, "Fuzzy Logic and Webster's Optimal Cycle Based Decentralized Coordinated Adaptive Traffic Control Method", *Elektronika Ir Elektrotehnika*, Vol. 26, No. 4, pp. 57-64, 2020. <https://doi.org/10.5755/j01.eie.26.4.25959> (SCI-E) (WOS Q4) (Scopus Q3)

26. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, Meryem Afife Mutluer, "CNN and HOG Based Comparison Study for Complete Occlusion Handling in Human Tracking", *Measurement*, Vol. 158, Article 107704, 2020. <https://doi.org/10.1016/j.measurement.2020.107704> (SCI-E) (WOS Q1) (Scopus Q1)
27. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, "Human action recognition with bag of visual words using different machine learning methods and hyperparameter optimization". *Neural Comput & Applic*, Vol. 32, No. 12, pp. 8585–8597, 2020. <https://doi.org/10.1007/s00521-019-04365-9> (SCI-E) (WOS Q2) (Scopus Q1)
28. Qazwan.A Tarbosh, Ömer Aydoğdu, Nabil Farah, Md. Hairul Nizam Talib, Adeeb Salh, Nihat Çankaya, Fuad Alhaj Omar, Akif Durdu, "Review and Investigation of Simplified Rules Fuzzy Logic Speed Controller of High Performance Induction Motor Drives", *IEEE Access*, vol. 8, pp. 49377-49394, 2020. <https://doi.org/10.1109/ACCESS.2020.2977115> (SCI-E) (WOS Q2) (Scopus Q1)
29. Seyit Alperen Celtek, Akif Durdu, Muzamil Eltejani Mohammed Ali, "Real-time Traffic Signal Control with Swarm Optimization Methods", *Measurement*, Volume 166, Article 108206, 2020. <https://doi.org/10.1016/j.measurement.2020.108206> (SCI-E) (WOS Q1) (Scopus Q1)
30. Akif Durdu, Mehmet Korkmaz, "A novel map merging technique for occupancy grid-based maps using multi-robot: a semantic approach", *Turk J. Elec Eng&Comp Sci*, Vol. 27 No. 5, pp. 3980–3993, 2019. <https://doi.org/10.3906/elk-1807-335> (SCI-E) (WOS Q4) (Scopus Q3)
31. Akif Durdu, Aydan M. Erkmén, Alper Yılmaz, "Reshaping human intention in Human-Robot Interactions by robot moves: A comparative analysis of HMM and OOM methods", *Interaction Studies*, Vol. 20 No. 3, pp. 534–564, 2019 <https://doi.org/10.1075/is.18068.dur> (S-SCI) (WOS Q3) (Scopus Q1)
32. Akif Durdu, Emre Hasan Dursun, "Sliding Mode Control for Position Tracking of Servo System with a Variable Loaded DC Motor", *Elektronika Ir Elektrotehnika*, Vol. 25 No. 4, pp. 8–16, 2019. <https://doi.org/10.5755/j01.eie.25.4.23964> (SCI-E) (WOS Q4) (Scopus Q3)
33. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, Kemal Erdogan, "An approach for learning from robots using formal languages and automata", *Industrial Robot*, Vol. 46 No. 4, pp. 490-498, 2019. <https://doi.org/10.1108/IR-11-2018-0240> (SCI-E) (WOS Q3) (Scopus Q2)
34. Akif Durdu, Mehmet Korkmaz, "Autonomously Simultaneous Localization and Mapping Based on Line Tracking in a Factory-Like Environment", *Advances in Electrical and Electronic Engineering journal*, Vol. 17, No. 1, pp. 45-53, March 2019. <https://doi.org/10.15598/aece.v17i1.3048> (E-SCI) (WOS Q4) (Scopus Q4)
35. Akif Durdu, M. Celalettin Ergene, Onur Demircan, Hasan Uguz, Mustafa Mahmutoglu, Ender Kurnaz, "Image Processing based Task Allocation for Autonomous Multi Rotor Unmanned Aerial Vehicles", *International Journal of Advanced Computer Science and Applications*, Vol. 9, No. 11, pp. 551-555, November 2018. <https://doi.org/10.14569/IJACSA.2018.091176> (E-SCI) (WOS Q3) (Scopus Q3)
36. Mehmet Korkmaz, Akif Durdu, "Real-Time Implementation of ORB-Based Probabilistic 3D Mapping", *Electronics World*, Vol. 123 (1975), pp. 38-41, September 2017 (SCI-E) (WOS Q4)
37. Akif Durdu, Ismet Erkmén, A.M. Erkmén, "Estimating and Reshaping Human Intention via Human-Robot Interaction", *Turk J. Elec Eng&Comp Sci*, Vol. 24, No:1, pp. 88-104, 2016 (SCI-E) (WOS Q4) (Scopus Q3)

Refereed Other Indexed Journal Publications

1. Fuat YALCINLI, Bayram Akdemir, Akif DURDU, Özgenur Yıldız, "Tam Trafik Uyarmalı Sinyalizasyon Sisteminin Simülasyon Modellemesi ve İyileştirme Oranlarının Saptanması", *International Journal of Advanced Natural Sciences and Engineering Researches*, 7(6), 1–7, June 2023, <https://doi.org/10.59287/ijanser.887>
2. Gökberk Ay , Akif Durdu and Barış S. Nesimioğlu , "Accuracy Comparison of CNN Networks on GTSRB Dataset", *Journal of Artificial Intelligence and Data Science*, vol. 2, no. 2, pp. 63-68, Dec. 2022.
3. Serkan Budak, M. Halis Tekin, Akif Durdu and Cemil SUNGUR, "Kalman Filter and PID Application on Underwater Vehicles", *Turkish Journal of Forecasting*, vol. 06, no. 1, ss. 27-33, Aug. 2022, <https://doi.org/10.34110/forecasting.1125559>.
4. M. Nazmi Öz, Serkan Budak, Ender Kurnaz and Akif Durdu, "Orientation Determination in IMU Sensor with Complementary Filter", *Turkish Journal of Forecasting*, vol. 06, no. 1, ss. 34-39, Aug. 2022, <https://doi.org/10.34110/forecasting.1126184>

5. Sinan İlgen, Akif Durdu, Erdi Gülbahçe, Abdullah Çakan, Mete KALYONCU, "The Bees Algorithm Approach to Determining SMC Controller Parameters for the Position Control of a SCARA Robot Manipulator", *European Journal of Science and Technology*, Vol. 33, pp. 267-273, 2022. <https://doi.org/10.31590/ejosat.883266>.
6. Fırat Bozkaya, Abdullah Yusefi, Şükrücan Tığlıoğlu, Ahmet Kağan Kaya, Okan Kazancı, Mustafa Yasin Akmaz, Akif Durdu, Cemil SUNGUR, "Improved Real Time Object Detection In Autonomous Systems Using Data Augmentation Methods", *European Journal of Science and Technology*, Vol. 30 (Special Issue), pp. 83-87, 2021. <https://doi.org/10.31590/ejosat.1006408>.
7. Talha Gülgün, İsmail Yalçinkaya, Mertcan Erdoğan, Akif Durdu, "Investigation of the Free Vibration Characteristic of a Propeller Planned for Use in a Thruster in an Unmanned Underwater Vehicle", *European Journal of Science and Technology*, (Special Issue), pp. 870 – 873, 2021. <https://doi.org/10.31590/ejosat.1010720>.
8. Talha Gülgün, İsmail Yalçinkaya, Mertcan Erdoğan, Akif Durdu, "Comparison of the Analysis Methods Applied in Calculating the Thrust Force of the Thrusters Used in Unmanned Underwater Vehicles", *European Journal of Science and Technology*, (Special Issue), pp. 791 – 795, 2021. <https://doi.org/10.31590/ejosat.1008881>.
9. Akif Durdu, Nevzat Bol, Erol Öztürk, Mehmet Duramaz, Mehmet Korkmaz, Berat Yıldız and Ahmet Kayabaşı, "Convolutional Neural Networks Based Active SLAM and Explorations", *European Journal of Science and Technology*, vol. 22, pp. 342-346, 2021. <https://doi.org/10.31590/ejosat.862953>
10. Seyit Alperen Çeltek, Akif Durdu, "AN OPERANT CONDITIONING APPROACH FOR LARGE SCALE SOCIAL OPTIMIZATION ALGORITHMS". *Konya Journal of Engineering Sciences*, 8(Special Issue), 38 – 45, December 2020. <https://doi.org/10.36306/konjes.821958>.
11. Anas Harb, Hakan Terzioğlu, Akif Durdu, "Intelligent Traffic Signaling Control Using Petri Nets". *Artificial Intelligence Studies*, 3(1), 1-13, 2020. <https://doi.org/10.30855/AIS.2020.03.01.01>.
12. Elaf Jirjees Dhulkefl, Akif Durdu and Hakan Terzioğlu, "DIJKSTRA ALGORITHM USING UAV PATH PLANNING". *Konya Journal of Engineering Sciences*, 8(Special Issue), 92 – 105, December 2020. <https://doi.org/10.36306/konjes.822225>.
13. Kemal Erdoğan, Akif Durdu and Rahime Ceylan, "RESHAPING HUMAN INTENTION ON HUMAN-MACHINE INTERACTION BY USING HOLOGRAMS". *Konya Journal of Engineering Sciences*, 8(Special Issue), 1-8, December 2020. <https://doi.org/10.36306/konjes.822126>.
14. Akif Durdu, Nuri Orhan, Seyit Alperen Çeltek, Muhammet Fatih Aslan, Kadir Sabancı, "Submersible Pump Vortex Detection Using Image Processing Technique and Neuro-Fuzzy". *International Journal of Applied Mathematics, Electronics and Computers*, 8(4), 163-172, December 2020. <https://doi.org/10.18100/ijamec.804049>.
15. Hasan Bilgehan Makineci, Akif Durdu, Hakan Karabork, "Comparison of Digital Elevation Models Produced with Photogrammetric Usage of UAV by Geodetic Techniques", *Turkish Journal of Remote Sensing*, 2 (2) , 58-69, December 2020.
16. Ahmet Furkan Büyükkalek, Abdullah Yusefi, Mert Dağadası, Yasin Türkmenoğlu, Akif Durdu, "DJI Tello ile ROS Tabanlı Haritalandırma Simülasyonu". *European Journal of Science and Technology*, (Special Issue), 504-508, 2020. <https://doi.org/10.31590/ejosat.820154>.
17. Abdullah Yusefi, Akif Durdu, Cemil Sungur, "ORB-SLAM-based 2D Reconstruction of Environment for Indoor Autonomous Navigation of UAVs". *European Journal of Science and Technology*, (Special Issue), 466-472, 2020. <https://doi.org/10.31590/ejosat.819620>.
18. Abdullah Yusefi, Akif Durdu, Cemil Sungur, "Performance and Trade-off Evaluation of SIFT, SURF, FAST, STAR and ORB feature detection algorithms in Visual Odometry". *European Journal of Science and Technology*, (Special Issue), 455-460, 2020. <https://doi.org/10.31590/ejosat.81973>.
19. Talha Gülgün, Göksel Alankaya, Muhammet Emin Duran, Mertcan Erdoğan, İsmail Yalçinkaya, Akif Durdu, Hakan Terzioğlu, "Analysis of The Impact of Different Angles of Thrusters in Underwater Vehicles on Thrust Force in CAD Environment". *European Journal of Science and Technology*, (Special Issue), 357-362, 2020. <https://doi.org/10.31590/ejosat.804592>.
20. Talha Gülgün, Göksel Alankaya, Muhammet Emin Duran, Mertcan Erdoğan, İsmail Yalçinkaya, Akif Durdu, Hakan Terzioğlu, "Low-Cost Unmanned Underwater Vehicle Design". *European Journal of Science and Technology*, (Special Issue), 363-367, 2020. <https://doi.org/10.31590/ejosat.804610>.

21. Ercan Ataner, Büşra Özdeş, Akif Durdu, Hakan Terzioğlu, "STM32 Based Underwater Control Card Design". European Journal of Science and Technology, (Special Issue), 351-356.
22. Ercan Ataner, Büşra Özdeş, Gamze Öztürk, Taha Yasin Can Çelik, Akif Durdu, Hakan Terzioğlu, "Design of Communication and Power Systems in Unmanned Underwater Vehicles". European Journal of Science and Technology, (Special Issue), 262-267.
23. Ercan Ataner, Büşra Özdeş, Gamze Öztürk, Taha Yasin Can Çelik, Akif Durdu, Hakan Terzioğlu, "Deep Learning Methods in Unmanned Underwater Vehicles ". European Journal of Science and Technology, (Special Issue), 345-350.
24. Hasan Bilgehan Makineci, Hakan Karabork, Akif Durdu, "The Performance Evaluation of Image Matching Techniques within UAV Images", Turkish Journal of Geosciences, 1(1), 8-14, 2020.
25. Mehmet Korkmaz, Onur Demircan, Akif Durdu, "A REAL-TIME STUDY AND COMPARISON ON VSLAM TECHNIQUES", International Journal of Emerging Technologies, Innovation Management and Entrepreneurship (IJETIME), Vol. 1, No. 1, pp.5-13, 2020
26. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, "A COMPARISON STUDY FOR IMAGE DENOISING", European Journal of Technique, Vol. 9, No. 2, pp. 145-150, December 2019. doi: <https://doi.org/10.36222/ejt.623068>
27. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, "Fusion of CT and MR Liver Images by SURF-Based Registration", International Journal of Intelligent Systems and Applications in Engineering, Vol. 7, No. 4, pp. 216-221, December 2019. <https://doi.org/10.18201/ijisae.2019457233>
28. Halil Cetin, Akif Durdu, M.Fatih Aslan, M.Mustafa Kelek, "Q-Learning Based Real Time Path Planning for Mobile Robots", International Journal of Trend in Scientific Research and Development (ijtsrd), Vol. 4, No. 1, pp. 631-636, December 2019.
29. Halil Cetin, Akif Durdu, "Motion Control of Mobile Robots using Fuzzy Controller", International Journal of Trend in Scientific Research and Development (ijtsrd), Vol. 4, No. 1, pp. 637-641, December 2019.
30. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, "Comparison of Contourlet and Time-Invariant Contourlet Transform Performance for Different Types of Noises", BALKAN JOURNAL OF ELECTRICAL & COMPUTER ENGINEERING, Vol. 7 No. 4, pp. 399-404 . <https://doi.org/10.17694/bajece.573583>
31. Ahmet Murat Erturan, Akif Durdu and Elif Merve Erturan, "The Use of LIDAR Technology in Architectural Offices", European Journal of Engineering Science and Technology (EJEST), Vol. 2 No. 2, pp. 40-48, 2019. <https://doi.org/10.33422/EJEST.2019.07.09>
32. A.Anas Harb, Akif Durdu, Hakan Terzioğlu, "Kavşak Trafik Sinyalizasyon Kontrolü için Bulanık Mantık Yöntemi ile Gerçek Zamanlı Sistemin Tasarımı ve Uygulaması", Avrupa Bilim ve Teknoloji Dergisi, Special Issue, pp. 490-497 . <https://doi.org/10.31590/ejosat.638612>
33. Taha Mahmood, Muzamil Eltejani Mohammed Ali, Akif Durdu, "A two Stage Fuzzy Logic Adaptive Traffic Signal Control for an Isolated Intersection Based on Real Data using SUMO Simulator", International Journal of Trend in Scientific Research and Development (ijtsrd), Vol. 3, No. 4, pp.656-659, June 2019.
34. Süleyman Demir, Akif Durdu, "Human Robot Interaction in Indoor", International Journal of Engineering Science and Computing (IJESC), Vol. 9, No. 6, pp.22963-22966, June 2019.
35. Elaf Jirjees Dhulkefl, Akif Durdu, "Path Planning Algorithms for Unmanned Aerial Vehicles", International Journal of Trend in Scientific Research and Development (ijtsrd), Vol. 3, No. 4, pp. 359-362, June 2019.
36. Akif Durdu, Üzeyir İlbaý Bozkurt, M. Celalettin Ergene, "Design of a Distributed Control System with Fuzzy Logic Controller and PLC in Wireless Sensor Network Based Industrial Environments and Monitoring the System with RFID", International Journal of Engineering Research and Development, Vol. 11, No. 1, pp. 173-191, January 2019. <https://doi.org/10.29137/umagd.396400>
37. Muhammet Fatih Aslan, Yunus Celik, Kadir Sabanci, Akif Durdu, "Breast Cancer Diagnosis by Different Machine Learning Methods Using Blood Analysis Data", International Journal of Intelligent Systems and Applications in Engineering, Vol. 6, No. 4, pp. 289-293, December 2018. <https://doi.org/10.1039/b000000x>
38. Burak Yılmaz, Akif Durdu, Güzin Özmen, "Brain Image Segmentation Using Multistable Cellular Neural Networks", Journal of Computers, Vol. 13, No. 5, pp. 537-544, May 2018. <https://doi.org/10.17706/jcp.13.5.537-544>
39. Mehmet Korkmaz, Akif Durdu, & Yunus Emre Tusun, "Sensor Comparison for a Real-Time SLAM Application", International Journal of Information and Electronics Engineering, Vol. 8, No. 1, pp. 1-4, 2018. <https://doi.org/10.18178/IJIEE.2018.8.1.684>

40. Muhammet Fatih Aslan, Kadir Sabancı, Akif Durdu, "Different Wheat Species Classifier Application of ANN and ELM", Journal of Multidisciplinary Engineering Science and Technology, Vol. 4, No: 9, September 2017.
41. Muhammet Fatih Aslan, Akif Durdu, Kadir Sabancı, "Shopping Robot That Make Real Time Color Tracking Using Image Processing Techniques", International Journal of Applied Mathematics, Electronics and Computers, Vol. 5, No: 3, 2017.
42. Üzeyir İlbaý Bozkurt, Akif Durdu, "Akıllı Fabrikalarda Dağıtılmış Kontrol Sistemleri Uygulaması ve RFID yaklaşımı(Smart Factories Distributed Control Systems Applications and RFID Approach)", Dicle Üniversitesi Mühendislik Fakültesi (DUMF) Mühendislik Dergisi, Cilt. 8, Sayı. 3, pp. 515-523, Temmuz 2017.
43. Emre Hasan Dursun, M. Latif Levent, Akif Durdu, and Ömer Aydoğdu, "Speed Control of a Variable Loaded DC Motor by Using Sliding Mode and Iterative Learning Control", International Journal of Electrical Energy, Vol. 5, No. 1, pp. 22-28, June 2017. <https://doi.org/10.18178/ijoe.5.1.22-28>
44. Üzeyir İlbaý Bozkurt, Akif Durdu, "Automation Application of Hydraulic Press Conveyor and Analysis of Efficiency (Hidrolik Presli Konveyör Uygulama Otomasyonu ve Verimlilik Analizi)", Fırat Üniversitesi Mühendislik Bilimleri Dergisi, Cilt. 29, Sayı.1, pp.19-27, 2017
45. Emre Hasan Dursun, Akif Durdu, "Speed Control of a DC Motor with Variable Load Using Sliding Mode Control", International Journal of Computer and Electrical Engineering, Vol. 8, No:3, pp. 219-226, June 2016.
46. Tolga Karakurt, Akif Durdu and Nihat Yılmaz, "Design of six legged spider robot and evolving walking algorithms", International Journal of Machine Learning and Computing, Vol. 5, No:2, pp. 96-100, 2015.

Refereed Conference/Workshop Papers

1. Muhammed Enes TOKGÖZ, Abdullah Yusefi, İbrahim TOY, and Akif DURDU, "Enhanced Obstacle Detection in Autonomous Vehicles using 3D LiDAR Mapping Techniques", 2024 23rd International Symposium INFOTEH-JAHORINA (INFOTEH), East Sarajevo, Bosnia and Herzegovina, 2024, pp. 1-4, doi: 10.1109/INFOTEH60418.2024.10495979. (IEEE Xplore)
2. Abdullah Yusefi, Akif DURDU, and İbrahim TOY, "Camera/LiDAR Sensor Fusion-based Autonomous Navigation", 2024 23rd International Symposium INFOTEH-JAHORINA (INFOTEH), East Sarajevo, Bosnia and Herzegovina, 2024, pp. 1-6, doi: 10.1109/INFOTEH60418.2024.10495974. (IEEE Xplore)
3. İbrahim TOY, Akif DURDU, and Abdullah Yusefi, "Localization Using Two Different IMU Sensor-Based Dead Reckoning System", 2024 23rd International Symposium INFOTEH-JAHORINA (INFOTEH), East Sarajevo, Bosnia and Herzegovina, 2024, pp. 1-5, doi: 10.1109/INFOTEH60418.2024.10495999. (IEEE Xplore)
4. Salim Azak, Fırat Bozkaya, Akif DURDU, "Enhancing Generalization in Autonomous Driving: A Comparative Study of Data Augmentation Techniques", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
5. Gökberk Ay, Akif DURDU, Barış Samim NESİMİOĞLU, "Performance Comparison of Machine Learning Classification Algorithms in Hyperspectral Images Based on Variable Training Set Sizes", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
6. Dilara Acar, Akif DURDU, "Optimization of Offshore Solar Energy Panels with Fuzzy Logic", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
7. Serkan Budak, Cemil SUNGUR, Akif DURDU, "Determination of LQR Weight Matrices for Quadrotor Control Using Simulink Response Optimization", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
8. Berfin Yapıcı, Hatice Nur Erdem, Büşra Önal, Kağan Koçyiğit, Musa Furkan Ulus, Mukaddes Altunkaynak, Neziha Burhan, Yasemin Kurt, Akif DURDU, "Ensuring Border Security by Tracking Moving Objects with Unmanned Aerial Vehicles", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
9. Yasemin Sümeyye Cücük, Akif DURDU, "Design Configuration Selections and Performance Analysis in Fixed Wing Unmanned Aerial Vehicles", 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12-14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
10. Şerife Nur Çiftci, Akif DURDU, Seyit Alperen CELTEK, Fuat YALÇINLI, "Simulation Modeling and Prioritization of Emergency Response Vehicles in Signaling Systems Using V2X Technology", 25. Otomatik

Kontrol Ulusal Konferansı (TOK 2024), 12–14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)

11. Sezai Ünver, Burak Seyit Kara, Seyit Alperen CELTEK, Akif DURDU, “Adaptive Traffic Signal Control and Application in Real Traffic Conditions”, 25. Otomatik Kontrol Ulusal Konferansı (TOK 2024), 12–14 Eylül 2024, Konya, Türkiye. (Otomatik Kontrol Ulusal Konferansı)
12. Fuat YALCINLI, Bayram Akdemir, Akif DURDU, Seyit Alperen ÇELTEK, Kübra Özcan Akkaş, Şerife Nur Çiftci, “Adaptif Sinyalizasyon Sistemi Performans Parametrelerinin Analizi”, The proceedings of 4th International Intelligent Transportation Systems Summit (SUMMITS’24), Ankara, Türkiye, 2-4 May 2024.
13. Sezai Ünver, Akif DURDU, Seyit Alperen ÇELTEK, Burak Seyit Kara, Fuat YALCINLI, “Dinamik Trafik Koşullarında Araç Rotalama Algoritmalarının Performansa Etkisi”, The proceedings of 4th International Intelligent Transportation Systems Summit (SUMMITS’24), Ankara, Türkiye, 2-4 May 2024.
14. Umair Younas, Akif DURDU and Ahmet Afşin KULAKSIZ, “Revolutionizing the Healthcare Industry: Real-Time Implementation of AI Driven Autonomous Robot for Enhanced Delivery Services in Chronic Patient Care”, 7th International Student Science Congress (UOK), İstanbul, Türkiye, 26-28 December 2023.
15. Akif DURDU, Mesut TUNÇER and Berat YILDIZ, “Graph-Based Collision Avoidance Algorithm Among Swarm Agents”, 2023 8th International Symposium on Electrical and Electronics Engineering (ISEEE), Galati, Romania, 26-28 October 2023, doi: 10.1109/ISEEE58596.2023.10310351. (IEEE Xplore)
16. Sezai Ünver, Seyit Alperen CELTEK, Furkan Enes KOÇAK, Furkan Acılar, Burak Seyit Kara, Akif DURDU, “Trafik Sinyalizasyon Sistemine Entegre Edilebilen V2I modülü Tasarımı”, 24. Otomatik Kontrol Ulusal Kongresi (TOK 2023), 14–16 Eylül 2023, İstanbul, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
17. Mesut TUNÇER, Akif Durdu, “Hava Aracının Kamera Özellikleri, Eğimi ve GPS Konumu ile Yerdeki Hedefin GPS Konumunun Bulunması”, 24. Otomatik Kontrol Ulusal Kongresi (TOK 2023), 14–16 Eylül 2023, İstanbul, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
18. Zülal Hilal Yıldız Budak, Akif DURDU, Seyit Alperen CELTEK, “Farklı Senaryolar için Bulanık Mantık Tabanlı Adaptif Trafik Sinyal Kontrolü”, 24. Otomatik Kontrol Ulusal Kongresi (TOK 2023), 14–16 Eylül 2023, İstanbul, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
19. Umair Younas, Barış KOKULU, Aysel Banu Tekdamar, Bahtiyar Erener Kurt, Akif DURDU, “Hizmet Sektöründe Kafe veya Restoran için Yerleştirme ve Masaüstü Entegre GUI Uygulamasına Sahip Yapay Zeka Güdümlü Servis Robotu”, 24. Otomatik Kontrol Ulusal Kongresi (TOK 2023), 14–16 Eylül 2023, İstanbul, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
20. Murat CEREN, Melek Ceyhun, Muhammet Ali Görey, Ömer Furkan Gülbaş, Musa Şen, Emirhan KARATAŞ, İrem Sezgin, Serkan Budak, Akif Durdu, “İnsansız Hava Araçları ile Popülasyon İçinde Kişilerin Otonom Takibi ve Kimlik Tespiti”, 24. Otomatik Kontrol Ulusal Kongresi (TOK 2023), 14–16 Eylül 2023, İstanbul, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
21. İbrahim TOY, Abdullah Yusefi and Akif DURDU, “Narrow Space Warning and Slope Control System compatible with ADAS”, 2023 31st Signal Processing and Communications Applications Conference (SIU), İstanbul, Türkiye, 05-08 July 2023, doi: 10.1109/SIU59756.2023.10223997. (IEEE Xplore)
22. Serkan Budak, Fırat Bozkaya, Mustafa Yasin Akmaz, Şükrücan Tıglioğlu, Cansel Boynukara, Okan Kazancı, Akif DURDU and Cemil SUNGUR, “Use of Yolo Algorithm for Traffic Sign Detection in Autonomous Vehicles and Improvement Using Data Replication Methods”, 2023 15th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), Bucharest, Romania, 29-30 June 2023, doi: 10.1109/ECAI58194.2023.10193941. (IEEE Xplore)
23. İbrahim Toy, Abdullah Yusefi, Akif Durdu, “Improved Dead Reckoning Localization Using IMU Sensor”, International Symposium on Electronics and Telecommunications 2022 (ISETC 2022-IEEE), 10-12 November 2022, Timisoara, Romania. (IEEE Xplore)
24. Serkan Budak, Cemil SUNGUR, Akif Durdu, “Pekiştirmeli Öğrenme ile Proses Kontrolü”, 23. Otomatik Kontrol Ulusal Kongresi (TOK 2022), 15–18 Eylül 2022, Elazığ, Türkiye. (Otomatik Kontrol Ulusal Kongresi)
25. Burhan Kaya, Akif Durdu, “Accurate Edge Detection With Support of Reflectance Transformation Imaging”, IEEE 30th Signal Processing and Communications Applications Conference (SIU 2022-IEEE), 15-18 May 2022, Safranbolu, Türkiye. (IEEE Xplore)
26. Ömer Selim Keskin, Muhammet Fatih Aslan, Abdullah Yusefi, Akif Durdu, “Performance comparison of Extreme Learning Machines and other machine learning methods on WBCD data set”, IEEE 29th Signal Processing and Communications Applications Conference (SIU 2021-IEEE), 9-11 June 2021, ONLINE, Türkiye. (IEEE Xplore)

27. M.Esat Dere, Akif Durdu, "PRM Algoritmasının Kararlı Hale Getirilmesi", 2020 4th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), 22-24 Oct. 2020, ONLINE, Türkiye.(IEEE Xplore)
28. Sinan İlgen, Akif Durdu, Erdi Gülbahçe, Abdullah Çakan, "İki Linkli Robot Manipülatörün Modellenmesi ve Bozucu Etki Altında Yörünge Kontrolü", 2020 4th International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT), 22-24 Oct. 2020, ONLINE, Türkiye. (IEEE Xplore)
29. Ahmet Furkan Büyükkalek, Ahmet Murat Erturan, Mert Dağadası, Şevval Çelik, Metehan Aslanbaş, Akif Durdu, "Image Processing Based Transportation In Unmanned Aerial Vehicles", IEEE 28th Signal Processing and Communications Applications Conference (SIU 2020-IEEE), 5-7 October 2020, ONLINE, Türkiye.(IEEE Xplore)
30. Muhammed Taha Koroglu, Mehmet Korkmaz, Alper Yılmaz and Akif Durdu, "Multiple Hypothesis Testing Approach to Pedestrian Inertial Navigation", 2019 IEEE Indoor Positioning Indoor Navigation Conference (IPIN), Sept.30-Oct.3, 2019 in Pisa, Italy (IEEE Xplore)
31. Anas A.M. Harb, Akif Durdu, Hakan Terzioğlu, "Akıllı Kontrol Yöntemleri ile Trafik Sinyalizasyon Kontrolü", International Congress on Human-Computer Interaction, Optimization and Robotic Applications, July 5-7, 2019 in Urgup, Nevşehir, Türkiye.
32. Shekofa Ghoury, Cemil Sungur, Akif Durdu, "Real-Time Diseases Detection of Grape and Grape Leaves using Faster R-CNN and SSD MobileNet Architectures", International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES2019), Apr 26-28, 2019 in Alanya, Turkey.
33. Ahmet Murat Erturan, Akif Durdu and Elif Merve Erturan, "The Use of LIDAR Technology in Architectural Offices", The 2nd International Conference on Modern Research in Science, Engineering and Technology, April 5-7, 2019 in Barcelona, Spain.
34. Berat Yıldız, Ahmet Kayabaşı, Akif Durdu, "Determination of the Effect of Weather Conditions on Efficiency in Solar Panel Applications by Artificial Neural Networks", VI. International KOP Regional Development Symposium, October 26-28, 2018, Konya, Türkiye.
35. Sinan İlgen, Akif Durdu, Erdi Gülbahçe, Abdullah Çakan, "Sliding Mode Control of a Two-link Robot Manipulator Using Adams & Matlab Software", 6th International Conference on Control Engineering & Information Technology (CEIT 2018), 25-27 October 2018, İstanbul, Türkiye.(IEEE Xplore)
36. Kemal Erdoğan, Hasan Kömür, Akif Durdu, Rahime Ceylan, "Human-Robot Interaction to Guide a Person", 2nd International Symposium on Multidisciplinary Studies and Innovative Technologies, October 19-20-21, 2018, Kızılcahamam, Ankara, Türkiye.(IEEE Xplore)
37. M.Fatih Aslan, Murat Ceylan, Akif Durdu, "Segmentation of Retinal Blood Vessel Using Gabor Filter and Extreme Learning Machines", 2018 International Conference on Artificial Intelligence and Data Processing (IDAP), September 28-30, 2018, Malatya, Türkiye.(IEEE Xplore)
38. S.Alperen Çelteç, Akif Durdu and Ender Kurnaz, "Design and Simulation of the Hierarchical Tree Topology Based Wireless Drone Networks", 2018 International Conference on Artificial Intelligence and Data Processing (IDAP), September 28-30, 2018, Malatya, Türkiye. (IEEE Xplore)
39. Motuma Abafogi, Akif Durdu and Bayram Akdemir, "A New Approach to Mobile Robot Navigation in Unknown Environments", 10th International Conference on Electronics, Computers and Artificial Intelligence (ECAI 2018-IEEE), 28 – 30 June, 2018, Iasi, ROMÂNIA. (IEEE Xplore)
40. Ahmet Kayabasi, Berat Yildiz, M.Fatih Aslan and Akif Durdu, "Comparison of ELM and ANN on EMG Signals Obtained for Control of Robotic-Hand", 10th International Conference on Electronics, Computers and Artificial Intelligence (ECAI 2018-IEEE), 28 – 30 June, 2018, Iasi, ROMÂNIA. (IEEE Xplore)
41. Aykut Tahtırvancı and Akif Durdu, "Performance Analysis of Image Mosaicing Methods for Unmanned Aerial Vehicles", 10th International Conference on Electronics, Computers and Artificial Intelligence (ECAI 2018-IEEE), 28 – 30 June, 2018, Iasi, ROMÂNIA. (IEEE Xplore)
42. Aykut Tahtırvancı, Akif Durdu, Burak Yılmaz, "Classification of EEG Signals Using Spiking Neural Networks", IEEE 26th Signal Processing and Communications Applications Conference (SIU 2018-IEEE), 2-5 May 2018, Çeşme, İzmir, Türkiye. (IEEE Xplore)
43. Esat Dere, Akif Durdu, "Usage of the A* Algorithm to Find the Shortest Path in Transportation Systems", International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES 2018), May 11 – 13, 2018, Safranbolu – Karabük, Turkey.

44. Mehmet Korkmaz, Akif Durdu, "Comparison of Optimal Path Planning Algorithms", 14th International Conference on Advanced Trends in Radioelectronics, Telecommunications and Computer Engineering (TCSET 2018-IEEE), February 20 – 24, 2018, Lviv – Slavske, Ukraine. (IEEE Xplore)
45. Mehmet Korkmaz, Akif Durdu, Yunus Emre Tusun, "Sensor Comparison for a Real-Time SLAM Application", 4th International Conference on Artificial Intelligence (ICOAI 2017), October 23-25, 2017, Florence, Italy.
46. Akif Durdu, Halil Çetin, "Motion Control of Mobile Robots Using Fuzzy Controller", The 5th International Fuzzy Systems Symposium (FUZZYSS'17), October 16-17, 2017, Ankara, Türkiye.
47. Burak Yılmaz, Akif Durdu, Güzin Özmen, "Brain Image Segmentation Using Multistable Cellular Neural Networks", 9th International Conference on Computer and Electrical Engineering (ICCEE 2016), December 7-11, 2016, Barcelona, Spain.
48. E.Hasan Dursun, M.Latif Levent, Akif Durdu, Ömer Aydoğdu, "Speed Control of a Variable Loaded DC Motor by using Sliding Mode and Iterative Learning Control", 9th International Conference on Computer and Electrical Engineering (ICCEE 2016), December 7-11, 2016, Barcelona, Spain.
49. Sinan İlgen, Akif Durdu, "Bulanık Mantık Yöntemi İle Trafik Işıklarının Akıllı Kontrolü", ELECO-2016 Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu, 1-3 Aralık 2016, Bursa, Türkiye
50. Akif Durdu, Nuri Orhan, Sedat Çalışır, "Detection Of Vortex At The Deep Well Submersible Pumps By Using Fuzzy Logic Controller And Impacts On Pump Operating Characteristics", International Human and Nature Sciences: Problems and Solution Seeking Congress (IHANAS 2016), October 7-9, 2016, Sarajevo, Bosnia and Herzegovina.
51. Ü.İlbay Bozkurt, Akif Durdu, "Modeling A Distributed Control System With Fuzzy Logic In Wireless Sensor Network Based Industrial Environments", IV. International Electric and Electronic Engineering and Technologies Conference (ELECTROTECH'16), September 29-30, 2016, Istanbul, Türkiye.
52. Doğan Uğurlu, Akif Durdu, "İnsansız Kara Araçlarında Lazer Algılayıcılarla Gerçek Zamanlı Haritalama (Real-Time Mapping With Laser Range Sensor For Unmanned Ground Vehicle)", 2016 Otomatik Kontrol Ulusal Toplantısı (TOK'2016), 29 Eylül-1 Ekim 2016, Eskişehir, Türkiye.
53. M.Celalettin Ergene, Akif Durdu, Halil Çetin, "Imitation and Learning of Human Hand Gesture Tasks of the 3D Printed Robotic Hand by Using Artificial Neural Networks", 8th International Conference on Electronics, Computers and Artificial Intelligence (ECAI 2016), 30 June-02 July, 2016, Ploiesti, ROMÂNIA. (IEEE Xplore)
54. E.Hasan Dursun, Akif Durdu, "Position Control by using PD Type Fuzzy Logic: Experimental Study on Rotary Servo System", 8th International Conference on Electronics, Computers and Artificial Intelligence (ECAI 2016), 30 June-02 July, 2016, Ploiesti, ROMÂNIA. (IEEE Xplore)
55. M.Mustafa Kelek, M.Fatih Aslan, Akif Durdu, "Real-Time Target Tracking Using Fast Object Detection", 2nd International Conference on Engineering and Natural Sciences (ICENS 2016), May 24-28, 2016, Sarajevo, Bosnia and Herzegovina.
56. Kemal Erdoğan, Akif Durdu, Nihat Yılmaz, "Intention Recognition Using Leap Motion Controller and Artificial Neural Networks", the International Conference on Control, Decision and Information Technologies (CoDIT 2016), April 6-8, 2016, Saint Julian's, Malta. (IEEE Xplore)
57. Tolga Karakurt, Akif Durdu, Emre H. Dursun, "Petri-Net Based Control of Six Legged Spider Robot", 17th International Conference on Advanced Robotics (ICAR 2015), July 27-31, 2015, Istanbul, Türkiye. (IEEE Xplore)
58. Kemal Erdoğan, Mehmet Korkmaz, Akif Durdu, Nihat Yılmaz, Sebahattin Topal, "Formation Morphing of Multi-Robots Using Graph Theory: Fugitive Chasing", International Conference on Intelligent Automation and Robotics (ICIAR) 2015, 21-23 October, 2015, San Francisco, USA.
59. Ahmet Aksu, S.Sinan Gültekin, Akif Durdu, Bayram Akdemir, H.İbrahim Eneç, Fuat Yalçınlı, "Transponder Birimleri İle Öncelikli Araçların Algılanması ve Sinyalize Kavşak Taleplerinin Verilmesi", Sürdürülebilir Ulaşım İçin Yol ve Trafik Güvenliği kongresi (ROTRASA 2015), 7-8 Aralık 2015, Ankara, Türkiye.
60. Emrah Bakirci, S.Sinan Gültekin, Ahmet Aksu, Akif Durdu, Bayram Akdemir, "Sinyalize Bir Trafik Kavşağı Sistemi İçin Zıgbee-Ieee 802.15.4 Temelli Kablosuz Sensör Ağı Uygulaması", Sürdürülebilir Ulaşım İçin Yol ve Trafik Güvenliği kongresi (ROTRASA 2015), 7-8 Aralık 2015, Ankara, Türkiye.
61. Mehmet Korkmaz, Nihat Yılmaz, Akif Durdu, "Comparison of the SLAM algorithms: Hangar experiments", The 3rd International conference on Control, Mechatronics and Automation (ICCM 2015), December 21–22, 2015, Barcelona, Spain.

62. Halil Cetin, Akif Durdu, "Path planning of mobile robots with Q-learning", IEEE 22nd Signal Processing and Communications Applications Conference (SIU 2014), pp 2162-2165, 23-25 April 2014, Trabzon, Türkiye.
63. Akif Durdu, H. Cetin, H. Komur, "Robot Imitation of Human Arm via Artificial Neural Network", The proceedings of the 16th International Conference on Mechatronics (Mechatronika 2014), 2014, pp 370-374, December 3 – 5, 2014, Brno, Czech Republic. (IEEE Xplore)
64. Tolga Karakurt, Akif Durdu, Nihat Yilmaz, "Design of Six Legged Spider Robot and Evolving Walking Algorithms", International Conference on Artificial Intelligence (ICOAI 2014), December 22 – 24, 2014, Barcelona, Spain. Award: best presentation.
65. Akif Durdu, Ismet Erkmen, Aydan M. Erkmen and Alper Yilmaz. "Morphing Estimated Human Intention via Human-Robot Interactions", International Conference on Intelligent Automation and Robotics (ICIAR) 2011, 20-22 October, 2011, San Francisco, USA.
66. Akif Durdu, Ismet Erkmen, Aydan M. Erkmen, "Observable Operator Models for Reshaping Estimated Human Intention by Robot Moves in Human-Robot Interactions", IEEE – INISTA-12 International Symposium on Innovations in Intelligent Systems and Applications, July 2012, Trabzon, TURKIYE. (IEEE Xplore)
67. Akif Durdu, Ismet Erkmen, Aydan M. Erkmen, "İnsan-Robot Etkileşimi Yoluyla İnsan Niyetlerinin Tahmin Edilmesi ve Değiştirilmesi", ELECO-2012 Elektrik Elektronik ve Bilgisayar Mühendisliği Sempozyumu, 29 Kasım -1 Aralık 2012, Bursa, Türkiye.
68. Osman Bilgin, Akif Durdu, Musa Aydın, Abdullah Urkmez, "Un Fabrikalarında Kullanılan Vals Makinalarının Otomasyonu", İzmir Otomasyon Sempozyumu, 11-12 Ekim 2001, İzmir, Türkiye.

Thesis

1. Akif Durdu, "*Robotic System Design for Reshaping Estimated Human Intention in Human-Robot Interaction*", Ph.D thesis, Advisor: İsmet Erkmen, Co-Advisor: Aydan M. Erkmen, Electrical Electronics Engineering, Middle East Technical University, October 2012.

Teaching

Courses Taught

Selcuk University

Graduate/Undergraduate Courses

1. 1202503 Automatic Control 1, Fa'13, Fa'14, Fa'15, Fa'16, Fa'17, Fa'18.
2. 1202605 Automatic Control 2, Sp'13, Sp'14, Sp'15, Sp'16, Sp'17, Sp'18.
3. 1202639 Introduction to Robotics, Fa'13, Fa'14, Fa'15, Fa'16, Fa'17, Fa'18.
4. 8221001056 Intelligent Control Systems Fa'14, Fa'15, Fa'16, Fa'17, Fa'18.
5. 8121001004 Linear System Theory Fa'15, Fa'16, Fa'17, Fa'18.
6. 8121011022 Stability Theories for Dynamical Systems Sp'15, Sp'16, Sp'17, Sp'18.
7. 8121051010 Tele Robots Fa'18.
8. 8221001060 Robotic Vision Fa'18.

Konya Technical University

Graduate/Undergraduate Courses

1. 1202503 Automatic Control 1, Fa'19, Fa'21, Fa'22, Fa'23, Fa'24.
2. 1202605 Automatic Control 2, Sp'19, Sp'21, Sp'22, Sp'23, Sp'24.
3. 1202639 Introduction to Robotics, Fa'19, Fa'21, Fa'22, Fa'23, Fa'24.
4. 8221001056 Intelligent Control Systems Fa'19, Fa'21, Fa'22, Fa'24.
5. 8121011022 Stability Theories for Dynamical Systems Sp'19, Sp'21, Sp'22, Sp'23.

6. 8121051010 Tele Robots Sp'22, Sp'23.
7. 8221001060 Robotic Vision Sp'22, Sp'23.

KTO Karatay University

Graduate/Undergraduate Courses

1. 05160606 Control Engineering, Fa'14, Fa'15, Fa'16, Fa'17.

Student Supervision

Selcuk University

Ph.D. Students

1. Burak Yılmaz, "A New Approach to Diagnosing Multiple Sclerosis in MRI Images", 2017.
2. Muzamil Eltejani Mohammed Ali, "Coordinated Adaptive Traffic Signal Control for Smart Cities", 2021.

MS Students with Thesis

1. Emre Hasan Dursun, "Sliding Mode Control of a DC Motor with Variable Load", 2016.
2. Mehmet Latif Levent, "Prediction of a Time-Varying Linear System Using Kalman Filter and Fuzzy Iterative Learning Control", 2016.
3. Üzeyir İlbaý Bozkurt, "Development of Distributed Control Systems for Industrial Environments Based on Wireless Sensor Networks", 2016.
4. Halil Çetin, "Robotic System Design with Autonomous Movements and Path Planning in Known Environments", 2017.
5. Muhammet Fatih Aslan, "Intelligent Sensing and Tracking Applications for Human-Machine Interaction", 2018.
6. Taha Abdulwahid Mahmood Mahmood, "Adaptive Traffic Signal Control for Smart Cities", 2019.
7. Elaf Jirjees Dhulkefl Dhulkefl, "Shortest Path Planning Applications in 3D Environments", 2019.

Konya Technical University

Ph.D. Students

1. Mehmet Korkmaz, "Investigation of SLAM and VSLAM Algorithms, Development and Implementation of a New Multi-Robot Map Merging Method", 2019.
2. Seyit Alperen Çeltek, "Reinforcement Learning Algorithms and IoT-based Control of Urban Traffic Signal Networks", 2021.
3. Muhammet Fatih Aslan, "Development of Autonomous Unmanned Aerial Systems in Indoor Environments", 2022.
4. Salim Azak, "Innovative Solution Approaches Based on Deep Learning for Autonomous Driving", 2024.
5. Abdullah Yusefi, "Sensor Fusion and Vision-based Localization for Autonomous Systems", 2024.
6. Berat Yıldız, "Intelligent Path Planning for Unmanned Aerial Vehicle (UAV) Swarms", 2024.
7. Fuat Yalçın, "Interactive and adaptive traffic management model at signalized intersections", 2025

MS Students with Thesis

1. Sinan İlgen, "Control Applications for Robot Manipulator Performance", 2019.
2. Berat Yıldız, "Development of an Autonomous Robotic System Using Sensor Fusion Techniques", 2019.
3. Aykut Tahtırvancı, "Mosaicking of Indoor and Outdoor Images Using Unmanned Aerial Vehicles", 2019.

4. Muhammed Esat Dere, "Optimal Pathfinding for Mobile Robots", 2019.
5. Mehmet Celalettin Ergene, "Object Tracking Applications for Intelligent Control Systems in Unmanned Aerial Vehicles", 2019.
6. Süleyman Demir, "Human-Robot Interaction in Indoor Environments", 2019.
7. Ahmet Furkan Büyükkalek, "Mapping with Unmanned Aerial Vehicles and AI-based Object Recognition". 2022.
8. Nevzat Bol, "Prediction of Process Parameters in Additive Manufacturing Using Artificial Intelligence Methods, 2023.
9. Zülal Hilal Yıldız Budak, "Adjustable and Weight-based Adaptive Traffic Signal Control for Multiple Intersections, 2024.

Professional Service & Activities

Organizing Committees

General Co-Chair, 25th Automatic Control National Conference (TOK 2024), Konya Technical University, Konya, Türkiye, Sept. 2024

Program Committee Member

8th EAI International Conference on Robotic Sensor Networks (ROSENET 2024), Istanbul, Türkiye, 19-20 Dec. 2024.

Session Chair

23th Automatic Control National Conference (TOK 2022), Firat University, Elazığ, Türkiye, Sept. 2022.

Awards, Honors and Recognition

- **University Entrepreneurship Club Award**, 10th GİV Entrepreneurship Awards, 2024
- Recipient of TÜBİTAK 2214 International Research Fellowship Programme for PhD Students scholarships, 2011.
- Recipient of TÜBİTAK 2219 International Postdoctoral Research Fellowship Program for Turkish Citizens, 2019.
- Recipient of TÜBİTAK 2224-A Grant Program for Participation in Scientific Meetings Abroad, 2014, 2019, 2023.
- **Best Presentation Award** at the International Conference on Artificial Intelligence (ICOAI), 2014
- **Certificate of Merit (Student)** at the International Conference on Intelligent Automation and Robotics (ICIAR), 2011
- Advisor for award-winning student teams in national and international competitions:
 - Yıldız Wars Free Category Third Place (2016): "Helpful Shopping Robot" by M. Fatih Arslan and M. Mustafa Kelek
 - 13th METU Robotics Days Free Category Third Place and Jury Special Award (2016): "Mine Searching Robot with Sun Tracking Mechanism" by B. Özşen
 - TÜBİTAK UAV Competition Rotary Wing Category Second Place (2017): S-Air Team
 - 15th METU Robotics Days Innovation Category Second Place (2018): "Active Security Robot" by M. Şen, M. İlker Ekmen, and M. Ali Baygın Teknofest'18
 - TÜBİTAK UAV Competition Rotary Wing Category Second and Third Places (2018): S-Quad and S-Air Teams
 - 16th METU Robotics Days Innovation Category Second Place (2019): "Autonomous Cleaning Robot" by M. Duramaz, E. Öztürk, and M. Aslantaş

- OpenZeka Mini Autonomous Vehicle Competition University Category Championship (2019)
- Teknofest'19 TÜBİTAK UAV Competition Rotary Wing Category Championship (2019): RACLAB Aybars Team 17th
- METU Robotics Days "Autonomous UAV-Image Processing" Category Championship (2020): RACLAB Tugberk Team
- Teknofest'20 Intelligent Transportation Competition Third Place (2020): RACLAB Intelligent Transportation Team
- TÜBİTAK 2242 University Research Project Competition "Social Innovation and Entrepreneurship" Encouragement Award (2021): "AI-Supported Smart Cleaning Robot"
- Teknofest'21 Intelligent Transportation Competition Second Place (2021): RACLAB Intelligent Transportation Team
- Teknofest'21 Robotaxi Competition Ready Vehicle Category "Most Original Software" Award (2021): RACLAB SİGÜN Team
- 18th METU Robotics Days "Autonomous UAV-Image Processing" Category Third Place (2022): RACLAB Aybars Team
- 18th METU Robotics Days Innovation Category Honorable Mention (2022): RACLAB Aspar Team
- Teknofest'22 Robotaxi Competition Ready Vehicle Category "Most Original Software" Award and Performance First Place (2022): RACLAB SİGÜN Team
- Teknofest'22 Swarm UAV Competition "Best Team Spirit" Award (2022)
- Teknofest'22 TÜBİTAK 2242 University Research Project Competition "Defense, Space, and Aviation" Second Place (2022): "Underwater Vehicle Control Board Communicating with Computers"
- Teknofest'22 Intelligent Transportation Competition Fourth Place (2022)
- Teknofest'23 Agricultural UAV Competition "Most Original Design" Award (2023)
- Teknofest'23 TÜBİTAK International UAV Competition Rotary Wing and Fixed Wing Categories "Performance Awards" (2023): RACLAB UAV and RACLAB MERKÜT UAV Teams
- Teknofest'23 Robotaxi Competition Ready Vehicle Category Performance Third Place (2023): RACLAB SİGÜN Team
- Teknofest'24 Robotaxi Competition Ready Vehicle Category Performance Second Place (2024): RACLAB SİGÜN Team