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GitHub Pages	: https://kmkarakaya.github.io/Deep-Learning-Tutorials/
Personal Blog	: https://murat.karakaya.net/
Google Scholar Index	: https://scholar.google.com.tr/citations?user=FA4fcxoAAAAJ&hl=en
Web of Science	: https://publons.com/researcher/2679520/murat-karakaya/
Scopus	: https://www.scopus.com/authid/detail.uri?authorId=16637174900
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RESEARCH INTERESTS

I am passionate about applying cutting-edge Machine Learning, Deep Learning, and Natural Computing algorithms to address challenging problems in the domains of Natural Language Processing, Large Language Models, Image Processing, and Optimization.

EDUCATION

- **Postdoctoral Research, Computer Engineering:**
 - Research Topic: Interactions and Network Structures in Social Networks,
 - Advisor: Hakan FERHATOSMANOGLU,
 - Dept. of Computer Science and Engineering, **Ohio State University**, USA, April 2011.
- **Ph.D., Computer Engineering:**
 - Thesis Title: Counteracting Free Riding in Pure Peer-To-Peer Networks,
 - Thesis Advisor: Ozgur ULUSOY, Co-Advisor: Ibrahim KORPEOGLU,
 - Dept. of Computer Engineering, **Bilkent University**, Ankara, Turkey, March 2008,
 - GPA: 4.00/4.00.
- **M.S., Computer Engineering:**
 - Thesis Title: An Efficient Broadcast Scheduling Algorithm for Pull-Based Mobile Environments,
 - Thesis Advisor: Ozgur ULUSOY,
 - Dept. of Computer Engineering, **Bilkent University**, Ankara, Turkey, August 2000,
 - GPA: 3.85/4.00.

- **M.S., Management and Organization:**
 - Thesis Title: Information Systems with regard to Individual and Organizational Productivity,
 - Thesis Advisor: Dursun BINGOL,
 - Institute of Social Sciences, **Atatürk University**, Erzurum, Turkey, December 1997,
 - GPA: 78/100.
- **ADP Diploma, Computer Engineering:**
 - Department of Computer Engineering, **Middle East Technical University**, Ankara, Turkey, September 1996,
 - GPA: 3.80/4.00.
- **B.S., Electrical & Electronics Engineering:**
 - Department of Electrical & Electronics Engineering, **Turkish Military Academy**, Ankara, Turkey, August 1991,
 - GPA: 3.60/4.00.

ACADEMIC EXPERIENCE

- Professor, Dept. of Software Engineering, TED University, Ankara, Turkey, 2023 – current.
- Professor, Dept. of Computer Engineering, Atılım University, Ankara, Turkey, 2022 – 2023.
- Associated Professor, Dept. of Computer Engineering, Atılım University, Ankara, Turkey, 2017 – 2022.
- Assistant Professor, Dept. of Computer Engineering, Atılım University, Ankara, Turkey, 2012 – 2017.
- Part Time Instructor, Dept. of Computer Engineering, Middle East Technical University (METU), Ankara, Turkey, 2012 - Present.
- Instructor, Dept. of Computer Engineering, Turkish Military Academy (KHO), Ankara, Turkey, 2011 - 2012.
- Instructor, Dept. of System & Management, Turkish Military Academy, Ankara, Turkey, 2009 - 2011.
- Instructor, Dept. of Computer Engineering, Turkish Land Forces CIS Academy, Ankara, Turkey, 2008 - 2009.
- Instructor, Dept. of System & Management, Georgian Military Academy, Tbilisi, Georgia, 2003.
- Instructor, Dept. of Technical Sciences, Turkish Military Academy, Ankara, Turkey, 2000 - 2002.

WORK EXPERIENCE

- Chief of Software Project Office, Turkish Land Forces CIS Academy, Ankara, Turkey, 2008 - 2009.
- Chief of IS Projects Branch, NATO CIS Services Agency HQ, Mons, Belgium, 2005 - 2008.
- Chief of Software Development Branch, Turkish Military Academy, Ankara, Turkey, 2004 - 2005.
- Software Engineer, Turkish Military Academy, Ankara, Turkey, 2002 - 2004.
- IS Project Manager, Turkish Land Forces HQ, Ankara, Turkey, 1997 - 1998.

LANGUAGES

- Turkish (native)
- English (fluent) KPDS Grade A (95/100)
- French (Intermediate) KPDS Grade B (82/100)
- Italian (Beginner)

PATENTS

1. Murat KARAKAYA, Gökhan Şengül, "**Temassız Ve Kablosuz Konumlandırma, Takip Ve Kontrol Sistemi (A Wireless Localization, Monitor and Control System)**", Başvuru numarası (Application No.): 2015/10603
2. Murat KARAKAYA, Gökhan Şengül, "**Yıkılan Binalarda Mahsur Kalan İnsanların Konumunu Ve Sayısını Tahmin Ve Yayma Sistemi (A System for Estimating and Spreading the Position and Number of People Trapped in Collapsed Buildings)**", Başvuru numarası (Application No.): 2017/19842, (PENDING).

PROJECT CONSULTING

1. Turkcell Global Bilgi A.Ş., "**Developing Digital Assistants Using Open Source Large Language Models**", In-house Project, 01.03.2024 - 01.09.2024.
2. 32BİT Bilgisayar Hizmetleri Sanayi Ve Ticaret Limited Şirketi, "**Deep Learning Based Recommendation Engine**", TÜBİTAK 1507, 01.04.2024 - 01.09.2025.
3. Ziraat Katılım A.Ş., "**Purchasing a Corporate Virtual Assistant System**", In-house Project, 01.09.2024 - 31.12.2024.
4. Stock Fikri Mülkiyet Hizmetleri A.Ş., "**Improving Workflows with Language Models and RAG System Integration**", In-house Project, 01.10.2024 - 31.10.2024.
5. İdea Teknoloji Çözümleri, "**Fine-tuning LLMs for RAG Applications**", In-house Project, 01.02.2025 - 28.02.2025.
6. WTECHIN Yazılım Bilişim ve Danışmanlık A.Ş., "**Yapay Zeka Destekli Özelge Cevaplama Sistemi**", TÜBİTAK 1007 KAMAK Çağrısı Hazırlığı, 01.04.2025 – 30.08.2025.
7. SobranTech Dijital Dönüşüm ve Yapay Zeka Teknolojileri A.Ş., "**Yapay Zeka Destekli Sözleşme Analiz ve Süreç Yönetimi**", TÜBİTAK 1507 KOBİ Ar-Ge Başlangıç Çağrısı Hazırlığı, 01.03.2025 – 30.08.2025.

INVITED TALKS / KEYNOTES

1. **A Quantitative Analysis of Large Language Models: Capabilities and Impact**, *International conference on Computer Science and Intelligence Systems (ICCSIS - 2025), Madrid, Spain, 10th-11th Aug 2025*
2. **Büyük Dil Modellerinin İmkan ve Kabiliyetleri ile Getirdiği Riskler**, 8. Siber Güvenlik Ekosisteminin Geliştirilmesi Zirvesi, *Türkiye Bilişim Derneği, Ankara Türkiye, 12 Haziran 2025.*
3. **Açık Kaynak Dil Modellerinin İmkan ve Kabiliyetleri**, Yapay Zeka Teknoloji Günleri Programı, *Genelkurmay Başkanlığı, Ankara, Türkiye, 21 Mayıs 2025.*
4. **Akıllı Şehirler için Üretken Yapay Zekâ Uygulamaları**, Üretken Yapay Zekâ Çağı ve Belediye Hizmetleri Ulusal Konferansı, *Gemlik Belediye Başkanlığı, Gemlik, Türkiye, 22 Mayıs 2025.*
5. **An Introduction to AI and Large Language Models: Concepts, Parameters, and Real-World Applications**, *OSTİM Teknik Üniversitesi, Ankara, Turkey, 11 March 2025.*

6. **Impact of AI on National Security: Risks and Opportunities**, Yapay Zeka, Toplum ve Güvenlik Çalıştayı, Millî İstihbarat Akademisi, Ankara, Turkey, 11 December 2024
7. **AI Integration in Software Development: Current Trends and Future Insights**, 9th International Conference on Computer Science and Engineering UBMK 2024, Antalya, Turkey, 27 Oct. 2024.
8. **AI for NGOs: From Basics to Applications**, InspiredbyUS 2024, TAD ConnectUSA Amerikan Corner Ankara, Ankara, Turkey, 26 May 2024.
9. **Akıllı Şehirler için Üretken Yapay Zekâ Uygulamaları**, Akıllı Ve Güvenli Kentler için Üretken Yapay Zekâ Uygulamaları Ulusal Konferansı 2024, Ankara, Turkey, 24 Oct. 2024.
10. **RAG (Retrieval Augmented Generation) ile Büyük Dil Modellerinin Etkin Kullanılması: Belgelerinizle Sohbet Edin**, Üretken Yapay Zeka Uygulamaları Ulusal Konferansı 2023, Ankara, Turkey, 12 Dec. 2023.
11. **ChatGPT: Impact on Education**, 8th International Conference on Computer Science and Engineering UBMK 2023, Burdur, Turkey, 15 Sept. 2023.
12. **Large Language Models: Today and Future**, Atılım University, Ankara, Turkey, 30 July 2023.
13. **ChatGPT: For Education and Research**, Atılım University, Ankara, Turkey, 19 June 2023.
14. **A Genetic Algorithm for Maximizing Target Coverage of Unmanned Aerial Vehicle Carried on a Mobile Platform**, University of Malta, Sliema, Malta, 3-7 April 2017.
15. **An Introduction to Knowledge Discovery in Databases**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2015.
16. **Ethics in Information Technologies**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2015.
17. **An Introduction to Databases**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2014.
18. **Ethics in Information Technologies**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2014.
19. **Knowledge Discovery in Databases**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2013.
20. **Knowledge Discovery in Databases**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2012.
21. **Knowledge Discovery in Databases**, Turkish Partnership for Peace (PfP) Training Center, Ankara, Turkey, 2011.
22. **NATO CIS Services**, NATO CIS School, Latina, Italy, 2005 – 2008.
23. **Peer-to-Peer Networks: Free Riding, and Counter-Mechanisms**, Department of Computer Engineering, Bilkent University, Ankara, Turkey, 2004.
24. **ARG: A Tool for Automatic Report Generation**, Electrical and Electronics Engineering Department, Istanbul University, Istanbul, Turkey, 2003.

JOURNAL PUBLICATIONS indexed by SCI / SCI-E

1. Halil Savuran, Murat Karakaya, **A novel solution for routing a swarm of drones operated on a mobile host**, *Engineering Applications of Artificial Intelligence*, Vol. 138, Parts A, pp - , December 2024. [[PDF](#)] [[DOI](#)] [[ONLINE](#)] ISSN: 0952-1976
2. Gökhan Şengül, Murat Karakaya, Sanjay Misra, Oluvsola O. Abayomi-Alli, Robertas Damaševičiusa, **Deep learning based fall detection using smartwatches for healthcare applications**, *Biomedical Signal Processing and Control*. 15(3), 036509 (2021), DOI: <https://doi.org/10.1016/j.bspc.2021.103242>. [[PDF](#)] [[DOI](#)] ISSN: 1746-8094

3. Tolga Üstüncök, Murat Karakaya, **SS-MLA: a semisupervised method for multi-label annotation of remotely sensed images**, *J. Appl. Remote Sens.* 15(3), 036509 (2021), DOI: 10.1117/1.JRS.15.036509.[PDF] [DOI] ISSN: 1931-3195
4. Murat Karakaya, Meltem Eryilmaz, Ulaş Ozan Ceyhan, **Analyzing students' Academic Success in Prerequisite Course Chains: A Case Study in Turkey**, *International Journal of Engineering Education*, Vol. 34, Issue 2 (A), pp 364–370, April 2018. [PDF] [DOI] ISSN: 0949-149X
5. Halil Savuran, Murat Karakaya, **Efficient Route Planning for an Unmanned Air Vehicle Deployed on a Moving Carrier**, *Soft Computing*, Vol. 20, Issue 7, pp 2905-2920, ISSN: 1432-7643, July 2016
6. Murat Karakaya, **MSCT: An Efficient Data Collection Heuristic for Wireless Sensor Networks with Limited Sensor Memory Capacity**, *KSII Transactions on Internet and Information Systems*, Vol.9, No.9, p. 3396-3411, 2015
7. Murat Karakaya, **Time-Sensitive Ant Colony Optimization to Schedule a Mobile Sink for Data Collection in Wireless Sensor Networks**, *The Ad Hoc & Sensor Wireless Networks*, Vol.28, No.1-2, p. 65-82, 2015.
8. Murat Karakaya, **Deadline-Aware Energy-Efficient Query Scheduling in Wireless Sensor Networks with Mobile Sink**, *The Scientific World Journal*, Vol. 2013, Article ID 834653, 10 pages, 2013. doi:10.1155/2013/834653. (ISSN: 1537-744X)
9. Murat Karakaya, Ibrahim Korpeoglu, Ozgur Ulusoy, **Free Riding in Peer-to-Peer Networks**, *IEEE Internet Computing*, Vol. 13, No. 2, pages 92-98, March/April 2009. (ISSN: 1089-7801)
10. Murat Karakaya, Ibrahim Korpeoglu, Ozgur Ulusoy, **Counteracting Free Riding in Peer-To-Peer Networks**, *Computer Networks*, Vol. 52, No. 3, pp 675-694, Elsevier, February, 2008. (ISSN:1389-1286)
11. Murat Karakaya, Ibrahim Korpeoglu, Ozgur Ulusoy, **A Connection Management Protocol for Promoting Cooperation in Peer-to-Peer Networks**, *Computer Communications*, Vol. 31, No. 2, pp 240-256, Elsevier, February 2008. (ISSN:0140-3664)
12. D. Katsaros, A. Nanopoulos, M. Karakaya, G. Yavas, O. Ulusoy, Y. Manolopoulos, **Clustering Mobile Trajectories for Resource Allocation in Mobile Environments**, *Intelligent Data Analysis Conference (IDA'2003)*, *Lecture Notes in Computer Science* (Springer Verlag), vol.2810, 2003. (ISSN:0302-9743)

JOURNAL PUBLICATIONS indexed by other sources

1. Murat Karakaya, **Başarılı Bir Türkçe Büyük Dil Modelini Sıfırdan Eğitmek: Ne Kadar Metin Verisine İhtiyacımız Var?**, *Türkiye Bilişim Derneği Bilişim Dergisi*, Vol. 199, 50-51, ISSN 1303-6300, Nisan, 2025
2. Erhan Gokcay, Murat Karakaya, Gokhan Sengul, **Optimal Number of Clusters**, *International journal of scientific research in information systems and engineering (IJSRISE)*, Vol. 4, No. 1, 81-86, ISSN 2380-8128, June 2018
3. Atila Bostan, Murat Karakaya, Gökhan Şengül, **Chaos-Based Data Encryption Using Arnold's Cat Map**, *International journal of scientific research in information systems and engineering (IJSRISE)*, Vol. 4, No. 1, 25-30, ISSN 2380-8128, June 2018
4. Meltem Eryilmaz, Murat Karakaya, **Harmanlanmış Öğrenme Ortamlarında Sosyal Medya Kullanımının Öğrenci Doyumu Üzerine Etkisi (The Impact of Using Social Media in Blended Learning Environments on Student Satisfaction)**, *Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, Vol. 15, No. 1, 106-129, ISSN:1305-020, Ocak 2018

5. Atila Bostan, Murat Karakaya, Gokhan Şengul, **Biometric Verification on e-ID-Card Secure Access Devices: A Case Study on Turkish National e-ID Card Secure Access Device Specifications**, *International Journal of Information Security Science (IJISS)*, Vol. 6, No. 4, 87-92, ISSN: 2147-0030, December 2017
6. Gokhan Sengul, Murat Karakaya, Atila Bostan, **A Smart Classroom Application: Monitoring and Reporting Attendance Automatically Using Smart Devices**, *International Journal of Scientific Research in Information Systems and Engineering (IJSRISE)*, Vol. 3, No. 1, 39-43, ISSN: 2380-8128, Apr. 2017.
7. Atila Bostan, Gökhan Şengül, Murat Karakaya, **Unidirectional Data Transfer: A Secure System to Push the Data from a High Security Network to A Lower One Over an Actual Air-Gap**, *International Journal of Scientific Research in Information Systems and Engineering (IJSRISE)*, Vol. 3, No. 1, 35-38, ISSN: 2380-8128, Apr. 2017.
8. Gokhan Sengul, Murat Karakaya, Atila Bostan, **Determination and Identification of Dangerously Lane Changing Vehicles in Traffic by Image Processing Techniques**, *International Journal of Scientific Research in Information Systems and Engineering (IJSRISE)*, Vol. 3, No. 1, 44-47, ISSN: 2380-8128, Apr. 2017.
9. Gokhan Sengul, Murat Karakaya, Atila Bostan, **Remotely Monitoring Activities of the Elders Using Smart Watches**, *International Journal of Scientific Research in Information Systems and Engineering (IJSRISE)*, Vol. 3, No. 1, 56-60, ISSN: 2380-8128, Apr. 2017.
10. Murat Karakaya, Ender Sevinç, **An Efficient Genetic Algorithm for Routing Multiple UAVs under Flight Range and Service Time Window Constraints**, *International Journal of Informatics Technologies*, Vol. 10, No.1, 113-121, DOI: <http://dx.doi.org/10.17671/btd.15848>, ISSN: 2147-0715, Jan. 2017
11. Murat Karakaya, Gokhan Şengul, Atila Bostan, **A Wireless Control System Based on Smart Bluetooth and Ibeacon Technology for Auditing the Patrols**, *International Journal of Scientific Research in Information Systems and Engineering*, Vol. 2, No. 3, 8-11, ISSN: 2380-8128, Dec. 2016.
12. Murat Karakaya, Atila Bostan, Erhan Gökçay, **How Secure is Your Smart Watch?** *International Journal of Information Security Science*, Vol. 5, No. 4, 90-95, ISSN: 2147-0030, Dec. 2016.
13. Hazan Daglayan, Murat Karakaya, **An Optimized Ambulance Dispatching Solution for Rescuing Injures After Disaster**, *Universal Journal of Engineering Science*, Vol. 4, No. 3, 50-57, DOI: <http://dx.doi.org/10.13189/ujes.2016.040303>, ISSN: 2331-6624, Sep. 2016.
14. Murat Karakaya, Gökhan Şengül, **Using Bluetooth Low Energy Beacons for Indoor Localization**, *International Journal of Intelligent Systems and Applications in Engineering*, Accepted, Sep. 2016.
15. Hazan Daglayan, Murat Karakaya, **The Impact of Crossover and Mutation Operators on a GA Solution for the Capacitated Vehicle Routing Problem**, *Universal Journal of Engineering Science*, Vol. 4, No. 3, 39-44, ISSN: 2331-6624, DOI: <http://dx.doi.org/10.13189/ujes.2016.040301>, Sep. 2016.
16. Atila Bostan, Murat Karakaya, **Öğrenci Ders Devamının Sınavlarda Alınan Notlara Etkisi Üzerine Bir Durum Çalışması (A Case Study on Impact of Student Course-Attendance on Exam Grades)**, *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, Vol. 12, No. 1, 211-222, DOI: <http://dx.doi.org/10.17860/efd.87593>, e-ISSN: 1306-7850, Nisan 2016.
17. Murat Karakaya, **Mobile Sink Scheduling Method for Wireless Sensor Networks under Travel Time Uncertainty**, *Journal of Advances in Computer Networks*, Vol. 3, No. 4, 326-329, ISSN: 1793-8244, Dec. 2015.
18. Murat Karakaya, **RSRP: Risk Sensitive Routing Protocol in Wireless Sensor Networks**, *Girne American University Journal of Social and Applied Sciences*, Vol. 7, No. 11, 68-75, ISSN: 1305-9130, Sep. 2015.

19. Murat Karakaya, Gokhan Sengul, **Using Service Oriented Architecture for Plate Recognition by Mobile Devices**, *Girne American University Journal of Social and Applied Sciences*, Vol. 7, No. 11, 76-81, ISSN: 1305-9130, Sep. 2015.
20. Murat Karakaya, Gokhan Sengul, **Determining Firm Logos Using Image Processing Techniques on a Mobile Device to Aid Blind People**, *Girne American University Journal of Social and Applied Sciences*, Vol. 7, No. 11, 83-88, ISSN: 1305-9130, Sep. 2015.
21. Ibrahim Cereci, Hazan Daglayan, Nergiz Kılinc, Senem Aktaş, Murat Karakaya, **Efficient Data Gathering in WSN with a Range Constrained Mobile Relay**, *Girne American University Journal of Social and Applied Sciences*, Vol. 7, No. 11, 89-95, ISSN: 1305-9130, Sep. 2015.
22. Halil Savuran, Murat Karakaya, **Route Optimization Methods for Unmanned Air Vehicle Launched from a Carrier**, *Lecture Notes on Software Engineering*, Vol. 3, No. 4, 279-284, ISSN: 2301-3559, Nov. 2015.
23. Ender Sevinc, Murat Karakaya, **Maximizing UAV Target Coverage under Flight Range and Target Service Time Constraints**, *Lecture Notes on Software Engineering*, Vol. 3, No. 4, 290-294, ISSN: 2301-3559, Nov. 2015.
24. Murat Karakaya, **A Local Optimization Technique for Assigning New Targets to the Planned Routes of Unmanned Aerial Vehicles**, *The Balkan Journal of Electrical & Computer Engineering (BAJECE)*, Vol.2, No.2, ISSN: 2147-284X, June 2014.
25. Murat Karakaya, **UAV Route Planning for Maximum Target Coverage**, *Computer Science & Engineering: An International Journal (CSEIJ)*, Vol. 4, No. 1, February 2014. (ISSN: 2231 - 329X)
26. Murat KARAKAYA, Özgür ULUSOY, İbrahim KÖRPEOĞLU, **A General Purpose Simulator for Unstructured P2P Networks and a Sample Application**, *Journal of Defense Sciences*, Turkish Military Academy, Vol. 8, No. 2, Nov 2009.
27. Murat Karakaya and H. Altay Guvenir, **ARG: A Tool for Automatic Report Generation**, *Istanbul University - Journal of Electrical & Electronics Engineering*, Vol. 4, No. 2, (2004), pp. 1101-1109. (ISSN:1303-0914)

CONFERENCE PUBLICATIONS

1. Merve Bozdağ, Selin Göç, Elif Sude Memiş, Miray Aday, Kasım Murat Karakaya, **EntreLocate: An AI Assistant for Business Location and Risk Assessment**, 10. *Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2025)*, İstanbul, Türkiye, 17-18-19 Eylül 2025.
2. Yavuz Selim Sever, Başak Nehir Artan, Berna Danışman, Nuran Er, Murat Karakaya, **FinSentio: A Modular LLM-Powered Financial Assistant for Investment Guidance, Risk Analysis, and Education**, 10. *Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2025)*, İstanbul, Türkiye, 17-18-19 Eylül 2025.
3. Harun Hüdaî Tan, Baran Erol, Hüseyin Yiğit Erten, Ahmet Arda Bağdatlı, Kasım Murat Karakaya, **AI-Based Domestic Relocation Assistant for Turkey**, 10. *Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2025)*, İstanbul, Türkiye, 17-18-19 Eylül 2025.
4. Kasım Murat Karakaya, Elif Bengü Saraç, Elif Ünal Çayır, **Constructing a Turkish Complaint Dataset with Images and Benchmarking Vision Language Models**, 10. *Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2025)*, İstanbul, Türkiye, 17-18-19 Eylül 2025.

5. İlknur Gür Nalçacı, Ferhat Şeker, Kasım Murat Karakaya, **Türkçe Soru Cevaplamada Açık Kaynak BDM'lerinin İnce Ayarı: Nutuk Örneğinde Veri Boyutu ve Parametre Seçiminin Etkisi**, 10. Uluslararası Bilgisayar Bilimleri ve Mühendisliği Konferansı (UBMK 2025), İstanbul, Türkiye, 17-18-19 Eylül 2025.
6. Murat Karakaya, **Local Benchmarking of Sentence Embedding Models for Retrieval-Augmented Generation**, *International conference on Computer Science and Intelligence Systems (ICCSIS - 2025)*, Madrid, Spain, 10th-11th Aug 2025.
7. Cansen Çağlayan, Murat Karakaya, **Multi-Topic Controllable Text Generation with Keywords**, *2023 the 5th International Conference on Research in Engineering, Technology and Science (ICRETS)*, Budapest, Hungary, July 06 - 09, 2023.
8. M. Karakaya, **Derin Öğrenme ile Otomatik Olarak Üretilen Resim Alt Yazısındaki Hataların Tespiti (Detecting Errors in Automatic Image Captioning by Deep Learning)**, *2021 6th International Informatics and Software Engineering Conference (UBYMK)*, Ankara, Turkey, 46-49, Sept 2021.
9. Cansen Çağlayan, Murat Karakaya, **Topic-Controlled Text Generation**, *2021 6th International Informatics and Software Engineering Conference (UBYMK)*, Ankara, Turkey, 533-536, 15-17 Sept 2021.
10. Tolga Üstüncök, Murat Karakaya, **Effect of PSO Tuned P, PD, and PID Controllers on the Stability of a Quadrotor**, *2019 4th International Informatics and Software Engineering Conference (UBYMK)*, Ankara, Turkey, 139-144, November 2019.
11. Tolga Üstüncök, Ozan Acar, Murat Karakaya, **Image Tag Refinement with Self Organizing Maps**, *2019 4th International Informatics and Software Engineering Conference (UBYMK)* Ankara, Turkey, 348-353, November 2019.
12. G. Tirkes, C. C. Aydin, G. Sengul, A. Bostan, M. Karakaya, **An Undergraduate Curriculum for Deep Learning**, *International Conference on Computer Science and Engineering (UBMK'18)*, Sarajevo, Bosnia Herzegovina, 604-609, 20th-23rd September 2018.
13. A. Bostan, G. Sengul, G. Tirkes, C. C. Aydin, M. Karakaya, **Deep Learning and Current Trends in Machine Learning**, *International Conference on Computer Science and Engineering (UBMK'18)*, Sarajevo, Bosnia Herzegovina, 543-546, 20th-23rd September 2018.
14. Murat Karakaya, **Recent Developments in Computer Vision for Finding Available Parking Lots**, *322nd International Conference on Communication and Signal Processing (ICCSP)*, Phuket, Thailand, 9th -10th February 2018.
15. Fatih Can Akıncı, Murat Karakaya, **Araç Park Yerlerinin Doluluk Durumlarının Derin Öğrenme Yöntemi ile Tespit Edilmesi (Parking Space Occupancy Detection Using DeepLearning Methods)**, *26th Signal Processing and Communications Applications Conference (SIU)*, 2-5 Mayıs 2018.
16. Murat Karakaya, Çiğdem Turhan, Ali Yazıcı, **Yazılım Mühendisliği Eğitiminde Ders Öğrenme Çıktılarının Ölçülmesi Üzerine Bir Durum Çalışması (A Case Study on Measuring Course Learning Outcomes in Software Engineering Education)**, *11. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'17)*, p. 312 - 320, 18-20 Ekim 2017.
17. Fatih Can Akıncı, Murat Karakaya, **Şehirlerin Dijital Dönüşümü: Görüntü İşleme Yöntemlerinin Boş Park Yerlerinin Tespitinde Kullanılması (Digital Transformation of Cities: Using Image Processing Methods to Identify Empty Parking Lots)**, *TBD 34. Ulusal Bilişim Kurultayı (BİLİŞİM 2017)*, p. 69-72, 20-21 Aralık 2017.
18. Erhan Gökçay, Murat Karakaya, Gokhan Şengul, **Optimal Number of Clusters**, *The Fifth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017)*, Girne American University, Girne, North Cyprus, 1-3 Nov. 2017.

19. Atila Bostan, Murat Karakaya, Gokhan Şengul, **Chaos-Based Data Encryption Using Arnold's CAT Map**, *The Fifth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017)*, Girne American University, Girne, North Cyprus, 1-3 Nov. 2017.
20. Murat Karakaya, Meltem Eryilmaz, Atila Bostan, **Predicting Student Success according to Online Activities in a Blended Course using Artificial Neural Networks**, *The Fifth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017)*, Girne American University, Girne, North Cyprus, 1-3 Nov. 2017.
21. Murat Karakaya, Atila Bostan, Gokhan Şengul, **Extending Lifetime of the Selected Sensor Nodes in Wireless Sensor Networks**, *The Fifth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017)*, Girne American University, Girne, North Cyprus, 1-3 Nov. 2017.
22. Atila Bostan, Murat Karakaya, Gokhan Şengul, **Biometric Verification on e-ID-Card Secure Access Devices: A Case Study on Turkish National e-ID Card Secure Access Device Specifications**, *10th International Conference on Information Security and Cryptology (ISCTURKEY 2017)*, Ankara, Turkey, Oct 20 - 21, 2017
23. Murat Paşa Uysal, Murat Karakaya **Ontology-Supported Enterprise Architecture Analysis**, *2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON)*, Kyiv, Ukraine, May 29 – June 2, 2017.
24. Murat Karakaya, Gokhan Şengul, Erhan Gökçay **An IoT Application for Locating Victims Aftermath of an Earthquake**, *2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON)*, Kyiv, Ukraine, May 29 – June 2, 2017.
25. Gokhan Şengul, Atila Bostan, Murat Karakaya **A Smart Classroom Application: Monitoring and Reporting Attendance Automatically Using Smart Devices**, *The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016)*, Girne American University, North Cyprus, 2-4 Nov. 2016.
26. Gokhan Şengul, Atila Bostan, Murat Karakaya **Determination and Identification of Dangerously Lane Switching Vehicles in Traffic by Image Processing Techniques**, *The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016)*, Girne American University, North Cyprus, 2-4 Nov. 2016.
27. Atila Bostan, Gokhan Şengul, Murat Karakaya **Unidirectional Data Transfer: A Secure System to Push the Data from A High Security Network to A Lower One Over an Actual Air-Gap**, *The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016)*, Girne American University, North Cyprus, 2-4 Nov. 2016.
28. Murat Karakaya, Gokhan Şengul, Atila Bostan **A Wireless Control System Based on Smart Bluetooth and Ibeacon Technology for Auditing the Patrols**, *The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016)*, Girne American University, North Cyprus, 2-4 Nov. 2016.
29. Murat Karakaya, Gokhan Şengul, Atila Bostan **Remotely Monitoring Activities of the Elders Using Smart Watches**, *The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016)*, Girne American University, North Cyprus, 2-4 Nov. 2016.
30. Murat Karakaya, Ali Yazıcı, **Yazılım Mühendisliği Alanında Yayımlanan Tez ve Makalelerin SWEBOK a göre Değerlendirilmesi ve Yazılım Mühendisliği Eğitimi ve Projelerinin İyileştirilmesi için Öneriler**, *10. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'16)*, 24-26 Ekim 2016.
31. Atila Bostan, Murat Karakaya, Erhan Gökçay, **Encouraging User-Trust to Internet-of-Things Implementations**, *9th International Conference on Information Security and Cryptology (ISCTURKEY 2016)*, Ankara, Turkey, Oct 25 to 26, 2016.

32. Murat Karakaya, Atila Bostan, Erhan Gökçay, **How Secure is Your Smart Watch?** *9th International Conference on Information Security and Cryptology (ISCTURKEY 2016)*, Ankara, Turkey, Oct 25 to 26, 2016.
33. Atila Bostan, Murat Karakaya, Erhan Gökçay, **Meeting the Requirements of MÜDEK Program Outcomes Item 5 in Computer Engineering Programs**, *International Conference on Computer Science and Engineering (UBMK 2016)*, Tekirdağ, Turkey, Oct 20 to 23, 2016.
34. Erhan Gökçay, Murat Karakaya, Atila Bostan, **A new Skeletonization Algorithm for Data Processing in Cloud Computing**, *International Conference on Computer Science and Engineering (UBMK 2016)*, Tekirdağ, Turkey, Oct 20 to 23, 2016.
35. Erhan Gökçay, Murat Karakaya, Atila Bostan, **An Information Theoretic Approach to Edge Detection**, *International Conference on Computer Science and Engineering (UBMK 2016)*, Tekirdağ, Turkey, Oct 20 to 23, 2016.
36. Murat Karakaya, Atila Bostan, Erhan Gökçay, **Prediction of Student Success Considering Attendancy and Midterm Grades**, *International Conference on Computer Science and Engineering (UBMK 2016)*, Tekirdağ, Turkey, Oct 20 to 23, 2016.
37. Murat Karakaya, Ender Sevinc, **Planning Multiple UAVs to Visit Points of Interest Considering Flight Range and Service Time Constraints**, *The 2nd International Conference on Engineering and Natural Sciences (ICENS 2016)*, Sarajevo, Bosnia and Herzegovina, May 24 to 28, 2016.
38. Ulaş Ozan Ceyhan, Murat Karakaya, **Investigating Students Success On Prerequisite Chain Courses**, *The 2nd International Conference on Engineering and Natural Sciences (ICENS 2016)*, Sarajevo, Bosnia and Herzegovina, May 24 to 28, 2016.
39. Murat Karakaya, **Mobile Sink Scheduling Method for Wireless Sensor Networks under Travel Time Uncertainty**, *The 2nd International Conference on Network Technologies (ICNT 2015)*, Dubai, UAE, October 17-18, 2015.
40. Senem Aktas, Nergiz Kilinc, Hazan Daglayan, Ibrahim Cereci, Murat Karakaya, **UAV Route Planing for Avoiding Enemy Radars**, *The 1st International Conference on Engineering and Natural Sciences (ICENS 2015)*, p. 161, Skopje, Macedonia, 15-19 May 2015.
41. Nergiz Kilinc, Ibrahim Cereci, Hazan Daglayan, Senem Aktas, Murat Karakaya, **A Genetic Algorithm for Safe and Rapid Transmission of Military Vehicles in a Minefield**, *The 1st International Conference on Engineering and Natural Sciences (ICENS 2015)*, p. 139, Skopje, Macedonia, 15-19 May 2015.
42. Hazan Daglayan, Nergiz Kilinc, Senem Aktas, Ibrahim Cereci, Murat Karakaya, **Efficient Routing of Ambulances Aftermath of a Disaster**, *The 1st International Conference on Engineering and Natural Sciences (ICENS 2015)*, Skopje, Macedonia, p.145, 15-19 May 2015.
43. Murat Karakaya, Atila Bostan, **Yazılım Mühendisliği Eğitiminde Bitirme Projesinin Yürütülmesinde İki Farklı Yöntemin Öğrenci Bakış Açısıyla Değerlendirilmesi**, *9. Ulusal Yazılım Muhendisliği Sempozyumu (UYMS'15)*, 9-11 Eylül 2015.
44. Gokhan Şengul, Murat Karakaya, **A Service Oriented Architecture to Recognize Car Plates by Mobile Devices**, *The Second International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2014)*, Girne American University, North Cyprus, 5-7 Nov. 2014.
45. Murat Karakaya, Gokhan Şengul, **Determining firm logos using image processing techniques on a mobile device to aid blind people**, *The Second International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2014)*, Girne American University, North Cyprus, 5-7 Nov. 2014.
46. Murat Karakaya, **RSRP: Risk Sensitive Routing Protocol in Wireless Sensor Networks**, *The Second International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2014)*, Girne American University, North Cyprus, 5-7 Nov. 2014.

47. Ibrahim Cereci¹, Hazan Daglayan, Nergiz Kılinc, Senem Aktaş, Murat Karakaya, **Efficient Data Gathering in WSN with a Range Constrained Mobile Relay**, *The Second International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2014)* Girne American University, North Cyprus, 5-7 Nov. 2014.
48. Halil Savuran, Murat Karakaya, **Route Optimization Methods for Unmanned Air Vehicle Launched from a Carrier**, *4th International Conference on Computer and Software Modeling (ICCSM 2014)*, Bangkok, Thailand, 2014.
49. Ender Sevinc, Murat Karakaya, **Maximizing UAV Target Coverage under Flight Range and Target Service Time Constraints**, *4th International Conference on Computer and Software Modeling (ICCSM 2014)*, Bangkok, Thailand, 2014.
50. H. Savuran, H. Demirel, M. Karakaya, **Gemiye Konuşlu İnsansız Hava Aracının Hedeflere Rotalanmasının Optimizasyonu**, *7. Savunma Teknolojileri Kongresi (SAVTEK-2014)*, Haziran 2014.
51. H. Demirel, H. Savuran, M. Karakaya, **İnsansız Hava Araçları İçin Radar Kaplama Alanlarından Kacınacak En Kısa Rotanın Hesaplanması**, *7. Savunma Teknolojileri Kongresi (SAVTEK-2014)*, Haziran 2014.
52. Murat Karakaya, **A Local Optimization Technique for Assigning New Targets to the Planned Routes of Unmanned Aerial Vehicles**, *The First International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2013)*, 06-09 November 2013, Kyrenia, Turkish Republic of North Cyprus.
53. Murat Karakaya, **UAV Route Planning for Maximum Target Coverage**, *The First International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2013)*, Girne American University, North Cyprus, 2013.
54. M. Karakaya, A. Bostan, **Yazılım Muhendisliği Eğitiminde Bitirme Projesi Dersinin Öğrenci Bakış Açısıyla Değerlendirilmesi** (in Turkish), *7. Ulusal Yazılım Muhendisliği Sempozyumu (UYMS'13)*, Eylül 2013.
55. M. Karakaya, **En Az Sayıda İnsansız Hava Aracı Kullanarak Sabit Hedeflerin Gözetlenmesinin Planlanması** (in Turkish), *15. Otomatik Kontrol Ulusal Toplantısı ve Sergisi (TOK2013)*, Eylül 2013.
56. Murat Karakaya, **Modeling A Sensor Network Providing Road Security and Testing Its Feasibility via Simulations** (in Turkish), *The Fourth National Conference on Defense Applications, Modeling and Simulation (USMOS)*, 14-15 June 2011, Ankara, Turkey.
57. Murat Karakaya, Ibrahim Korpeoglu, Ozgur Ulusoy, **A Distributed and Measurement-Based Framework Against Free Riding in Peer-to-Peer Networks**, *The Fourth IEEE International Conference on Peer-to-Peer Computing*, 25-27 August 2004, Zurich, Switzerland.
58. Murat Karakaya, Ozgur Ulusoy, **Evaluation of a Broadcast Scheduling Algorithm**, *Advances in Databases and Information Systems (ADBIS'01), Lecture Notes in Computer Science (Springer Verlag)*, vol.2151, September 2001. (ISSN:0302-9743)

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- D. Katsaros, G. Yavas, A. Nanopoulos, M. Karakaya, Ö. Ulusoy, Y. Manolopoulos, **Resource Allocation in Wireless Networks**, in *Encyclopedia of Data Warehousing and Mining*, (John Wang, ed.), IDEA Group Reference, 2005.

UNREFEREED PUBLICATIONS

- Murat Karakaya, **Yollara Yerleştirilen El Yapımı Patlayıcılara Karşı Kablosuz Algılayıcı Ağların Kullanımı (Use of Wireless Sensor Networks Against Handmade Explosives Placed on Roads)**, Cumhuriyet Bilim ve Teknoloji Dergisi, No. 1358, March 29, 2013.

SPONSORED PROJECTS AND GRANTS

1. **Derin Öğrenme Yöntemi ile Görme Engelliler için Logo Tanıma Uygulaması (A Deep Learning Application to Detect Logos for Assisting Blinds)**, 2018-2019, Academic Advisor, *TÜBİTAK 2209-B Sanayiye Yönelik Lisans Araştırma Programı Destekleme Programı*, Project No. 1139B411801171, Budget: 4000 TL /~\$800.
2. **Project Manager, Automatic Survey Preparation and Evaluation System using Image Processing Techniques**, 2016-2017, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1617-11, Budget: 8000 TL /~\$3000.
3. **Project Manager, A Smart Building Application: Determining Number of Victims Automatically in a Collapsed Building**, 2016-2017, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1617-07, Budget: 8000 TL /~\$3000
4. **Project Manager, Remote Monitoring of Elderly People by Mobile Systems**, 2015-2016, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1516-04, Budget: 8000 TL /~\$3000.
5. **Project Manager, A Smart Classroom Application: Monitoring and Reporting Class Attendance Automatically with Wireless Connection**, 2015-2016, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1516-05, Budget: 8000 TL /~\$3000.
6. **Project Manager, Wireless Control System Design for Auditing the Patrol Officers**, 2014-2015, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1415-12, Budget: 8000 TL /~\$4000.
7. **Project Manager, Identification of Reckless Drivers by Image Processing Techniques**, 2014-2015, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1415-13, Budget: 8000 TL /~\$4000.
8. **Project Manager, Detection & Identification of Logos for Blinds using Smart Phones**, 2013-2014, supported by Atilim University LAP Research Program, Project No. ATU-LAP-C-1314-07, Budget: 9000 TL /4500\$
9. **Participant Researcher, Novel Information Society Technologies for Turkey** (Türkiye için Yeni Bilgi Toplumu Teknolojileri (BTT-Türkiye)), supported by TÜBİTAK, Project No.: TUBITAK-EEEAG-105E065, 2005 - 2008.
10. **Participant Researcher, Data Mining Techniques for the Location and Air-Cache Management Problems**, supported by TÜBİTAK and GSRT (The General Secretariat for Research and Technology of Greece), 2002 – 2004.

AWARDS / HONORS / ACHIEVEMENTS

1. **2025 Teknofest Sağlıkta Yapay Zeka Yarışması Üniversite ve Üzeri Kategorisinde proje detay raporunda 100 üzerinden 92 puan alarak finalist, 2025.**

2. 2025 Teknofest Sağlıkta Yapay Zeka Yarışması Üniversite ve Üzeri Kategorisinde proje sunuş raporunda 100 üzerinden 94,67 puan alarak finalist, 2025.
3. 2024 Teknofest Sağlıkta Yapay Zeka Yarışması Üniversite ve Üzeri Kategorisinde Final Yarışmasında 5889 takım arasında 50 üzerinden 44,41 puan alarak 7ncilik, 2024.
4. 2024 Teknofest Sağlıkta Yapay Zeka Yarışması Üniversite ve Üzeri Kategorisinde proje sunuş raporunda 100 üzerinden 89,33 puan alarak finalist, 2024.
5. TUBİTAK International Scientific Publication Incentive (UBYT), The Scientific and Technical Research Council of Turkey (TUBITAK), 2024.
6. TED University Research Incentive Grant, Atılım University, 2025.
7. Atılım University Research Incentive Grant, Atılım University, 2021-2022.
8. Best Paper Award, 2021 6st International Informatics and Software Engineering Conference (UBMK) , Ankara, Turkey, Sept, 2021.
9. Atılım University Research Incentive Grant, Atılım University, 2020-2021.
10. Atılım University Research Incentive Grant, Atılım University, 2017-2018.
11. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2017.
12. Atılım University Research Incentive Grant, Atılım University, 2016-2017.
13. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2016.
14. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2015.
15. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2015.
16. Best Presentation Award, 2nd International Conference on Network Technologies (ICNT'15), Dubai, UAE, Oct.17-18, 2015.
17. Innovative Project Award, 5th Undergraduate Research Projects Fair (Lisans Araştırma Projeleri Şenliği LAP2015), Atılım University, Ankara, Turkey, May 22,2015.
18. Best Presentation Award, 4th International Conference on Computer and Software Modeling (ICCSM'14), Bangkok, Thailand, Oct.10-12,2014.
19. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2013.
20. Postdoctoral Research Scholarship, The Scientific and Technical Research Council of Turkey (TUBITAK), 2010 - 2011.
21. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2009.
22. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2008.
23. TUBİTAK International Publication Incentive, The Scientific and Technical Research Council of Turkey (TUBITAK), 2008.
24. ITIL Practitioner Certificate, Learning Tree Int., London/England, 2008.
25. PRINCE2 Practitioner Certificate, Learning Tree Int., Brussels/Belgium, 2007.
26. ITIL Foundation Certificate, Learning Tree Int., London/England, 2007.
27. Ph.D. Scholarship, The Scientific and Technical Research Council of Turkey (TUBITAK), 2000 - 2005.
28. Scientific Service Award, Georgian Military Academy, 2003.
29. Graduate Scholarship (Tuition), Bilkent University, during Graduate study from 1998 to 2008.
30. Project Award, Command of Artillery and Missile School, Third Place in the Project Competition (among 125 projects), 1995.

31. *Gratification Award, Turkish Land Forces, in recognition of success in education and training, 1995.*

TEACHING

Given Courses:

- Machine Learning for Engineers @ Atılım : Spring 2020, Spring 2021, Spring 2022, Spring 2023
- Fundamentals of Deep Learning @ Atılım : Fall 2021, Fall 2022
- Algorithms @ Atılım : Fall 2016
- Project Orientation @ Atılım : Fall 2013, Fall 2014, Spring 2015
- Object-Oriented Data Structures @ Atılım : Fall 2014, Fall 2015, Spring 2016, Spring 2023
- Operating Systems @ Atılım : Fall 2013
- Natural Computing @ Atılım : Fall 2013, Spring 2015
- Advanced Database Systems @ Atılım : Spring 2015, Fall 2016, Spring 2017, Fall 2018
- Introduction to Database Management Sys. @ Atılım : Fall 2017
- Database Design & Management @ Atılım : Fall 2015, Fall 2017, Spring 2018, Spring 2019
- Database Systems and Programming @ Atılım : Spring 2013, Fall 2014, Fall 2015, Spring 2017, Spring 2019
- Senior Project @ Atılım : Fall 2012, Spring 2013, Spring 2022
- Introduction to Computer Eng. & Programming @ Atılım: Fall 2012, Fall 2015
- Database Management Systems @ METU : Spring 2012, Fall 2012, Spring 2013
- Computer Programming @ Atılım : Spring 2017, Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2021, Spring 2021, Fall 2022
- Database Design@ TEDU : Spring 2024
- Building AI Applications with Large Language Models @ TEDU : Fall 2024, Spring 2025
- Digital Design and Computer Architecture @ TEDU : Fall 2024
- Deep Learning @ TEDU : Spring 2025

Designed and Opened Courses:

- Information Security @ KHO : Spring 2009
- Natural Computing @ Atılım : Fall 2013
- Machine Learning for Engineers @ Atılım : Spring 2020
- Fundamentals of Deep Learning @ Atılım : Fall 2021
- Introduction to Machine Learning @ Atılım : Spring 2022
- Building AI Applications with Large Language Models @ TEDU : Fall 2024
- Digital Design and Computer Architecture @ TEDU : Fall 2024

JOURNAL EDITORIAL BOARD MEMBER

1. Editorial Board Member, Journal of Telecommunications System & Management, 2013 – 2025.
2. Editorial Board Member, Electrical & Electronic Technology Open Access Journal, MedCrave Group, 2017 - Current
3. Editor, Turkish Journal of Electrical Engineering and Computer Sciences, TUBITAK, ISSN: 1300-0632, 2016, 2017
4. Editorial Board Member, Turkish Military Academy Science Journal, 2009 – 2012.

CONFERENCE COMMITTEE MEMBER

1. Technical Committee Member, 2021 Sinyal İşleme ve İletişim Uygulamaları (SIU2017), Antalya, Turkey, Oct 5 – 7, 2021
2. Technical Committee Member, International Symposium on Connected and Autonomous Vehicles (SoCAV), Hong Kong, China, January 15-17, 2021 Technical Committee Member, International Conference on Internet Computing for Science and Engineering ICICSE 2021, Guilin, China, China, July 9-11, 2021, 2021
3. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2021), Chengdu, China, December 10-13, 2021
4. Technical Committee Member, 2021 Sinyal İşleme ve İletişim Uygulamaları (SIU2021), Antalya, Turkey, Oct 5 – 7, 2021
5. Technical Committee Member, International Symposium on Connected and Autonomous Vehicles (SoCAV), Hong Kong, China, January 15-17, 2021
6. Technical Committee Member, International Conference on Internet Computing for Science and Engineering ICICSE 2021, Guilin, China, China, July 9-11, 2021
7. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2021), Chengdu, China, December 10-13, 2021
8. Technical Committee Member, 2020 Sinyal İşleme ve İletişim Uygulamaları (SIU2017), Antalya, Turkey, Oct 5 – 7, 2020
9. Technical Committee Member, International Joint Conference on Information and Communication Engineering (JCICE 2020), organized by IASED (International Academy of Science and Engineering for Development, www.iased.org), Sydney, Australia, Feb. 17-19, 2020.
10. Technical Committee Member, 2020 2nd International Conference on Information System and System Management (ISSM), Rabat, Morocco, October 14-16, 2020.
11. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2020), Chengdu, China, Dec. 11-14, 2020
12. Technical Committee Member, International Conference on Communication Technology (IEEE ICCT 2020), Nanning, China, October 28-31, 2020, 2021
13. Technical Committee Member, 2019 IEEE 10th International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS), September 18-21, 2019, in Metz, France.
14. Technical Committee Member, the 2nd International Conference on Software Engineering and Information Management (ICSIM 2019), January 10-12, 2019, in Bali, Indonesia.

15. Technical Committee Member, 2nd International Conference on Big Data and Smart Computing (ICBDSC 2019), January 10-12, 2019, in Bali, Indonesia.
16. Program Committee Member, TBD 35. Ulusal Bilişim Kurultayı (BİLİŞİM 2018), Ankara, Turkey, 21-22 Kasım 2018
17. Program Committee Member, 12. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'18), Istanbul, Turkey, 10-12 Eylül 2018
18. Technical Committee Member, 18th IEEE International Conference on Communication Technology (ICCT 2018), Oct. 8-11, 2018 in Chongqing, China.
19. Technical Committee Member, International Conference on Video and Image Processing (ICVIP2018), December 29-31, 2018 in Hong Kong.
20. Technical Committee Member, International Joint Conference on Information and Communication Engineering (JCICE 2018), organized by IASED (International Academy of Science and Engineering for Development, www.iased.org), Shanghai, China, April 27-29, 2018.
21. Technical Committee Member, International Conference on Software Engineering and Information Management (ICSIM 2018), Casablanca, Morocco, January 27-29, 2018.
22. Technical Committee Member, International Conference on Big Data and Smart Computing (ICBDSC 2018), Casablanca, Morocco, January 27-29, 2018.
23. Technical Committee Member, 10th IEEE International Conference on Communication Software and Networks (ICCSN 2018), Huazhong University of Science and Technology, Wuhan, China, June 28-July 1, 2018
24. Technical Committee Member, 11th IEEE International Conference on Open Source and Systems and Technologies (ICOSST 2017), Al-Khawarizmi Institute of computer Science, UET, Lahore, Pakistan, 18th-20th December, 2017
25. Technical Committee Member, 17th IEEE International Conference on Communication Technology (IEEE-ICCT 2017), Chengdu, China, October 27-30, 2017
26. Session Chair, 11. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'17), Alanya, Turkey, 18-20 Ekim 2017
27. Program Committee Member, 11. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'17), Alanya, Turkey, 18-20 Ekim 2017
28. Technical Committee Member, 9th IEEE International Conference on Communication Software and Networks (ICCSN 2017), Guangdong University of Technology, Guangzhou, China, May 6-8, 2017
29. Scientific Committee Member, 10th International Conference on Information Security and Cryptology (ISCTURKEY 2017), 20-21 Ekim 2017, Ankara, Turkey
30. International Program Committee Member, The 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2017), September 21-23, 2017, Bucharest, Romania
31. Scientific Committee Member, The Fifth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017), 2017
32. Scientific Committee Member, 2nd International Conference on Computer Science and Engineering (UBMK 2017), Antalya, Turkey, 5-7 October 2017.
33. Program Committee Member, The Seventh National Conference on Defense Applications, Modeling and Simulation (USMOS), Ankara, Turkey 2017
34. Technical Committee Member, 2017 Sinyal İşleme ve İletişim Uygulamaları (SIU2017), Antalya, Turkey, May 15 – 18, 2017
35. Technical Committee Member, 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON), Kyiv, Ukraine, May 29 – June 2, 2017
36. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2017), Chengdu, China, October 10-11, 2017.

37. Scientific Committee Member, The International Congress on Engineering and Natural Sciences (ICENS 2017), Budapest, Hungary, May 3-7, 2017.
38. Technical Program Committee Member, International Symposium on Networks, Computers and Communications (ISNCC), 2017.
39. International Program Committee Member, International Conference on Control, Automation and Diagnosis (ICCAD'17), 2017.
40. Scientific Committee Member, 9th International Conference on Information Security and Cryptology (ISCTURKEY 2016), 2016.
41. Scientific Committee Member, International Conference on Computer Science and Engineering (UBMK 2016), 2016.
42. Scientific Committee Member, The Fourth International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2016), 2016.
43. Technical Committee Member, 8th IEEE International Conference on Communication Software and Networks (ICCSN 2016), Beijing, China, June 4-6, 2016.
44. Program Committee Member, 11th Asia Pacific International Conference on Information Science and Technology (APIC-IST 2016), Hokkaido, Japan, June 26 - 29, 2016.
45. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2016), Chengdu, China, October 10-11, 2016.
46. Scientific Committee Member, The International Congress on Engineering and Natural Sciences (ICENS 2016), Skopje, Macedonia, May 24-28, 2016.
47. Program Committee Member, 10. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'16), Çanakkale, Turkey 2016.
48. Scientific Committee Member, The Third International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2015), 2015.
49. Program Committee Member, 9. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'15), Izmir, Turkey 2015.
50. Program Committee Member, The Sixth National Conference on Defense Applications, Modeling and Simulation (USMOS), Ankara, Turkey 2015.
51. Technical Committee Member, The 7th International Conference on Future Computer and Communication (ICFCC 2015), Singapore, May 20-22, 2015.
52. Technical Committee Member, The International Conference on Computer and Communications (ICCC 2015), Chengdu, China October 10-11, 2015.
53. Scientific Committee Member, The International Congress on Engineering and Natural Sciences (ICENS 2015), Skopje, Macedonia May 15-19, 2015.
54. Special Session Organizer, The 2015 IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2015), Istanbul, Turkey August 2-5, 2015.
55. Technical Committee Member, The 4th International Conference on Computer and Software Modeling, Bangkok, Thailand Oct.10-12,2014.
56. Organizing Committee Member, International Conference and Business Expo on Wireless Communication, 2015.
57. Technical Committee Member, The 4th International Conference on Computer and Software Modeling Bangkok, Thailand Oct.10-12, 2014.
58. Scientific Committee Member, The Second International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2014), 2014
59. Program Committee Member, The Sixth National Conference on Defense Applications, Modeling and Simulation (USMOS), 2013.
60. Program Committee Member, The Fourth National Conference on Defense Applications, Modeling and Simulation (USMOS) 2011.

REFREE / REVIEWER

1. Reviewer, 1 Paper, Ufuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, Ufuk Üniversitesi, Ankara, Turkey 2019
2. Reviewer, 3 Papers, International Conference on Computer Science and Engineering (UBMK 2018), Sarajevo, Bosnia & Herzegovina, 20-23 Sep. 2018
3. Reviewer, 3 papers, 12. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'18), Istanbul, Turkey, 10-12 Eylül 2018
4. Reviewer, 3 papers, The IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2018), 2018
5. Monitor, TÜBİTAK TEYDEB - 1512 Girişimcilik Aşamalı Destek Programı, 14/04/2017 - 14/04/2018
6. Reviewer, Autonomous Robots, Springer, ISSN: 0929-5593 (print version), 2018
7. Reviewer, 2 Papers, 11th IEEE International Conference on Open Source and Systems and Technologies (11th IEEE ICOSST 2017), Al-Khawarizmi Institute of computer Science, UET, Lahore, Pakistan, 18th-20th December, 2017
8. Reviewer, 1 Paper, KSII Transactions on Internet and Information Systems, the National Research Foundation under the Ministry of Education, Science and Technology (MEST) and the Korean Federation of Science and Technology Societies (KOFST), eISSN: 1976-7277, 2017
9. External referee (Dış Danışman), 1 Project, TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 11/09/2017
10. Panelist, 3 Projects, TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 2017-1-1003 Bulut Bilişim 2, 17/08/2017
11. Reviewer, 3 Papers, The International Conference on Computer and Communications (ICCC 2017), Chengdu, China, Dec 13-16, 2017
12. Reviewer, 3 Papers, 10th International Conference on Information Security and Cryptology (ISCTURKEY 2017), Ankara, Turkey, 20-21 Ekim 2017
13. Referee, TÜBİTAK TEYDEB, 1501-Sanayi Ar-Ge Projeleri Destekleme Programı, 14/07/2017
14. Reviewer, 4 Papers, 11. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'17), Alanya Hamdullah Emin Paşa (HEP) Üniversitesi, Turkey 18-20 Ekim 2017
15. Reviewer, Computers & Operations Research, Elsevier, ISSN: 0305-0548, 2017
16. Reviewer, Autonomous Robots, Springer, ISSN: 0929-5593 (print version), 2017
17. Reviewer, 3 Papers, Ulusal Savunma Uygulamaları Modelleme ve Simülasyon Konferansı (USMOS 2017), Ankara, Turkey, 21-23 Nov. 2017
18. Reviewer, 3 Papers, International Conference on Computer Science and Engineering (UBMK 2017), Antalya, Turkey, 5-8 Oct. 2017
19. Reviewer, 1 papers, 9th IEEE International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS'2017), Bucharest, Romania, September 21-23, 2017
20. Referee, TÜBİTAK TEYDEB, 1501-Sanayi Ar-Ge Projeleri Destekleme Programı, 09/06/2017
21. Referee, TÜBİTAK TEYDEB, 1507-KOBİ Ar-Ge Başlangıç Destek Programı, 22/05/2017
22. Panelist, 5 Projects, TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 2017-1-GÖRÜNTÜ İŞLEME 2, 12/05/2017
23. Monitor, TÜBİTAK TEYDEB - 1512 Girişimcilik Aşamalı Destek Programı, 14/04/2017 - 14/04/2018
24. Reviewer, 1 papers, The 3rd International Conference on Fuzzy Systems and Data Mining (FSDM), National Dong Hwa University, Hualien, Taiwan, Nov. 24-27, 2017

25. Reviewer, ETRI Journal, Electronics and Telecommunications Research Institute (ETRI), ISSN 1225-6463, 2017
26. Reviewer, 3 papers, 2017 IEEE First Ukraine Conference on Electrical and Computer Engineering (UKRCON), Kyiv, Ukraine, May 29 – June 2, 2017
27. Reviewer, 3 papers, Sinyal İşleme ve İletişim Uygulamaları (SIU2017), 2017
28. Reviewer, IEEE Access, The Multidisciplinary Open Access Journal, 2017
29. Reviewer, The IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2017), 2017
30. Reviewer, The International Symposium on Networks, Computers and Communications (ISNCC), 2017
31. Reviewer, 3 Papers, 9th IEEE International Conference on Communication Software and Networks (ICCSN 2017), 2017
32. Reviewer, Asian Journal of Mathematics and Computer Research, 2016
33. Reviewer, 9th IEEE International Conference on Communication Software and Networks (ICCSN 2017), 2016
34. Reviewer, 3 Papers, 9th International Conference on Information Security and Cryptology (ISCTURKEY 2016), 2016
35. Reviewer, 4 Papers, International Conference on Computer Science and Engineering (UBMK 2016), 2016
36. Reviewer, 3 Papers, The International Conference on Computer and Communications (ICCC 2016), 2016
37. External referee (Dış Danışman), TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 1002 Hızlı Destek Programı, 17/07/2016
38. Reviewer, 4 Papers, 10. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'15), 2016
39. Reviewer, Journal of the Electronics and Telecommunications Research Institute (ETRI), 2016
40. Reviewer, IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2016
41. Reviewer, 8th IEEE International Conference on Communication Software and Networks (ICCSN 2016), 2016
42. Reviewer, The IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2016), 2016
43. Reviewer, KSII Transactions on Internet and Information Systems, 2016
44. Panelist, TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 2016-1-1003 Metin Madenciliği, 05/02/2016
45. Referee, TÜBİTAK 1507-KOBİ Ar-Ge Başlangıç Destek Programı, 05/01/2016
46. Panelist, TÜBİTAK EEEAG - Elektrik, Elektronik, Enformatik Araştırma Destek Grubu, 2015-1-Biyomedikal Görüntüleme Sistemleri, 26 Ağust 2015
47. Reviewer, Journal of the Electronics and Telecommunications Research Institute (ETRI), 2015
48. Reviewer, KSII Transactions on Internet and Information Systems, 2015
49. Reviewer, 9. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS'15), 2015
50. Reviewer, International Journal of Advancements in Technology, 2015
51. Reviewer, The IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2015), 2015
52. Reviewer, The 7th International Conference on Future Computer and Communication, 2015
53. Referee, Teknogirisim Sermayesi Destegi Değerlendirme Komisyonu, Bilim, Sanayi ve Teknoloji Bakanlığı, 2015
54. Refree, AR-GE Merkezi Değerlendirme/Denetim Komisyonu, Bilim, Sanayi ve Teknoloji Bakanlığı, 2014
55. Reviewer, International Journal of Distributed Sensor Networks, 2014
56. Reviewer, The 4th International Conference on Computer and Software Modeling Bangkok, Thailand Oct.10-12, 2014
57. Reviewer, The Defense Against Terrorism Review (DATR), 2014

58. Reviewer, Turkish Journal of Electrical Engineering & Computer Sciences, 2014
59. Reviewer, The International Journal of Computing and Informatics (CAI), 2013.
60. Reviewer, The Sixth National Conference on Defense Applications, Modeling and Simulation (USMOS), 2013.
61. Reviewer, Teknogirişim Sermayesi Desteği Değerlendirme Komisyonu, Bilim, Sanayi ve Teknoloji Bakanlığı, 2013.
62. Reviewer, The International Journal of Computing and Informatics (CAI), 2013
63. External Reviewer, 27th International Conference on Data Engineering, 2011.
64. External Reviewer, ACM SIGMOD 2011.
65. Reviewer and Session Chairman, The Fourth National Conference on Defense Applications, Modeling and Simulation (USMOS) 2011.
66. Reviewer, 5th Defense Technologies Congress (SAVTEK), 2010.
67. Reviewer, The International Journal of Computer and Telecommunications Networking (Elsevier Computer Networks), 2010.
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