**ACADEMIC CV**

1. **Name Surname : Özlem Sabuncu**
2. **Date of Birth : 30.09.1997**
3. **Title : Dr.**
4. **State of Education : PhD**
5. **Current Institution : Near East University**

|  |  |  |  |
| --- | --- | --- | --- |
| **Degree** | **Department** | **University** | **Date** |
| Bachelor’s Degree | Biomedical Engineering | Near East University | 2015-2019 |
| Master’s Degree | Electrical and Electronic Engineering | Near East University | 2019-2021 |
| PhD | Electrical and Electronic Engineering | Near East University | 2021-2025 |

**4. Master / PhD Thesis**

**4.1.** **Master's Thesis Title and Supervisor**

Artificial Intelligence Model to Assist and Evaluate the Kidney Stone on Computed Tomography Image **-**Prof. Dr. Bülent Bilgehan

**4.2. Title of PhD Thesis / Medical Specialization Thesis and Supervisor**

Enhanced Unmanned Aerial Vehicle Communication Optimization in Healthcare 5.0 via Blockchain and 5G -Prof. Dr. Bülent Bilgehan

**5. Publications**

**5.1. Articles published in internationally refered journals (SCI, SSCI, AHCI, ESCI)**

1. Bilgehan, B., Kayed, L., & Sabuncu, Ö. (2022). General probability distribution model for wireless body sensors in the medical monitoring system. *Biomedical Signal Processing and Control*, *77*, 103777. <https://doi.org/10.1016/j.bspc.2022.103777>
2. Gürman, M., Bilgehan, B., Sabuncu, Ö., & Mirzaei, O. (2023). A powerful probabilistic model for noise analysis in medical images. *International Journal of Imaging Systems and Technology*, *33*(3), 999-1013. https://doi.org/10.1002/ima.2283
3. Bilgehan, B., & Sabuncu, Ö. (2023). An optimized device‐to‐device (D2D) blockchain network for the insurance industry. *International Journal of Communication Systems*, e5446. <https://doi.org/10.1002/dac.5446>
4. Sabuncu, Ö., & Bilgehan, B. (2023). Statistical RMS delay spread representation in 5G mm-Wave analysis using real-time measurements. *Wireless Networks*, 1-11. <https://doi.org/10.1007/s11276-023-03332-6>
5. Sabuncu, Ö., Bilgehan, B., Kneebone, E., & Mirzaei, O. (2023). Effective deep learning classification for kidney stone using axial computed tomography (CT) images. *Biomedical Engineering/Biomedizinische Technik*, (0). https://doi.org/[10.1515/bmt-2022-0142](https://doi.org/10.1515/bmt-2022-0142)
6. Bilgehan, B., & Sabuncu, Ö. (2023). Component-Related Phase Noise Evaluation Method for the LC Oscillators*. Circuits, Systems, and Signal Processing*, 1-20. <https://doi.org/10.1007/s00034-023-02472-6>
7. Bilgehan, B., & Sabuncu, Ö. (2023). Optimized blockchain network model for 6G cellular vehicle‐to‐everything communication. *Transactions on Emerging Telecommunications Technologies*, *34*(12), e4868. <https://doi.org/10.1002/ett.4868>
8. Sabuncu, Ö., & Bilgehan, B. (2024). Revolutionizing Healthcare 5.0: Blockchain-Driven Optimization of Drone-to-Everything Communication Using 5G Network for Enhanced Medical Services. *Technology in Society*, 102552. https://doi.org/[10.1016/j.techsoc.2024.102552](https://doi.org/10.1016/j.techsoc.2024.102552)
9. Sabuncu, Ö., & Bilgehan, B. (2025). Novel Statistical Modelling and Optimization Techniques of Fading Channel Coefficients for 5G Network Performance. *Journal of Network and Systems Management*, *33*(2), 42. <https://doi.org/10.1007/s10922-025-09905-4>
10. Sabuncu, Ö., & Bilgehan, B. (2025). Human-Centric IoT-Driven Digital Twins in Predictive Maintenance for Optimizing Industry 5.0. *Journal of Metaverse*, *5*(1), 64-72. <https://doi.org/10.57019/jmv.1596909>
11. Bilgehan, B., & Sabuncu, Ö. (2025). Adaptive UAV Deployment for Enhanced Connectivity in Disaster-Stricken Emergency Networks: A Multi-Objective Approach. *Ad Hoc Networks*, 103953. <https://doi.org/10.1016/j.adhoc.2025.103953>

**5.2**. **Articles published in other internationally refereed journals**

1. Bilgehan, B., & Sabuncu, Ö. (2024). [Applying P-NOMA in UAV-Assisted IoT Networks for Enhanced Wireless Communication](https://scholar.google.com/citations?view_op=view_citation&hl=tr&user=uJPubhQAAAAJ&sortby=pubdate&citation_for_view=uJPubhQAAAAJ:_FxGoFyzp5QC). *NEU Journal for Artificial Intelligence and Internet of Things, 4(2),*

**5.3. Assertions presented in international scientific congresses and published in the proceedings**

1. Sabuncu, Ö., & Bilgehan, B. (2021, December). Performance Evaluation for Various Deep Learning (DL) Methods Applied to Kidney Stone Diseases. In *2021 International Conference on Forthcoming Networks and Sustainability in AIoT Era (FoNeS-AIoT)* (pp. 1-3). IEEE. https://doi.org/[10.1109/FoNeS-AIoT54873.2021.00010](https://doi.org/10.1109/FoNeS-AIoT54873.2021.00010)
2. Bilgehan, B., & Sabuncu, Ö. (2022, August). Synchronization and Analysis of Chaotic Circuit with Application to Communication in the internet of things (IoT) Services. In *2022 International Conference on Artificial Intelligence in Everything (AIE)* (pp. 674-678). IEEE. <https://doi.org/10.1109/AIE57029.2022.00132>
3. Sadıkoğlu, F., Sabuncu, Ö., & Bilgehan, B. (2023, March). A Comparative Analysis of the Different CNN Models Using Fuzzy PROMETHEE for Classification of Kidney Stone. In *15th International Conference on Applications of Fuzzy Systems, Soft Computing and Artificial Intelligence Tools–ICAFS-2022* (pp. 77-84). Cham: Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-25252-5_15>
4. Sadıkoğlu, F., Bilgehan, B., & Sabuncu, Ö. (2023, September). Fixed Power Optimized Path Selection Using Fuzzy Pairing for C-V2X Communication. In *International Conference on Theory and Applications of Fuzzy Systems and Soft Computing* (pp. 20-27). Cham: Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-76283-3_6>
5. Sadıkoğlu, F., Bilgehan, B., & Sabuncu, Ö. (2024, November). An Effective Probabilistic Model for Clutter Signal Representation. In *World Conference Intelligent System for Industrial Automation* (pp. 165-172). Cham: Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-53488-1_20>
6. Sadıkoğlu, F., Bilgehan, B., & Sabuncu, Ö. (2024, April). Optimized Solution for Multipath Faded Mm-Wave Signal in IoT Network. In *International Conference on Smart Environment and Green Technologies* (pp. 153-160). Cham: Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-81564-5_19>
7. Sadıkoğlu, F., Sabuncu, Ö., & Bilgehan, B. (2024, April). Revolutionizing Connectivity: Exploring Blockchain Integration in Advanced Communication Networks. In *International Conference on Smart Environment and Green Technologies* (pp. 227-233). Cham: Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-81564-5_28>
	1. **International books published, or chapters from a book**
8. Sabuncu, Ö., & Bilgehan, B. (2025) Transforming UAV Framework with Blockchain, IoT, and Workflow Sorting: Integrating Technologies for Medical Delivery. *AI Horizons: From Learning to Understanding— Navigating Challenges Across Industries.* <https://doi.org/10.1007/978-3-031-86749-1>
9. Bilgehan, B., & Sabuncu, Ö. (2025) UAV-Assisted Dynamic IoT Network Deployment in Disaster Zones. *AI Horizons: From Learning to Understanding— Navigating Challenges Across Industries*. <https://doi.org/10.1007/978-3-031-86749-1>
10. Bilgehan, B., & Sabuncu, Ö. (2025) Predictive Modelling of Outdoor Wireless Propagation for Future 5G Networks in Cyprus. *AI Horizons: From Learning to Understanding— Navigating Challenges Across Industries.* <https://doi.org/10.1007/978-3-031-86749-1>

**5.5. Articles published in national refereed journals**

**5.6. Assertions presented in national scientific congresses and published in the proceedings.**

**5.7. Other publications**

**6. Projects**

**7. Projeler**

**8. Administrative Services**

1. Vice Head of the Department of Electrical and Electronics Engineering
2. Board Member of the Science, Technology, and Engineering Applications and Research Center

**9. Professional Affiliations**

**10. Fellowships and Awards**

1. ISSN International Best Researcher Award, Titles are Awarded by, ISSN AWARDS with, World Research Council & Times of Research
2. One of the best 3 papers which got the best paper award at the IEEE International Conference on AI in Everything (AIE), 2022.
3. Near East University 2022 Young Researcher Award

1. World Top Scientists Awards" under the category of "Best Researcher Award".
2. Near East University 2023 Young Researcher Award
3. Near East University 2024 Young Researcher Award
4. Near East University 2024 Oral Presentation Award

**11. Please fill out the chart below for undergraduate and graduate courses you have given in the last 2 years.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Academic****Year** | **Semester** | **Course** | **Weekly Course Hours** | **Number of Students** |
| **Theoretical** | **Practical** |
| **2023 - 2024** | **Fall** | Bilgisayar Uygulamaları | 2 | 1 | 20 |
| **Fall** | Elektrik Malzemeleri | 2 | 1 | 20 |
| **Fall** | Elektriksel Ölçme Tekniği | 2 | 1 | 20 |
| **Fall** | Mantık Devreleri | 2 | 1 | 10 |
| **Fall** | Mühendislik Tasarımı I. | 2 | 1 | 10 |
| **Spring** | Elektronik I. | 2 | 2 | 20 |
| **Spring** | Mühendislik Tasarımı II. | 2 | 2 | 20 |
| **Spring** | Bilgisayar Uygulamaları | 2 | 1 | 20 |
| **Spring** | Haberleşme Sistemleri | 3 | 1 | 30 |
| **Spring** | Elektriksel Ölçme Tekniği | 2 | 1 | 20 |
| **2024 - 2025** | **Fall** | Bilgisayar Uygulamaları | 2 | 1 | 20 |
| **Fall** | Mantık Devreleri | 2 | 2 | 20 |
| **Fall** | Elektrik Malzemeleri | 2 | 2 | 20 |
| **Fall** | Sinyaller ve Sistemler | 3 | 1 | 30 |
| **Fall** | Mühendislik Tasarımı I. | 2 | 1 | 20 |
| **Spring** | Haberleşme Sistemleri | 3 | 1 | 30 |
| **Spring** | Elektriksel Ölçme Tekniği | 2 | 1 | 30 |
| **Spring** | Bilgisayar Uygulamaları | 2 | 1 | 20 |
| **Spring** | Mühendislik Tasarımı II. | 3 | 1 | 10 |
| **Spring** | Elektromanyetik Dalga Yayılımlı Antenler | 3 | 1 | 20 |

**13. Organizations/Companies Previously Affiliated With**

|  |  |  |  |
| --- | --- | --- | --- |
| **No** | **Organization Name** | **Duration** | **Affiliation** |
| 1 | Near East University | 09.2019 - 09.2021 | Research Assistant |
| 2 | Near East University | 09.2021 – 05.2025 | Lecturer |
| 3 | Near East University | 05.2025-present | Dr. |