# ATILIM UNIVERSITY

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**Associate Professor of Electrical and Electronics Engineering**
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## PERSONAL

| Date of Birth | 1985 |
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| Place of Birth | Ankara/Turkey |

## EDUCATION

| | |
|---|---|
| **2011-2016** | Atilim University, Modeling and Design of Engineering Systems (Main Field of Study: Electrical and Electronics Engineering), Ph.D. |
| **2009-2011** | Atilim University, Electrical and Electronics Engineering, M.S. |
| **2003-2009** | Atilim University, Electrical and Electronics Engineering, B.S. |

## ACADEMIC POSITIONS

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|---|---|
| **02/2023-** | Associate Professor, Department of Electrical and Electronics Engineering, Atilim University, Turkey |
| **04/2017-01/2023** | Assistant Professor, Department of Avionics, Atilim University, Turkey |
| **09/2019-09/2020** | Postdoctoral (ERCIM) Fellow, Department of Electronic Systems, Norwegian University of Science and Technology (NTNU), Norway |
| **02/2009-03/2017** | Research Assistant, Department of Electrical and Electronics Engineering, Atilim University, Turkey |

## ADMINISTRATIVE DUTIES

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| **08/2017-08/2019** | Vice Director, Atilim University Graduate School of Natural and Applied Sciences |

## HONORS&AWARDS

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|---|---|
| 1 | The European Research Consortium for Informatics and Mathematics (ERCIM) Alain Bensoussan Fellowship (Grant), 2019 |
| 2 | Atilim University Scientific Publication Award (Young Category): Award for Outstanding Publication Achievement in 2019-2020 Academic Year, 2021 |
| 3 | Atilim University Scientific Publication Award (Young Category): Award for Outstanding Publication Achievement in 2020-2021 Academic Year, 2022 |

## RESEARCH INTERESTS

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|---|---|
| 1 | Wireless channel modeling |
| 2 | Source localization in Electronic Warfare/Radar Systems |
| 3 | Physical-layer security of wireless networks through Radio Frequency (RF) fingerprinting |
| 4 | Performance evaluation of communication systems/technologies |
| 5 | Communications for the Internet-of-Things (IoT) |

## JOURNAL PUBLICATIONS (SCI-E)

| | |
|---|---|
| **1** | M. Bouzidi, A. Amro, Y. Dalveren, F. A. Cheikh, and M. Derawi, LPWAN Cyber Security Risk Analysis: Building a Secure IQRF Solution, *Sensors*, vol. 23, no. 4, 2078, 2023. |
| **2** | V.S. Yilmaz, M. Akdag, Y. Dalveren, R. O. Doruk, A. Kara, and A. Soylu, Investigating the Impact of Two Major Programming Environments on the Accuracy of Deep Learning-Based Glioma Detection from MRI Images, *Diagnostics*, vol. 13, no. 24, 651, 2023. |
| **3** | M. Bouzidi, N. Gupta, Y. Dalveren, M. Mohamed, F. A. Cheikh, and M. Derawi, Indoor Propagation Analysis of IQRF Technology for Smart Building Applications, *Sensors*, vol. 11, no. 23, 3972, 2022. |
| **4** | M. A. A. Imran, E. Arik, Y. Dalveren, M. B. Tabakcioglu, and A. Kara, On the Accuracy of an Emitter Localization Method based on Multipath Exploitation in Realistic Scenarios, *Journal of Electromagnetic Waves and Applications*, 2022, vol. 36, no. 15, 2022. |
| **5** | M. Bouzidi, M. Mohamed, Y. Dalveren, A. Moldsvor, F. A. Cheikh, and M. Derawi, Propagation Measurements for IQRF Network in an Urban Environment, *Sensors*, vol. 22, no. 18, 7012, 2022. |
| **6** | S. Tas, O. Sari, Y. Dalveren, S. Pazar, A. Kara, and M. Derawi, Deep Learning-Based Vehicle Classification for Low Quality Images, *Sensors*, vol. 22, no. 13, 4740, 2022. |
| **7** | H. Almashaqbeh, Y. Dalveren, A. Kara, A Study on the Performance Evaluation of Wavelet Decomposition in Transient-based Radio Frequency Fingerprinting of Bluetooth Devices, *Microwave and Optical Technology Letters*, vol. 64, no. 4, 2022. |
| **8** | I. Mohamed, Y. Dalveren, F. O. Catak and A. Kara, On the Performance of Energy Criterion Method in Wi-Fi Transient Signal Detection, *Electronics*, vol. 11, no. 2, 269, 2022. |
| **9** | Y. Dalveren, A. M. Durukan and A. Kara, A Case Study on the Assessment of RF Switch and Splitter Options for Coupling of Transceiver Modules to Bidirectional Antennas Employed in Linear Wireless Sensor Networks, *Microwave and Optical Technology Letters*, vol. 63, no. 11, pp. 2826-2832, 2021. |
| **10** | S. Koksal, Y.Dalveren, B. Meiga and A. Kara, Distributed-Denial-of-Service Attack Mitigation in Network Functions Virtualization-based 5G Networks Using Management and Orchestration, *International Journal of Communication Systems*, vol. 34, no. 9, e4825, 2021. |
| **11** | D. E. Sala, Y. Dalveren, A. Kara and M. Derawi, Design and Optimization of Piezoelectric-Powered Portable UV-LED Water Disinfection System, *Applied Sciences*, 11(7), 3007, 2021. |
| **12** | Y. Dalveren, G. Karatas, M. Derawi, and A. Kara, A Simple Propagation Model to Characterize the Effects of Multiple Human Bodies Blocking Indoor Short-Range Links at 28 GHz, *Electronics*, 10(3), 305, 2021. |
| **13** | I. S. Mohamed, Y. Dalveren, and A. Kara, Performance Assessment of Transient Signal Detection Methods and Superiority of Energy Criterion (EC) Method, *IEEE Access*, vol. 8, pp. 115613-115620, 2020. |
| **14** | S. A. Abufana, Y. Dalveren, A. Aghnaiya, A. Kara, Variational Mode Decomposition-Based Threat Classification for Fiber Optic Distributed Acoustic Sensing, *IEEE Access*, vol. 8, pp. 100152-100158, 2020. |
| **15** | M. A. A. Imran, Y. Dalveren, B. Tavli, and A. Kara, Optimal Operation Mode Selection for Energy-Efficient Light-Weight Multi-Hop Time Synchronization in Linear Wireless Sensor Networks, *EURASIP Journal on Wireless Communications & Networking*, 109, 2020. |

| 16 | M. Bouzidi, Y. Dalveren, F.A. Cheikh, and M. Derawi, Use of the IQRF Technology in Internet-of-Things-Based Smart Cities, *IEEE Access*, vol. 8, pp. 56615-56629, 2020. |
|---|---|
| 17 | A. Aghnaiya, Y. Dalveren, and A. Kara, On the Performance of Variational Mode Decomposition-Based Radio Frequency Fingerprinting of Bluetooth Devices, *Sensors*, vol. 20, no. 6, 1704, 2020. |
| 18 | E. Uzundurukan, A. M. Ali, Y. Dalveren, A. Kara, Performance Analysis of Modular RF Front End for RF Fingerprinting of Bluetooth Devices, *Wireless Personal Communications*, vol. 112, pp. 2519-2531, 2020. |
| 19 | Y. Dalveren, A. Kara, Multipath Exploitation in Emitter Localization for Irregular Terrains, *Radioengineering*, vol. 28, no. 2, pp. 473-482, 2019. |
| 20 | Y. Dalveren, A. Alabish, A. Kara, A Simplified Model for Characterizing the Effects of Scattering Objects and Human Body Blocking Indoor Links at 28 GHz, *IEEE Access*, vol. 7, pp. 69687-69691, 2019. |
| 21 | R. Kadıoğlu, Y. Dalveren, and A. Kara, Quality of Service Assessment: A Case Study on Performance Benchmarking of Cellular Network Operators in Turkey, *Turkish Journal of Electrical Engineering & Computer Sciences*, v. 23, no. 2, pp. 548 – 559, 2015. |
| 22 | A. Kara, N. E. Cagiltay, and Y. Dalveren, An Enhanced Course in Digital Communications, *International Journal of Engineering Education*, v. 30, no. 4, pp. 1048 – 1059, 2014. |

## JOURNAL PUBLICATIONS (Other indexes)

| 1 | Y. Dalveren, A. Kara, Performance Evaluation of Empirical Path Loss Models for a Linear Wireless Sensor Network Deployment in Suburban and Rural Environments, *Hittite Journal of Science and Engineering*, vol. 7, no. 4, pp. 313-320, 2020. |
|---|---|
| 2 | Y. Dalveren, A. Kara, Examining the Effects of Human Bodies Blocking Indoor Links at 28 GHz with a Perfectly Conducting Cylinder Model, *Duzce University Journal of Science and Technology*, vol. 8, no. 1, pp. 1118-1127, 2020. (in Turkish) |
| 3 | E. Uzundurukan, Y. Dalveren, A. Kara, A Database for the Radio Frequency Fingerprinting of Bluetooth Devices. *Data*, 5(2), 55, 2020. |

## PROJECTS*

| 1 | "Localization of Emitters by Exploiting Multipaths" funded by TUBITAK-1001, 2019-2021 (Researcher: 09/2019-04/2021; Principal Investigator: 04/2021-09/2021). |
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**\*** Atilim University Undergraduate Projects (LAPs) are not listed.

## PATENTS

| 1 | Y. Dalveren, A. Kara, "Yansımalar Kullanılarak Emisyon Kaynaklarının Konumlandırılmasında Doğruluğun Arttırılması", Turkish Patent Institute, Registration Number: 2016 18856 (issued in 2021). |
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## CONFERENCE PRESENTATIONS/PUBLICATIONS

| 1 | D. Dogan, Y. Dalveren, and A. Kara, A Mini-Review on Radio Frequency Fingerprinting Localization in Outdoor Environments: Recent Advances and Challenges, IEEE 14th International Conference on Communications, Bucharest, Romania, 2022. |
|---|---|
| 2 | H. Al-Sudani, A. A. Thabit, and Y. Dalveren, Cognitive Radio and Its Applications in the New Trend of Communication System: A Review, IEEE 5th International Iraqi Conference on Engineering Technology and its Applications (IICETA), 2022. |

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| 3 | M. Derawi, Y. Dalveren, and F.A. Cheikh, Internet-of-Things-Based Smart Transportation Systems for Safer Roads, IEEE 6th World Forum on Internet of Things, New Orleans, LA, USA, 2020. |
| 4 | Y. Dalveren, Target Localization in NLOS Environments by Machine Learning: An Insight from a Literature Review, 6th International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2019), Kyrenia/North Cyprus, 2019. |
| 5 | A. Alabish, Y. Dalveren, A. Kara, An Experimental Study towards Examining Human Body Movements in Indoor Wave Propagation at 18 - 22 GHz, IEEE International Symposium on Networks, Computers and Communications (ISNCC'2018), Rome/Italy, 2018. |
| 6 | Y. Dalveren, A. Kara, On the Accuracy of TDOA-based Passive Localization of Emitters, 5th International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2018), Kyrenia/North Cyprus, 2017. |
| 7 | Y. Dalveren, A. Kara, A Discussion on Using Non-Gaussian Noise to Model Sensor position Error in Source Localization, 4th International Symposium on Engineering, Artificial Intelligence and Applications (ISEAIA 2017), Kyrenia/North Cyprus, 2017. |
| 8 | Y. Dalveren, A. Kara, Comparative Analysis of TDOA-based Localization Methods in the Presence of Sensor Position Errors", IEEE 4th International Conference on Control, Decision and Information Technologies (CoDIT'17), Barcelona/Spain, 2017. |
| 9 | Y. Dalveren, A. Kara, An Approach for Identifying the Likelihood of an Irregular Terrain Profile Being a Multipath Scattering Center in Emitter Localization, ACM 7th International Conference on Information, Communication and Management (ICICM 2017), Moscow/Russia, 2017. |
| 10 | O. Karapür, G. M. Keskin, Y. Dalveren, A. Kara, A Low Cost Smartphone Controlled Wireless Data Logger System for Monitoring of Safety Critical Areas, 3rd International Conference on Advanced Technology & Sciences (ICAT'16), Konya/Turkey, 2016. |
| 11 | M.T. Ozturk, Y.Dalveren, A.Kara, Spectrum Analysis of Parabolic Range Gate Pull Off (RGPO) Signals, IEEE 23th Signal Processing and Communications Applications Conference, Malatya/Turkey, 2015. |
| 12 | Y. Dalveren, Using E-Learning in Enterprise Resource Planning (ERP) Training: A Case Study to Assist Curriculum Designers in Turkey, 5th World Conference on Educational Sciences, Rome/Italy, 2013. |
| 13 | Y. Dalveren, A. Kara, On the Design of Elective Courses in RF and Communications According to the Needs of Industry, 4th World Conference on Educational Sciences, Barcelona/Spain, 2012. |
| 14 | Y. Dalveren, A. Kara, Classification of Objects Over and Around Sea Surface for Passive Geolocation, 12th Mediterranean Microwave Symposium (MMS 2012), Istanbul/Turkey, 2012. |
| 15 | K.Y. Kapusuz, Y. Dalveren, A. Kara, Deniz Yüzeyi ve Çevresindeki Saçıcıların Bistatik Saçılma KatsayısınınKutuplanma ve Saçılma Açısına Bağımlılığının İncelenmesi, URSI Ulusal Kongresi, İstanbul/Turkey, 2012. |
| 16 | Y. Dalveren, A. Kara, On the Requirements of Industry on RF and Communication Graduates: Comparison of Local/National and International Market, 2nd International Engineering Education Conference, Antalya/Turkey, 2012. |
| 17 | A. Kara, N. E. Cagiltay, Y. Dalveren, Development of a Digital Communications Course Enriched by Virtual and Remote Laboratory Tools, IEEE 10th Conf. on Information Technology Based Higher Education and Training (ITHET 2011), Kusadasi/Turkey, 2011. |
| 18 | O. Turkkan, A. Kara, Y. Dalveren, Design of a Low Cost Wireless Transmission Module, International Conference on Wireless Communications and Mobile Computing, Istanbul/Turkey, 2011. |

## CITATIONS

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| Sum of times cited without self-citations (ISI Web of Science): | 92 |
| H-index (ISI Web of Science): | 7 |

## COURSES GIVEN

| | |
|---|---|
| 1 | EE106 Introduction to Computational Tools |
| 2 | EE213 Probability and Random Processes |
| 3 | EE316 Communication Systems |
| 4 | EE402 Wireless Communications |
| 5 | EE404 Radar Systems |
| 6 | EE493/494 Design Projects I/II |

## THESES SUPERVISED

| | |
|---|---|
| 1 | Selen Yilmaz (MSc), "A Study on Microstrip Antenna Design for 77 GHz Radar Systems", 2023 (supervisor). |
| 2 | Haider Jalil Sahib Al-Sudani (MSc), "High-Order Cumulants Based Classification for Cognitive Radio Applications", Atilim University, 2023 (supervisor). |
| 3 | Ozgen Sari (MSc), "Deep Learning-based Vehicle Classification under Low Quality Imaging Conditions", Atilim University, 2022 (supervisor). |
| 4 | Sumeyra Tas (MSc), "Deep Learning-based Vehicle Classification for Low Quality Images", Atilim University, 2022 (supervisor). |
| 5 | Hemam Nawaf Abdallah Almashaqbeh (MSc), "Use of Wavelet Decomposition in Radio Frequency Fingerprinting of Bluetooth Signals", Atilim University, 2021 (supervisor). |
| 6 | Mohamed Zeglam (MSc), "Comparative Assessment of Simple and Accurate Localization Methods Based on TDOA-AOA Measurements", Atilim University, 2021 (supervisor). |
| 7 | Ahmed Alabish (PhD), "Modeling and Characterization of Human Body Shadowing at Millimeter Waves", Atilim University, 2020 (co-supervisor). |
| 8 | Ahmet Mert Durukan (MSc), "Comparative Assessment of Switching Options for Back to Back Antennas in Wireless Networks", Atilim University, 2019 (supervisor). |